UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE, INC.,
Petitioner

v.

APEX BEAM TECHNOLOGIES LLC,
Patent Owner.

U.S. Patent No. 10,979,128
U.S. Patent No. 11,637,615

DECLARATION OF FRIEDHELM RODERMUND IN SUPPORT OF PETITIONS FOR *INTER PARTES* REVIEW OF U.S. PATENT NOS. 10,979,128 AND 11,637,615

TABLE OF CONTENTS

Page

I. INTRODUCTION AND ENGAGEMENT 1

II. BACKGROUND AND QUALIFICATIONS 3

III. SUMMARY OF MY OPINIONS 7

IV. PUBLICATION OF 3GPP SPECIFICATIONS AND RELATED DOCUMENTS 8

A. General Practices 8

B. Specific Documents 24

1. TDoc R2-1914882 24

2. TDoc R2-1915141 35

3. TDoc R2-1916382 40

4. TDoc R2-1912096 44

5. TS 38.300 V15.5.0 50

V. AVAILABILITY FOR CROSS-EXAMINATION 56

A. Right To Supplement 57

B. Signature 57

I, Friedhelm Rodermund, do hereby declare as follows:

I. INTRODUCTION AND ENGAGEMENT

1. I have been retained in this matter by the Petitioner to provide testimony regarding the standard business practices of 3rd Generation Partnership Project ("3GPP") for record keeping and publishing technical specifications, change request proposals, reports, and other documents developed during the course of standards activities carried out by 3GPP and the European Telecommunications Standards Institute ("ETSI").

2. I have been asked to provide my opinions regarding the authenticity and dates of public accessibility of the following 3GPP documents:

- TDoc R2-1914882, which represents a 3GPP document with the title "Handling UL LBT Failures in MAC" (hereinafter "R2-1914882") (EX1007)
- TDoc R2-1915141, which represents a 3GPP document with the title "Handling of UL LBT failure" (hereinafter "R2-1915141") (EX1008)
- TDoc R2-1916382, which represents a 3GPP document with the title "Report of offline-403 - Remaining issues of consistent UL LBT failure" (hereinafter "R2-1916382") (EX1009)

- TDoc R2-1912096, which represents a 3GPP document with the title "Uplink LBT failure recovery for NR-U" (hereinafter "R2-1912096") (EX1018)
- Version 15.5.0 of technical specification 3GPP TS 38.300 which represents a 3GPP document with the title "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; NR and NG-RAN Overall Description; Stage 2 (Release 15)" (hereinafter "TS 38.300 V15.5.0") (Ex. EX1017)

3. As an ETSI Project Manager and Secretary, from June 1998 to December 2004, I have personal knowledge of 3GPP's standard business and records keeping practices. I continued following 3GPP's work ever since. Thus, based on my experience, personal knowledge, and review of 3GPP's business records, I am able to testify regarding the authenticity of certain documents published by 3GPP and the timing of their publication.

4. I am being compensated for my time spent on this matter at my usual rate of €500 per hour. My fee is not contingent on the outcome of this or any matter, or on the content of any of the testimony I give in this declaration. I have no financial interest in the Petitioner.

5. I have been informed that Apex Beam Technologies, LLC ("Apex Beam Technologies" or "Patent Owner") is the current assignee of U.S. Patent No.

10,979,128 ("the '128 Patent") and U.S. Patent No. 11,637,615 ("the '615 Patent"). I have no financial interest in the Patent Owner or the '128 or '615 Patents.

6. In forming my opinions, I have considered the cited exhibits, including the exhibits identified in Appendix B, and my academic and professional training and experience in the field of wireless communications and standards development as described herein.

II. BACKGROUND AND QUALIFICATIONS

7. I have more than 25 years of experience working with standards development organizations including 3GPP, ETSI, and the Open Mobile Alliance ("OMA"). I have particular experience with the development of standards related to cellular telecommunications, including the standards for the Universal Mobile Telecommunications System ("UMTS"), Long Term Evolution ("LTE"), and 5G, which are all standards developed by the 3GPP.

8. I attended the University of Technology Aachen in Aachen, Germany, where I performed graduate studies in Electrical Engineering with a focus on telecommunications technologies ("Dipl.-Ing. TH" degree). I also attended the University of Technology Trondheim in Trondheim, Norway, and completed my Diploma thesis, "Design of a dual processor computer for digital signal processing in power electronics," in 1993.

9. From December 1993 to June 1998, I worked at Mannesmann Mobilfunk as a System Engineer and Project Manager in Quality Assurance and Technical Standards. One of my responsibilities was to ensure by managing and performing related test activities that cellular network equipment was compatible with the Global System for Mobile Communications ("GSM") standard developed by ETSI. During that time, I also started working as a standards delegate. I attended my first ETSI meeting in 1996 (although I was already following ETSI developments from 1992 during my studies).

10. From June 1998 to December 2004, I worked at ETSI as a project manager for various ETSI Special Mobile Group ("SMG") and 3GPP working groups. First, I served as a secretary of SMG4 "Data Services" and SMG8 "Base Stations Testing." Then, as a project manager with the ETSI Mobile Competence Center ("MCC"), I supported establishing 3GPP as the new international standards development organization for cellular telecommunications. One of my roles was acting as Secretary for 3GPP's Technical Specifications Group Terminals, Working Group ("T2"), the group which played a leading role in the creation of standards for Multimedia such as the Multimedia Messaging Service ("MMS").

11. Later, I was a secretary of the highest-level Technical Specifications Group Terminals which was besides other things responsible for the development of test specifications including tests for the radio interface.

12. I edited all technical specifications produced by my working groups and presented results to the parent body for approval. I attended all meetings (apart from some sub-working group meetings) and was also responsible for compiling meeting reports, for handling all the meeting documents, and managing the work plan. It was also my role to guide the groups and to advise the chairmen regarding 3GPP working methods and procedures including document handling, and to make sure delegates were aware of their company's obligations under the 3GPP Intellectual Property Rights policy.

13. As part of my responsibilities at ETSI, I acted as a 3GPP custodian of records by personally managing 3GPP's public File Transfer Protocol (FTP) folders, which I used to make publicly accessible various 3GPP documents, including versions of 3GPP specifications, technical reports, liaison statements, change requests, contributions, agendas, meeting reports, and other 3GPP documents from my working groups. I am also knowledgeable about document management practices used in other working groups and within 3GPP in general with regard to making documents publicly accessible through the same public FTP server of 3GPP.

14. Since I left ETSI as a staff member in 2005, I have been continuously involved in standardization activities, including with OMA, ETSI, and 3GPP. Since 2017, I also have been attending the ETSI Intellectual Property Rights ("IPR")

Special Committee, which is responsible for the maintenance of the ETSI IPR Policy.

15. After I left ETSI, I worked from January 2005 to October 2014 at Vodafone, first as a Project Manager for Mobile Broadcast Standards, and then as Vice Chairman of the Device Management working group of the Open Mobile Alliance, and then as a Senior Standards Strategist, all with responsibilities as described on my curriculum vitae. At Vodafone, I was deeply involved in standards work with ETSI and 3GPP and other standards setting organizations, including as a delegate to 3GPP SA1 "Services." As part of my responsibilities, I attended selected 3GPP meetings, submitted documents to 3GPP, used 3GPP resources (including 3GPP's FTP server) extensively, and remained knowledgeable about 3GPP policies and procedures with regard to document management and public accessibility. I was also involved in the creation of patents, defense activities related to patent litigations, and patent evaluation, mostly in the context of standards development.

16. Since leaving Vodafone in 2014, I have performed consulting work regarding Internet of Things (IoT) and Machine to Machine (M2M) technology and standards, first at Friedhelm Rodermund Consulting and then as the Founder and Director of IOTECC GmbH. In connection with my work, I regularly deal with standards such as OMA's Lightweight M2M (LwM2M) and 3GPP's LTE, Narrowband IoT (NB-IoT) and 5G standards. And I have extensively used 3GPP

resources and have remained knowledgeable about 3GPP policies and procedures with regard to document management and public accessibility.

17. I also provide consulting services related to patents, in particular around 3GPP Standard Essential Patents ("SEPs"), and I have worked as an expert witness on a number of occasions. I continue to closely follow the maintenance of the ETSI IPR Policy as a delegate to the ETSI IPR Special Committee. Furthermore, I am conducting a seminar on SEPs and the Internet of Things at the Technical University of Ilmenau, Germany.

18. At the time of writing this declaration, I am following – including attending selected meetings – the following standards committees: ETSI oneM2M, ETSI IPR Special Committee, OMA, and 3GPP.

19. A copy of my curriculum vitae, which includes a detailed description of my experience and education, is attached as Appendix A. A list of litigation matters on which I have worked over the last five years is also included in my curriculum vitae.

III. SUMMARY OF MY OPINIONS

20. It is my opinion that EX1007 is an authentic copy of 3GPP T-doc R2-1914882 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by November 7, 2019, at the latest.

21. It is my opinion that EX1008 is an authentic copy of 3GPP T-doc R2-1915141 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by November 8, 2019, at the latest.

22. It is my opinion that EX1009 is an authentic copy of 3GPP T-doc R2-1916382 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by November 23, 2019, at the latest.

23. It is my opinion that EX1018 is an authentic copy of 3GPP T-doc R2-1912096 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by October 3, 2019, at the latest.

24. It is my opinion that EX1017 is an authentic copy of technical specification TS 38.300 V15.5.0 published by 3GPP and would have been publicly accessible through ftp.3gpp.org as of April 9, 2019.

IV. PUBLICATION OF 3GPP SPECIFICATIONS AND RELATED DOCUMENTS

A. General Practices

25. Unless otherwise noted, the foregoing and following is an accurate description of 3GPP general practices from 1998 to the present, including in 2019, regardless of whether I use the present or past tense to describe those practices.

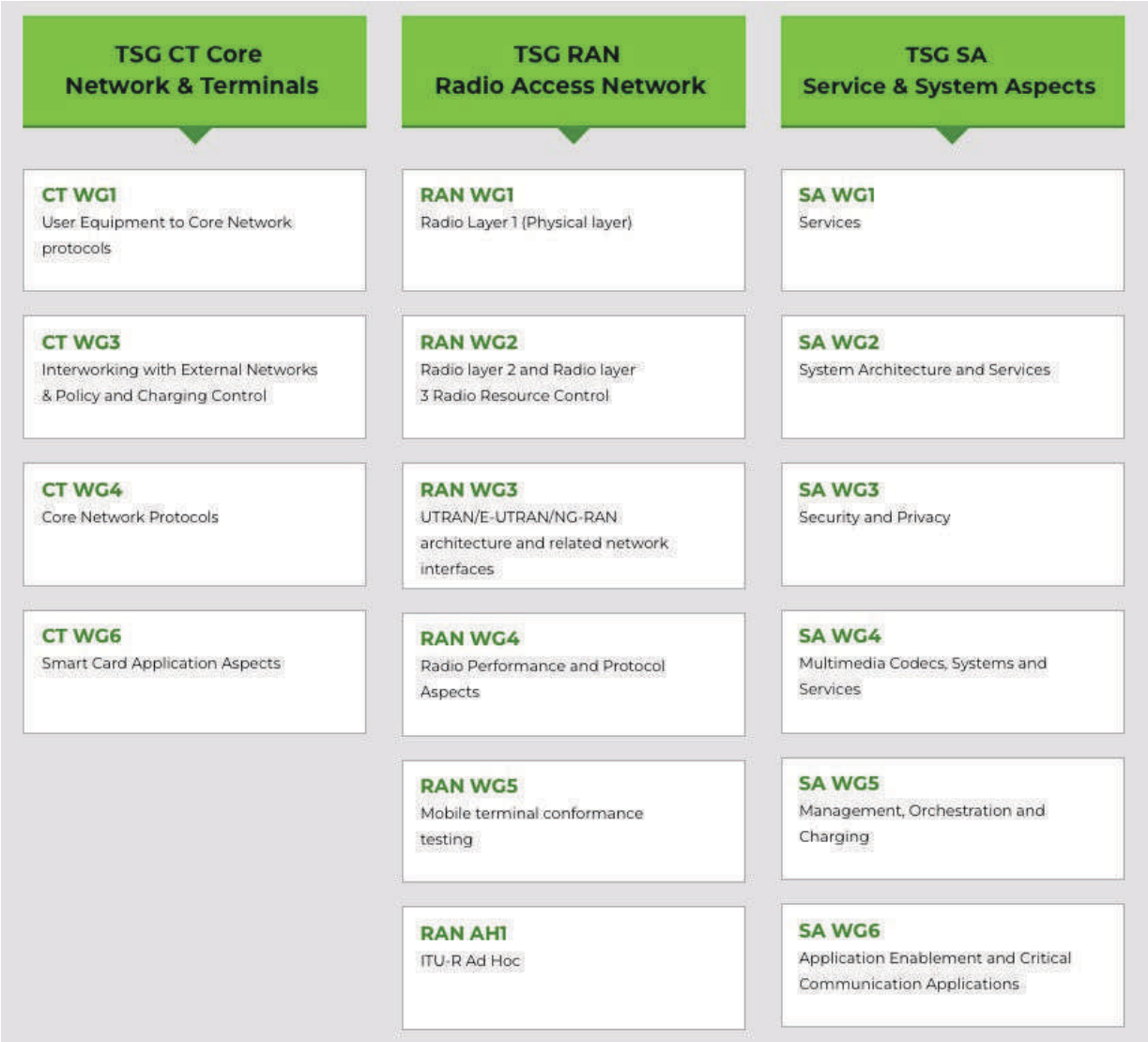
26. 3GPP was established in 1998 by a group of telecommunications standard development organizations from Japan, Korea, China, Europe, and the United States to jointly develop worldwide standards for mobile telecommunications. Today, 3GPP consists of seven partners: Association of Radio Industries and Businesses, Japan ("ARIB"), Alliance for Telecommunications Industry Solutions, USA ("ATIS"), China Communications Standards Association ("CCSA"), European Telecommunications Standards Institute ("ETSI"), Telecommunications Standards Development Society, India ("TSDSI"), Telecommunications Technology Association, Korea ("TTA"), and Telecommunication Technology Committee, Japan ("TTC"). In addition to being one of the founding partners, ETSI hosts the Mobile Competence Centre ("MCC"), which provides administrative and technical support for the day-to-day work of 3GPP. Furthermore, ETSI manages 3GPP's IT services such as the 3GPP website, FTP server, and email exploders.

27. 3GPP is the world's leading organization for developing and maintaining cellular telecommunications standards, which it has done since its foundation in 1998. As noted above and in my curriculum vitae, I began working for 3GPP, as part of my work at ETSI, the European-based organizational partner of 3GPP.

28. In the ordinary course of its regularly conducted business activities, and pursuant to its standard business practices, 3GPP publishes technical specifications, proposals, reports, and other documents related to the development of cellular telecommunications standards. Such documents are published for the purposes of discussion and establishment of industry standards for cellular telecommunications. This has been 3GPP's ordinary course of business since when I began working at ETSI in 1998.

29. In the ordinary course of 3GPP's regularly conducted business activities, and pursuant to its standard business practices, all draft technical specifications, proposals, reports, and other temporary documents to be discussed or considered in relation to 3GPP's telecommunications standards activities were, and continue to be, assigned a temporary document number and made publicly available, including on the FTP server associated with the 3GPP website, currently residing at ftp.3gpp.org. Such documents are referred to as "TDocs." Final versions of the technical specifications also were, and continue to be, publicly available from that same FTP server.

30. The names and the structure of 3GPP working groups, as of today, can be found at https://www.3gpp.org/3gpp-groups (reproduced below):



31. Each Technical Specification Group (TSG) or Working Group adopts a structured numbering system for the documents associated with their meetings, and those systems typically follow a consistent numbering system as shown in the following example: xminnzzzz. The numbering system normally comprises five logical elements: (1) x: a single letter corresponding to the TSG; wherein in 2019 x was one of R (Radio Access Network), C (Core and Terminals), or S (Service and

System Aspects); (2) m: a single character corresponding to the Working Group identity (typically 1, 2, 3, etc.) or, in the case of the TSG itself, the letter "P"; (3) i: normally the hyphen character "-"; (4) nn: the calendar year of the meeting to which the document was submitted; and (5) zzzz: a running number (some working groups use 5 digits).

32. In the ordinary course of 3GPP's regularly conducted business activities, and pursuant to its standard business practices, from December 1998 onwards, 3GPP published all of its TDocs and all final versions of its technical specifications on its FTP server, which has always been easily and publicly accessible from its website and currently resides at ftp.3gpp.org.

33. As early as December 1998, including in 2017, 3GPP's FTP server was freely accessible to the general public with no login, password, or membership requirement.

34. By 1999, at least 100 companies were members of 3GPP (719 companies by December 2020), ranging from Bosch to Ericsson to Nokia to Samsung and generally including those interested in the discussion, creation, and adoption of cellular telecommunications standards, including UMTS. Each of these companies typically delegated multiple individuals to regularly participate in 3GPP meetings. Further, pursuant to 3GPP's standard business practices, 3GPP working groups sent emails notifying these individuals as soon as new or additional

documents had been uploaded to 3GPP's FTP server. Thus, not only did the general public have access to the documents on the FTP server, but some of the most interested members of the public—those working to develop standards for cellular telecommunication or working to implement the standards—were personally informed of their availability by email.

35. Based on my experience with 3GPP and the telecommunications industry, I would expect any person implementing a cellular network or device, e.g., an LTE or 5G network, to consult the corresponding specifications on the 3GPP FTP server, as well as other related documents. The whole purpose of 3GPP creating and making these specifications available was so that engineers and other individuals would have ready access to them when developing and implementing cellular networks and devices.

36. By June 1999, 3GPP's FTP server was well-known to persons in the cellular telecommunications industry as a source of public information regarding industry standards and technological advances.

37. 3GPP specifications bear a specification number consisting of four or five digits, e.g., 09.02 or 29.002. The first two digits define the specification series which are defined to group the different aspects of the 3GPP system into, e.g., requirements, service aspects, radio aspects codecs, security aspects, and test specifications. The series digits are followed by two additional digits for the 01 to

13 series or three further digits for the 21 to 55 series. The subjects of the individual specification series are explained on 3GPP's website at https://www.3gpp.org/specifications-technologies/specifications-by-series, and reproduced below.

Subject of specification series	3G and beyond / GSM (R99 and later)	GSM only (Rel-4 and later)	GSM only (before Rel-4)
Requirements	21 series	41 series	01 series
Service aspects ("stage 1")	22 series	42 series	02 series
Technical realization ("stage 2")	23 series	43 series	03 series
Signalling protocols ("stage 3") - user equipment to network	24 series	44 series	04 series
Radio aspects	25 series	45 series	05 series
CODECs	26 series	46 series	06 series
Data	27 series	47 series (none exists)	07 series
Signalling protocols ("stage 3") -(RSS-CN) and OAM&P and Charging (overflow from 32-range)	28 series	48 series	08 series
Signalling protocols ("stage 3") - intra-fixed-network	29 series	49 series	09 series
Programme management	30 series	50 series	10 series
Subscriber Identity Module (SIM / USIM), IC Cards. Test specs.	31 series	51 series	11 series
OAM&P and Charging	32 series	52 series	12 series
Access requirements and test specifications		13 series [1]	13 series [1]
Security aspects	33 series	(2)	(2)
UE and (U)SIM test specifications	34 series	(2)	11 series
Security algorithms [3]	35 series	55 series	(4)
LTE (Evolved UTRA), LTE-Advanced, LTE-Advanced Pro radio technology	36 series		
Multiple radio access technology aspects	37 series		
Radio technology beyond LTE	38 series		

38. Following a link for a series (e.g., “23 series” link) leads to a 3GPP web page providing access to all specifications in a series, as shown by the screenshot below:



39. As another example of a series, the LTE radio standard is covered in the “36 series” and is further subdivided into separate sections or specifications. The LTE radio specification series starts at TS 36.101 and ends at TR 36.978. Excluding withdrawn specifications, the LTE standard consists of more than 250 specifications.

40. As another example of a series, the 5G New Radio (NR) standard is covered in the "38 series" and is further subdivided into separate sections or specifications. Selecting the "38 series" link on website shown in paragraph 33 leads to the 3GPP portal (portal.3gpp.org) page for all of the 38 series technical specifications.[1] These 5G NR specifications start at TS 38.101 and end at TR 38.922. Excluding withdrawn specifications, the 5G NR standard consists of more than 140 specifications.

41. Each LTE or 5G specification can span from a few pages to hundreds of pages. One full version of the LTE or 5G standard is massive, spanning tens of thousands of pages across the particular series of technical specifications.

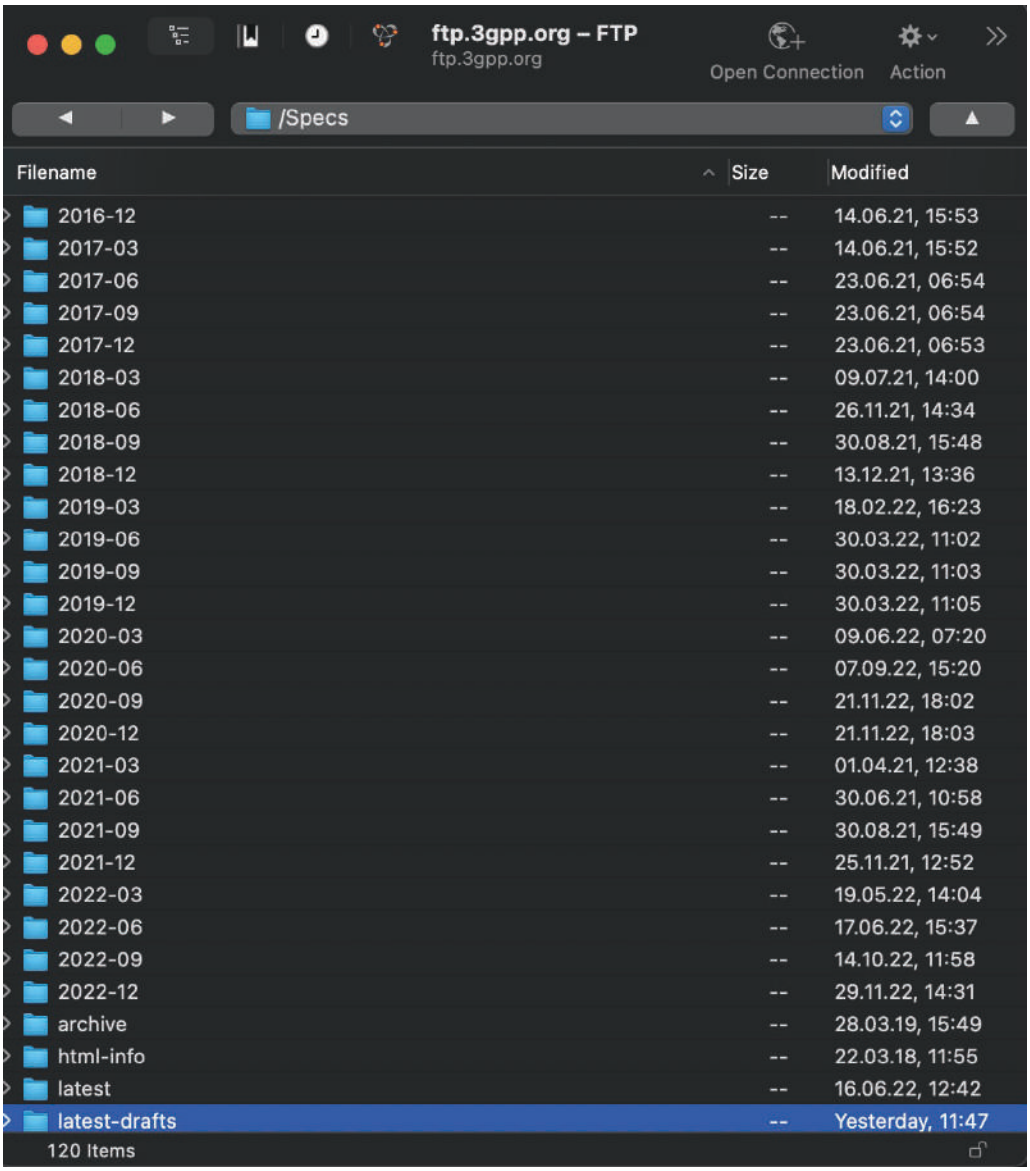
42. In the ordinary course of 3GPP's regularly conducted business activities, and pursuant to its standard business practices, TDocs are usually uploaded to 3GPP's FTP server and website before the meeting where they are to be discussed. Documents created or revised during the course of a meeting are normally uploaded at the latest during the week following the meeting (e.g., the meeting report of the meeting is usually published for review during the week following the meeting).

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1 https://portal.3gpp.org/Specifications.aspx?q=1&series=45&releases=all&draft=False&underCC=False&withACC=False&withBCC=False&numberNYA=False

43. In the ordinary course of 3GPP's regularly conducted business activities, and pursuant to its standard business practices, 3GPP maintains archives that include different versions of the specifications, as well as email communications to its membership, including emails announcing the uploading of new or additional documents to 3GPP's FTP server. These archives are created at the time the emails are initially sent.

44. 3GPP specifications almost always are duplicated in at least two and sometime more locations on the FTP server. One location corresponds to a "snapshot" of the specifications corresponding to a particular plenary meeting cycle—for instance, the 2018-12 snapshot contains a snapshot of numerous specifications after the December 2018 3GPP plenary meetings. The second location is an "archive" that contains all versions over time for a given specification. The screenshot below shows an excerpt of the "Spec" folder at ftp.3gpp.org:



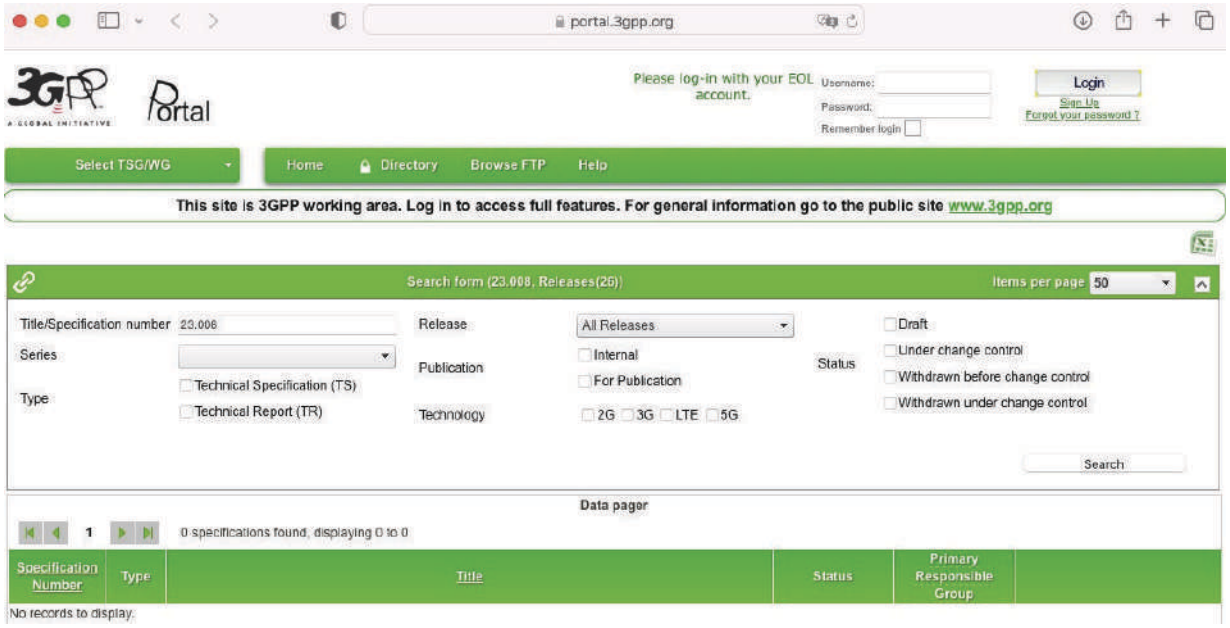
45. While 3GPP aims to upload the updated specifications to both locations at the same time, occasionally there may be a small difference in the upload date, and thus the date stamp, for the same specification uploaded to the two locations. Additionally, specifications which are not yet approved (so called "draft" specifications) are presented as TDocs at working group and at plenary meetings (as

soon as the working group decides to submit the specification to the plenary meeting for information or approval). In many cases, the TDocs are also distributed on the email exploder of the working group prior to the meeting, making the TDocs available to all those subscribed to the email distribution list.

46. The timestamp on 3GPP's FTP server shows the date when the document was uploaded the last time. Thus, the timestamp shows the latest possible date the document became publicly available and accessible on 3GPP's FTP server. The given document might have been available earlier and the original timestamp might have been overwritten because the document was uploaded again. According to my experience, this is something which happened occasionally. Thus, the FTP timestamp is reliable as the latest possible upload date but one cannot determine whether it represents the first upload of a document to the FTP server.

47. An additional means of accessing 3GPP documents including TDocs and specifications is the 3GPP portal. *See* https://portal.3gpp.org/Specifications.aspx. 3GPP preserves the posted document indefinitely on its server for future reference. *Id.* As detailed below, the 3GPP website provides the date that a particular version of a technical specification was uploaded, using the date convention YYYY-MM-DD. The 3GPP portal also provides a login function to unlock full features, however, login is not required for searching and downloading technical specifications. Based on my personal

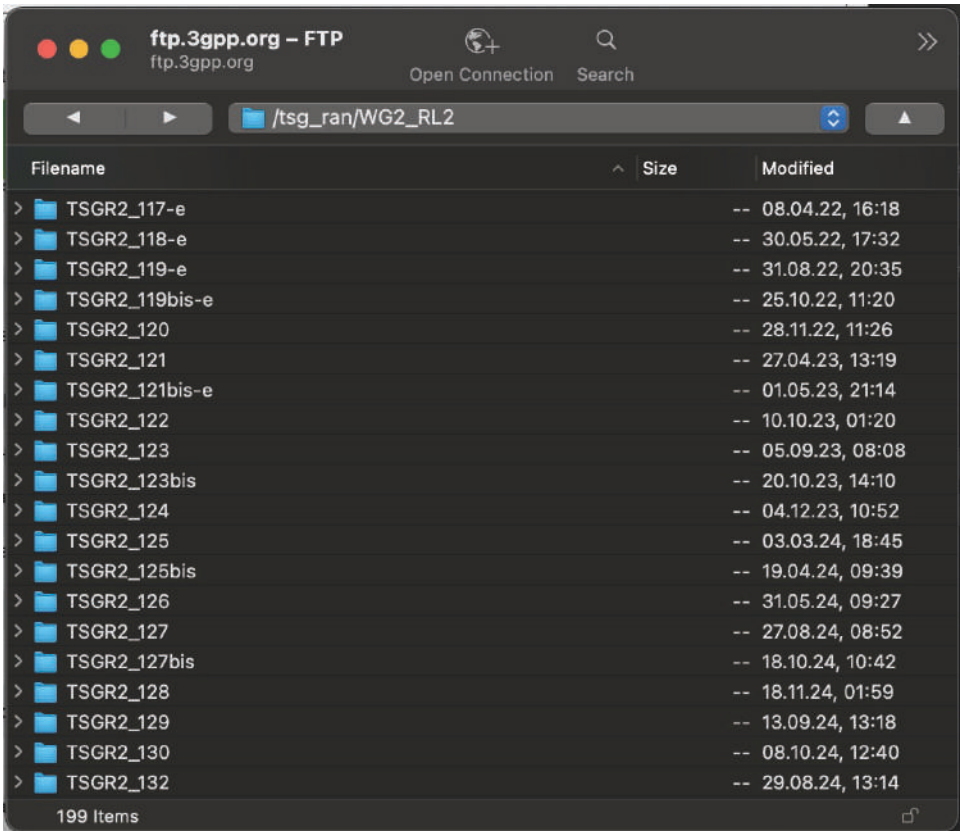
experience, throughout the 2019 timeframe, anyone interested in a particular 3GPP specification could search the 3GPP portal to find and download the latest version of a technical specification using the 3GPP portal in substantially the same manner as they would today:



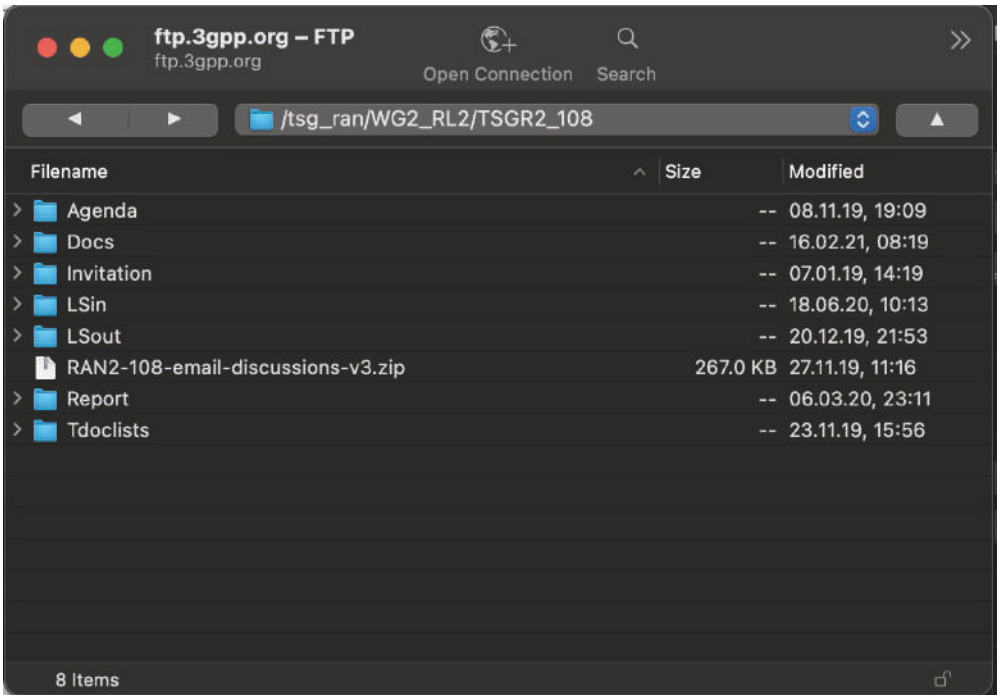
https://portal.3gpp.org/Specifications.aspx; *see, e.g.,* 2015 internet archive https://web.archive.org/web/20150924200802/https://portal.3gpp.org/.

48. 3GPP's working practice to store their documents on its FTP server, as described above, has not changed over time. Starting from the first 3GPP meetings in 1998 until present, all WGs and plenary meetings are represented by dedicated meeting folders on the FTP server. These meeting folders include the documents discussed at the meetings. Both the folders and the documents are accessible to the

public. Almost every week, a new meeting folder with the respective documents is added. As an example, the screenshot below shows an extract of the RAN WG2 folder named "WG2_RL2" showing that every meeting has a dedicated number:



49. As an example, the screenshot below shows the typical structure of a meeting folder including the most important folders "Agenda", "Docs" (includes all meeting contributions), and "Report" (includes the meeting report):



50. In addition to the plenary and WG meeting folders, and some other folders, there is also the "Specs" folder, which holds all 3GPP specifications including the aforementioned "snapshot" and archive folders. Since the early days of 3GPP a new folder is added inside the "Specs" folder after each TSG plenary meeting to hold the latest versions of specifications approved at those TSG plenary meetings. This is still 3GPP's working practice today; thus, this practice has not changed over time.

51. 3GPP maintains a set of publicly accessible documents[2] providing further details on its way of working:

[2] All available from https://www.3gpp.org/delegates-corner/3gpp-working-procedures

- 3GPP Working Procedures
- Vocabulary for 3GPP Specifications 3GPP TR 21.905
- Working Methods 3GPP TR 21.900
- Specification Drafting Rules 3GPP TR 21.801

B. Specific Documents

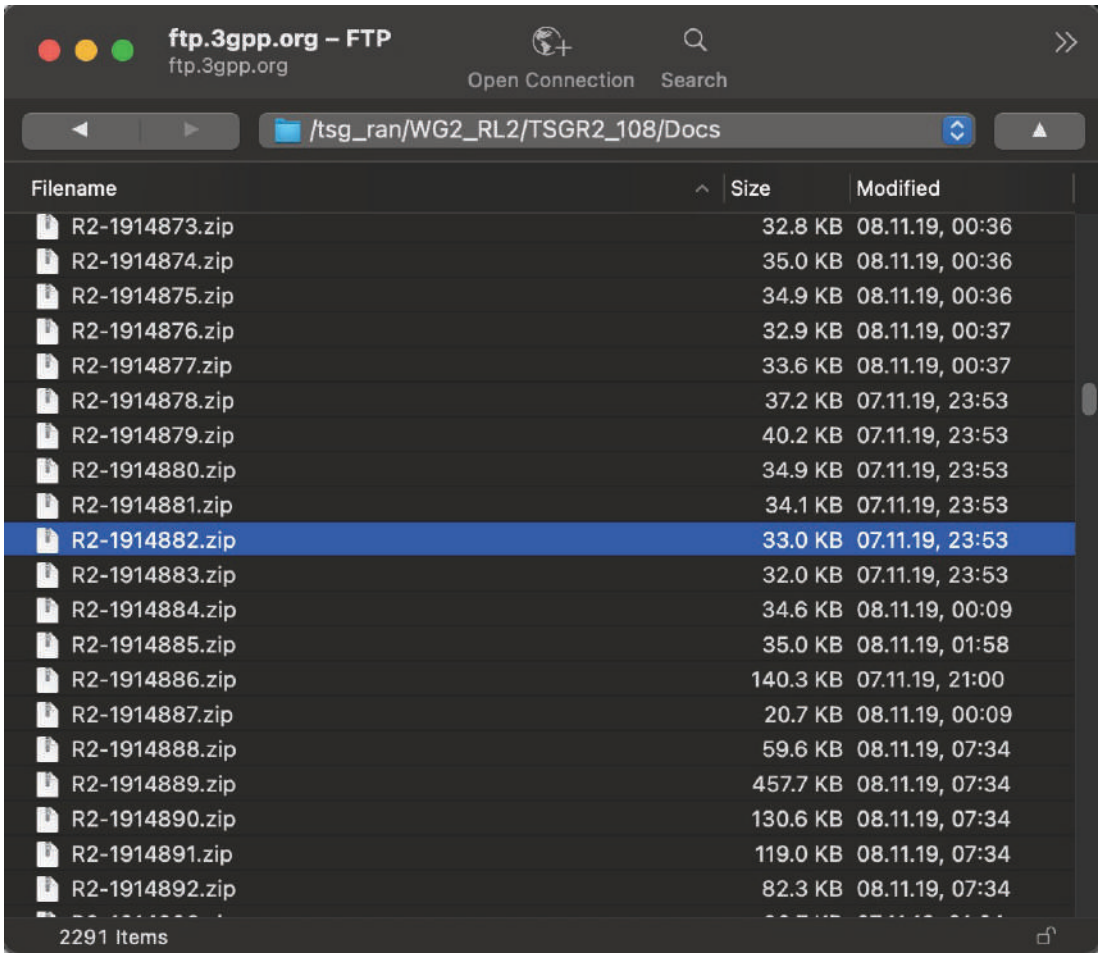
1. TDoc R2-1914882

52. Based on my personal knowledge and my review of 3GPP's business records, I recognize EX1007 as a true and correct copy of 3GPP TDoc R2-1914882, which represents a 3GPP document with the title "Handling UL LBT Failures in MAC." The document was authored by InterDigital and discussed remaining details for handling UL LBT failures in MAC, including a detection, recovery, and reporting behaviour. Usually, the TDoc number of a 3GPP meeting document is shown in the upper right corner of the cover page but for this document the TDoc number has not been filled in by mistake. In any case, the TDoc number R2-1914882 is reflected in the filename.

53. On its face, R2-1914882 refers to the RAN WG2 meeting #108 held on Nov. 18th–22nd, 2019, in Reno, USA. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this

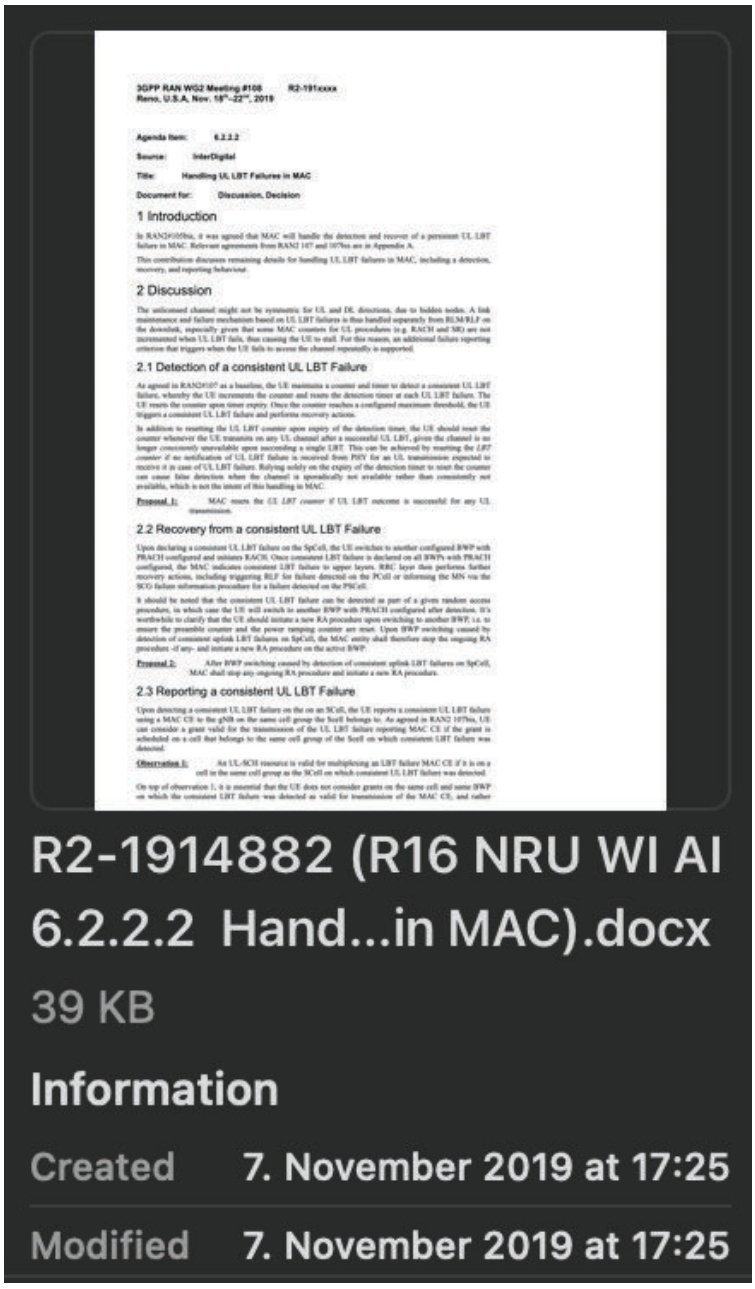
information tells me that R2-1914882 was available either prior to or during that meeting to at least all attending 3GPP members.

54. The public availability of the document is confirmed by the date stamp, November 7, 2019, shown on the historic 3GPP FTP server for the corresponding downloadable file ("R2-1914882.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20200626124042/https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_108/Docs/. This information is also shown on the date stamp for the present-day listing of the same document on the 3GPP FTP server at https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_108/Docs as shown in the screenshot below:



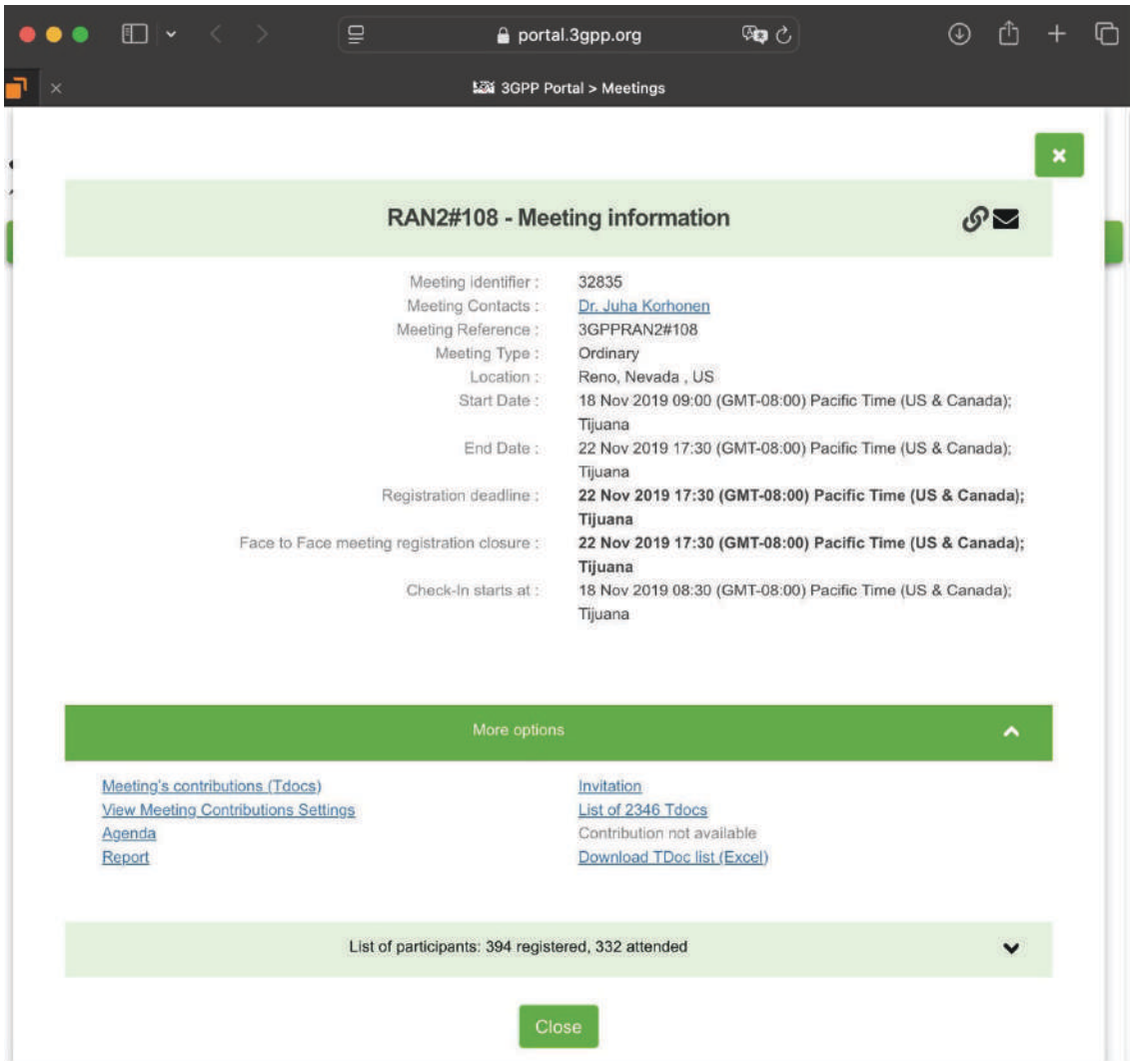
55. Experts in the field of determining the public availability of 3GPP documents would reasonably rely upon the FTP server upload date on the 3GPP FTP server as the date the document became available to the public.

56. In addition, metadata information for the downloaded and extracted TDoc file states a last Modified date of "7. November 2019," as shown in the screenshot below.



57. This last modified date is consistent with the November 7, 2019, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

58. The final meeting report of the RAN WG2 meeting #108 held on November 18-22, 2019, can be found in Appendix C. According to the 3GPP website at https://portal.3gpp.org/Meetings.aspx#/ which is shown by the screenshot below, that meeting was attended by 332 individuals (out of 394 registered participants):



59. The meeting report mentions R2-1914882 on page 77 which clearly indicates that the document was registered for this meeting. Furthermore, the meeting report includes in the zip file the meeting's document list of which an

excerpt can be found in Appendix D[3]. R2-1914882 is listed in row 584 and is tagged as "available" which clearly shows the document was available at the meeting. Furthermore, the "Upload" date is shown as "2019-11-07" as can be seen by the screenshot below:



	TDoc	Title	Source	TDoc Status	Reservation date	Uploaded
1						
584	R2-1914882	Handling UL LBT Failures	InterDigital	available	2019-11-07 00:29:05	2019-11-07 23:53:19

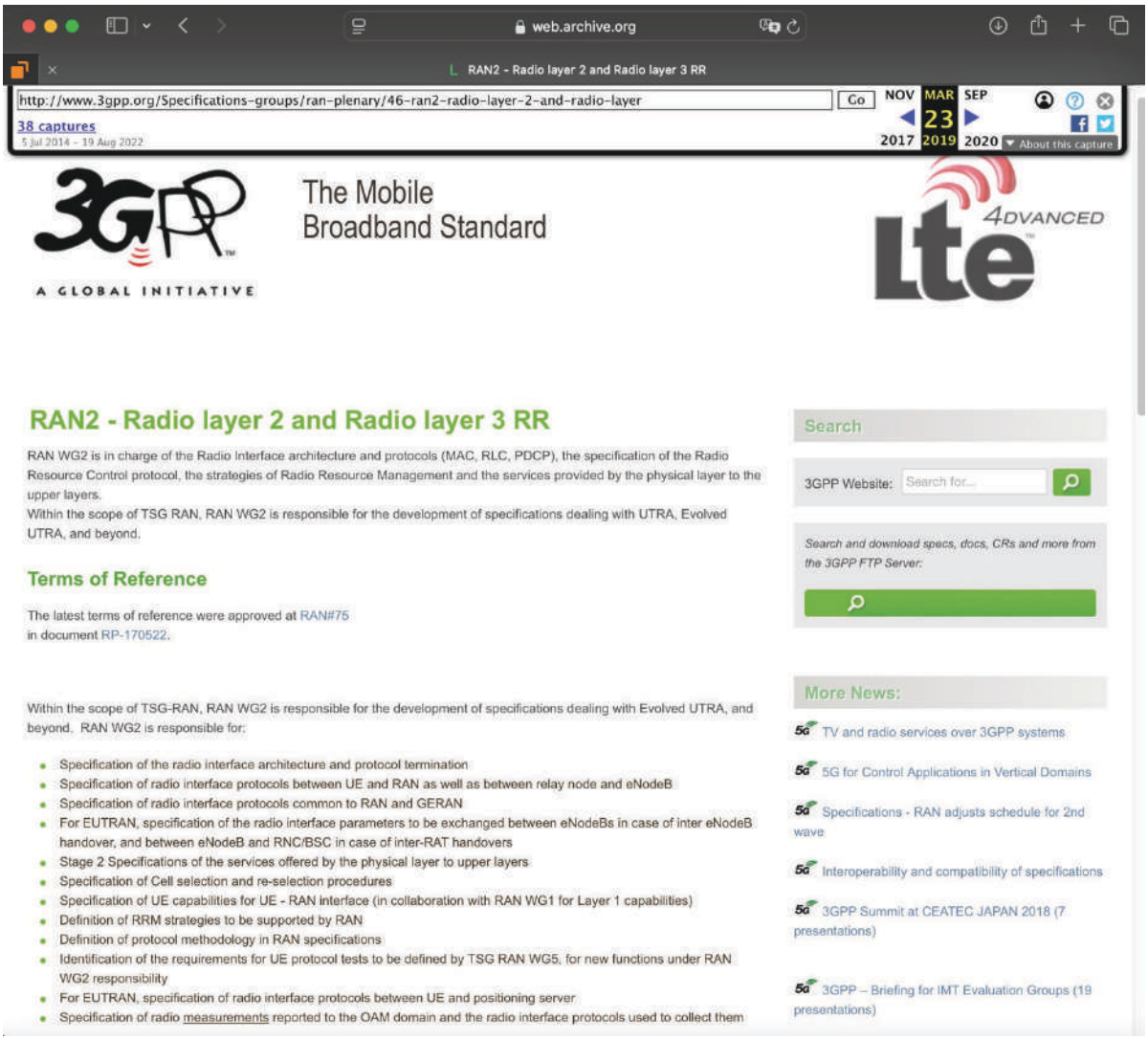
60. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, EX1007 is an authentic copy of 3GPP TDoc R2-1914882 that was uploaded and made available via the 3GPP FTP server to the general public by November 7, 2019, at the latest. The interested public would have been able to locate R2-1914882 on the 3GPP server as of that date by November 23, 2019, at the latest, as described below.

61. Members of the public would have been able to locate R2-1914882 in several ways. Starting from the 3GPP homepage, one way of finding the desired information and documents was to discover the technical responsibilities of the different 3GPP working groups by clicking on "Specification Groups". This led to the webpage shown above (paragraph 30) where a member of the public would have observed that RAN WG2 has responsibility for "Radio layer 2 and Radio layer 3

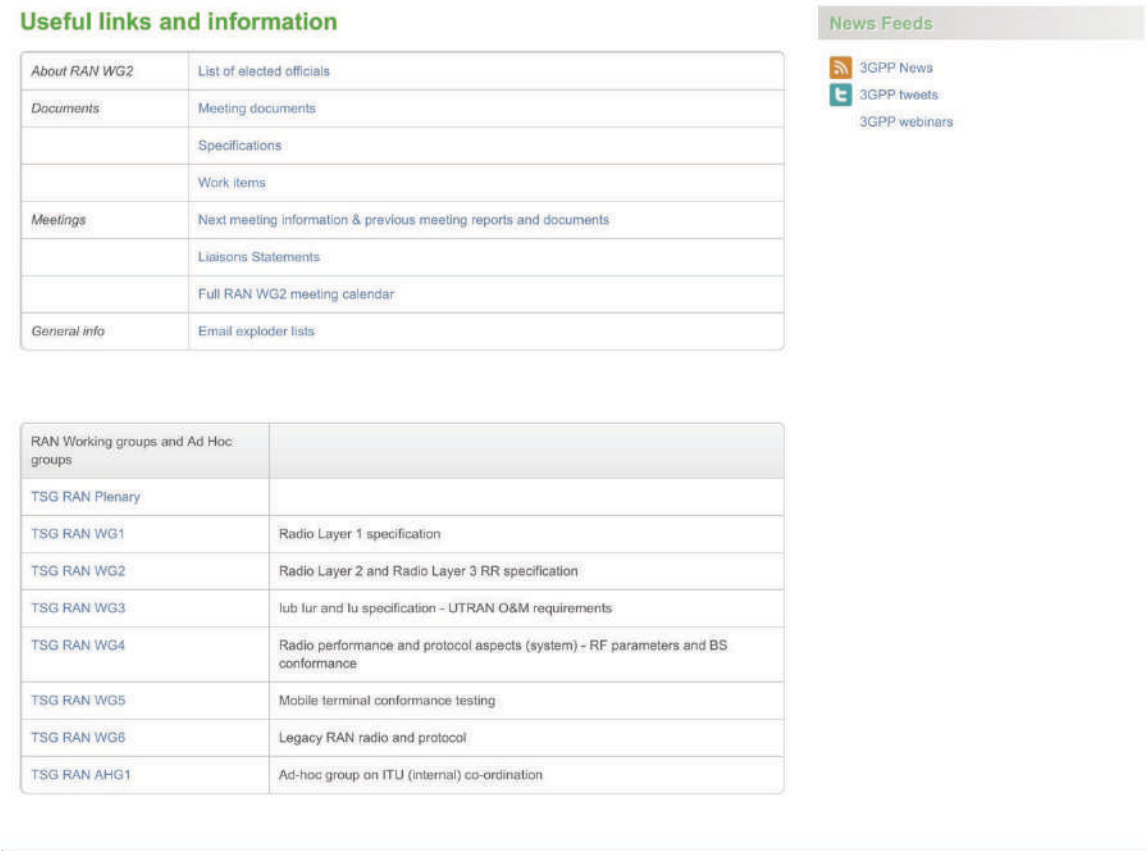
[3] Given the size of the document list with over 2000 rows (documents) and over 30 columns the Appendix only includes the columns relevant for this declaration: TDoc, Title, Source, TDoc Status, Reservation date, Uploaded.

Radio Resource Control". Clicking on "RAN WG2" led to a page titled "RAN2 – Radio layer 2 and Radio layer 3 RR" showing several links leading to further information about RAN WG2 (the elected officials, documents, specifications, work items, meeting information, including meeting reports and associated documents, Liaison Statements, and the email exploder lists), as shown below:[4]

[4] https://web.archive.org/web/20190323225709/http://www.3gpp.org/Specifications-groups/ran-plenary/46-ran2-radio-layer-2-and-radio-layer.


web.archive.org
RAN2 - Radio layer 2 and Radio layer 3 RR
http://www.3gpp.org/Specifications-groups/ran-plenary/46-ran2-radio-layer-2-and-radio-layer
Go
38 captures
5 Jul 2014 - 19 Aug 2022
NOV MAR SEP
2017 23 2019 2020
About this capture
3GPP
A GLOBAL INITIATIVE
The Mobile Broadband Standard
LTE ADVANCED
RAN2 - Radio layer 2 and Radio layer 3 RR
RAN WG2 is in charge of the Radio Interface architecture and protocols (MAC, RLC, PDCP), the specification of the Radio Resource Control protocol, the strategies of Radio Resource Management and the services provided by the physical layer to the upper layers.
Within the scope of TSG RAN, RAN WG2 is responsible for the development of specifications dealing with UTRA, Evolved UTRA, and beyond.
Terms of Reference
The latest terms of reference were approved at RAN#75 in document RP-170522.
Within the scope of TSG-RAN, RAN WG2 is responsible for the development of specifications dealing with Evolved UTRA, and beyond. RAN WG2 is responsible for:
Specification of the radio interface architecture and protocol termination
Specification of radio interface protocols between UE and RAN as well as between relay node and eNodeB
Specification of radio interface protocols common to RAN and GERAN
For EUTRAN, specification of the radio interface parameters to be exchanged between eNodeBs in case of inter eNodeB handover, and between eNodeB and RNC/BSC in case of inter-RAT handovers
Stage 2 Specifications of the services offered by the physical layer to upper layers
Specification of Cell selection and re-selection procedures
Specification of UE capabilities for UE - RAN interface (in collaboration with RAN WG1 for Layer 1 capabilities)
Definition of RRM strategies to be supported by RAN
Definition of protocol methodology in RAN specifications
Identification of the requirements for UE protocol tests to be defined by TSG RAN WG5, for new functions under RAN WG2 responsibility
For EUTRAN, specification of radio interface protocols between UE and positioning server
Specification of radio measurements reported to the OAM domain and the radio interface protocols used to collect them
Search
3GPP Website: Search for...
Search and download specs, docs, CRs and more from the 3GPP FTP Server:
More News:
TV and radio services over 3GPP systems
5G for Control Applications in Vertical Domains
Specifications - RAN adjusts schedule for 2nd wave
Interoperability and compatibility of specifications
3GPP Summit at CEATEC JAPAN 2018 (7 presentations)
3GPP – Briefing for IMT Evaluation Groups (19 presentations)

...



Useful links and information

About RAN WG2	List of elected officials
Documents	Meeting documents
	Specifications
	Work items
Meetings	Next meeting information & previous meeting reports and documents
	Liaisons Statements
	Full RAN WG2 meeting calendar
General info	Email exploder lists

News Feeds

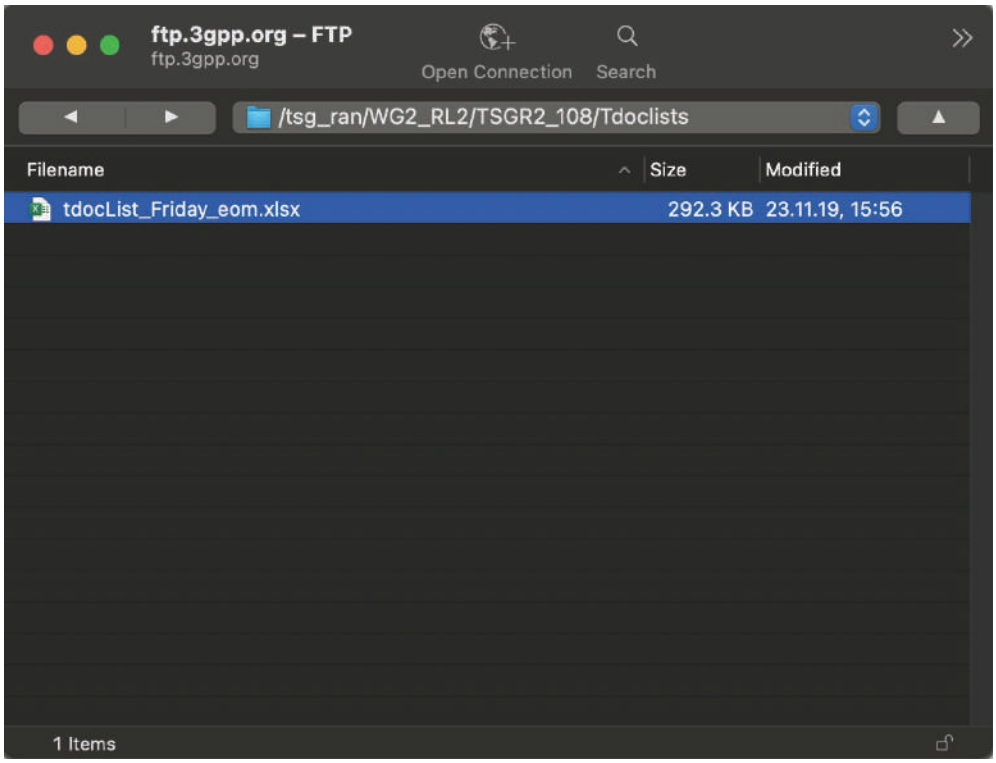
3GPP News
3GPP tweets
3GPP webinars

RAN Working groups and Ad Hoc groups	
TSG RAN Plenary	
TSG RAN WG1	Radio Layer 1 specification
TSG RAN WG2	Radio Layer 2 and Radio Layer 3 RR specification
TSG RAN WG3	Iub Iur and Iu specification - UTRAN O&M requirements
TSG RAN WG4	Radio performance and protocol aspects (system) - RF parameters and BS conformance
TSG RAN WG5	Mobile terminal conformance testing
TSG RAN WG6	Legacy RAN radio and protocol
TSG RAN AHG1	Ad-hoc group on ITU (internal) co-ordination

62. For a member of the public interested in learning more about the activities of the working group, the "Meeting documents" link led to 3GPP's folder for RAN WG2 (named WG2_RL2 where "RL2" stands for radio layer 2) hosted on 3GPP's ftp server. Besides other documents, the folder largely consists of numbered meeting folders which include the documents of specific meetings, as shown above in paragraph 48. Furthermore, paragraph 49 above shows the structure of a meeting folder which consists of at least the following dedicated folders: "Agenda", "Docs", "Invitation", and "Report".

63. As one example, it would have been straightforward for members of the public to identify documents related to specific technical topics via the report of a meeting which was available to be downloaded from the "Report" folder. The meeting report includes information about all documents registered for a meeting, including the T-doc number, title describing the subject matter of the contribution, the author(s), the status of the document, and any related discussion of the T-doc from the meeting. The T-doc numbers enable any person to retrieve the document from the "Docs" folder and study and share the document without restrictions.

64. For example, as explained above, page 77 of the meeting report for the RAN WG2 meeting #108 meeting, and line 584 of the document list attached to the meeting report, included the T-doc number and the title "Handling UL LBT Failures in MAC," which describes the subject matter of the submission. In addition to the final document list mentioned above, earlier versions of the document list were made available via the FTP server such as a version uploaded shortly after the meeting, on November 23, 2019, as can be seen below:



65. The above-mentioned document list "tdocList-Friday-eom.xlsx" ("eom" stands for end of meeting) is available in Annex I, and R2-1914882 is listed in row 584 and is tagged as "available" which clearly shows the document was available at the meeting. Furthermore, the "Uploaded" date is shown as "07.11.19" as can be seen by the screenshot below:

	A	B	C	N	O	P
1	Tdoc	Title	Source	TDoc Status	Reservation date	Uploaded
584	R2-1914882	Handling UL LBT Failures	InterDigital	available	07.11.19	07.11.19

66. Therefore, no later than November 23, 2019, members of the public would have had access to a subject matter index of submissions to RAN WG2 #108, including R2-1914882 and would have had access to additional subject matter indices thereafter, including as part of the final meeting minutes and T-doc list.

67. A member of the public who was reviewing the meeting minutes or the document list would not have encountered any difficulty locating R2-1914882 on the FTP server in the "Docs" folder for RAN WG2 #108 by no later than November 23, 2019, by using the R2-1914882 T-doc number.

68. At least after November 23, 2019, members of the public interested in cellular communications and the development of wireless communication standards would have been aware of 3GPP's standard business practices for the organization of documents on the FTP server, including the location of materials for the RAN WG2 (or would have learned of the responsibilities of RAN WG2, and the location of RAN WG2's materials on the FTP server) and would have been able to locate R2-1914882 after exercising reasonable diligence, including by using the T-doc titles in the meeting minutes or the document list as a subject matter index to locate R2-1914882.

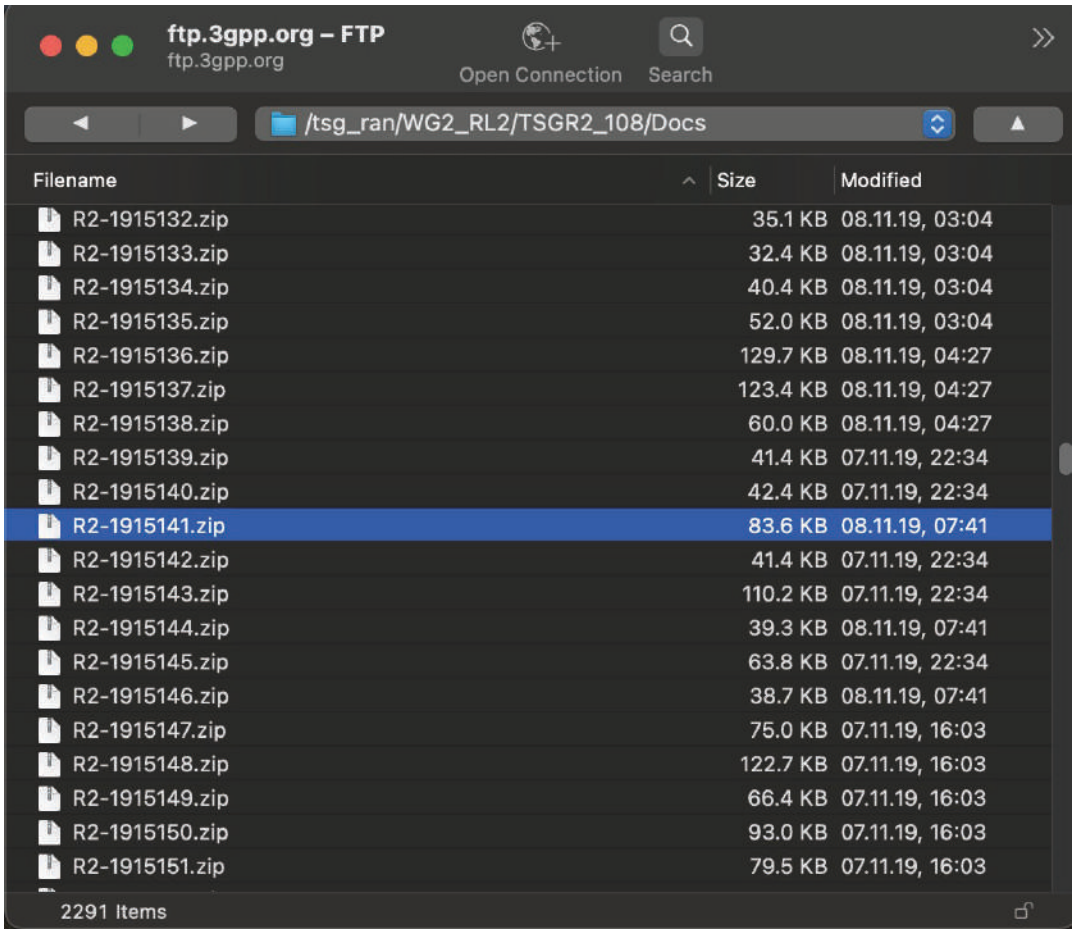
2. TDoc R2-1915141

69. Based on my personal knowledge and my review of 3GPP's business records, I recognize EX1008 as a true and correct copy of 3GPP TDoc R2-1915141, which represents a 3GPP document with the title "Handling of UL LBT

failure." The document was authored by Huawei, HiSilicon and it discussed remaining issues and proposals on UL LBT failure based on previous agreements.

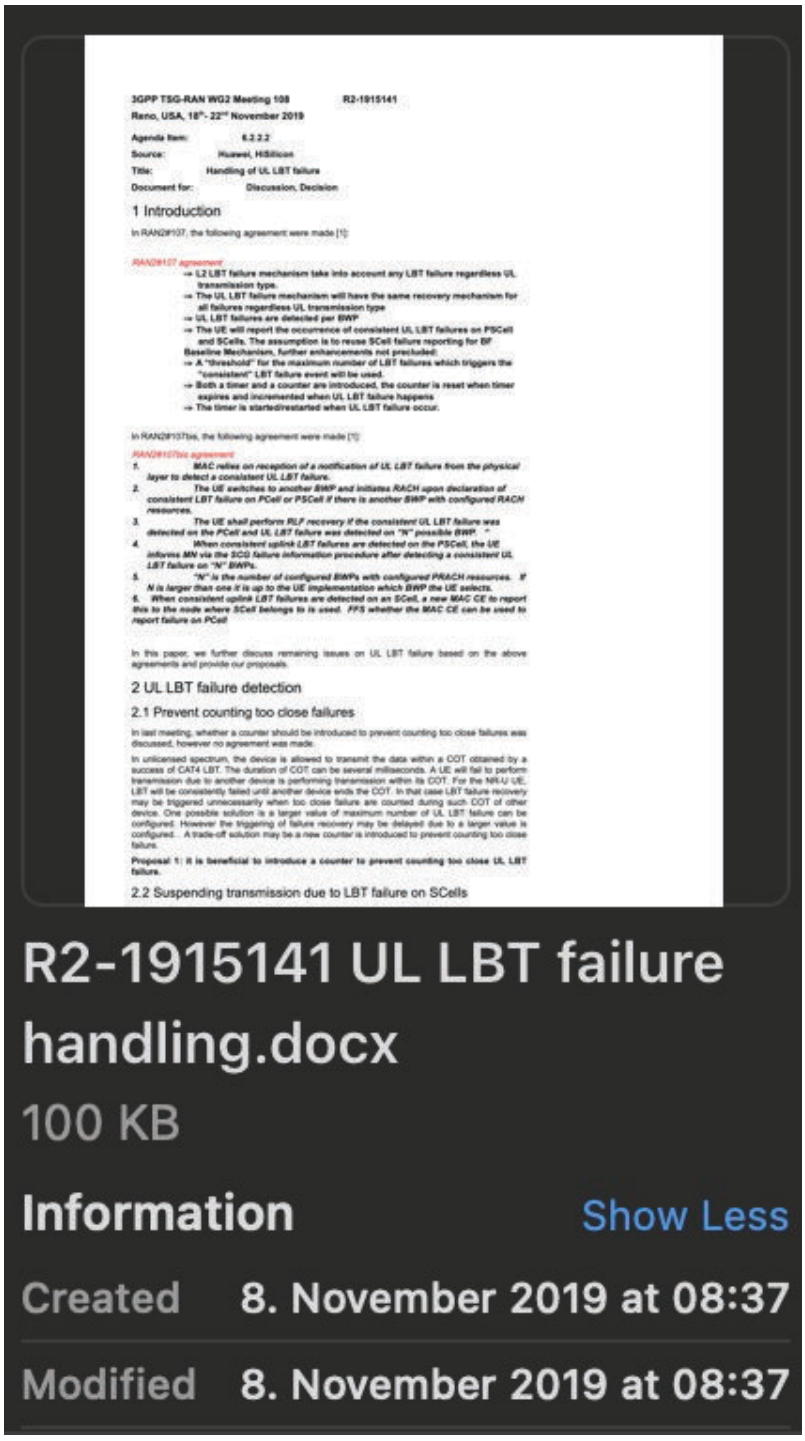
70. On its face, R2-1915141 refers to the RAN WG2 meeting #108 held on Nov. 18th–22nd, 2019, in Reno, USA. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that R2-1915141 was available either prior to or during that meeting to at least all attending 3GPP members.

71. The public availability of the document is confirmed by the date stamp, November 8, 2019, shown on the historic 3GPP FTP server for the corresponding downloadable file ("R2-1915141.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20200626124042/https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_108/Docs/. This information is also shown on the date stamp for the present-day listing of the same document on the 3GPP FTP server at https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_108/Docs as shown in the screenshot below:



72. Experts in the field of determining the public availability of 3GPP documents would reasonably rely upon the FTP server upload date on the 3GPP FTP server as the date the document became available to the public.

73. In addition, metadata information for the downloaded and extracted TDoc file states a last Modified date of "8. November 2019," as shown in the screenshot below.



3GPP TSG-RAN WG2 Meeting 108 R2-1915141
Reno, USA, 18th- 22nd November 2019

Agenda Item: 6.2.3.2
Source: Huawei, HiSilicon
Title: Handling of UL LBT failure
Document for: Discussion, Decision

1 Introduction

In RAN2#107, the following agreement were made [1]:

RAN2#107 agreement

- ⇒ L2 LBT failure mechanism take into account any LBT failure regardless UL transmission type.
- ⇒ The UL LBT failure mechanism will have the same recovery mechanism for all failures regardless UL transmission type
- ⇒ UL LBT failures are detected per BWP
- ⇒ The UE will report the occurrence of consistent UL LBT failures on PSCell and SCells. The assumption is to reuse SCell failure reporting for BF Baseline Mechanism, further enhancements not precluded.
- ⇒ A "threshold" for the maximum number of LBT failures which triggers the "consistent" LBT failure event will be used.
- ⇒ Both a timer and a counter are introduced, the counter is reset when timer expires and incremented when UL LBT failure happens
- ⇒ The timer is started/restarted when UL LBT failure occur.

In RAN2#107bis, the following agreement were made [1]:

RAN2#107bis agreement

1. *MAC relies on reception of a notification of UL LBT failure from the physical layer to detect a consistent UL LBT failure.*
2. *The UE switches to another BWP and initiates RACH upon declaration of consistent LBT failure on PCell or PSCell if there is another BWP with configured RACH resources.*
3. *The UE shall perform RLF recovery if the consistent UL LBT failure was detected on the PCell and UL LBT failure was detected on "N" possible BWP. "*
4. *When consistent uplink LBT failures are detected on the PSCell, the UE informs MN via the SCG failure information procedure after detecting a consistent UL LBT failure on "N" BWPs.*
5. *"N" is the number of configured BWPs with configured PRACH resources. If N is larger than one it is up to the UE implementation which BWP the UE selects.*
6. *When consistent uplink LBT failures are detected on an SCell, a new MAC CE to report this to the node where SCell belongs to is used. FFS whether the MAC CE can be used to report failure on PCell*

In this paper, we further discuss remaining issues on UL LBT failure based on the above agreements and provide our proposals.

2 UL LBT failure detection

2.1 Prevent counting too close failures

In last meeting, whether a counter should be introduced to prevent counting too close failures was discussed, however no agreement was made.

In unlicensed spectrum, the device is allowed to transmit the data within a COT obtained by a success of CAT4 LBT. The duration of COT can be several milliseconds. A UE will fail to perform transmission due to another device is performing transmission within its COT. For the NR-U UE, LBT will be consistently failed until another device ends the COT. In that case LBT failure recovery may be triggered unnecessarily when too close failure are counted during such COT of other device. One possible solution is a larger value of maximum number of UL LBT failure can be configured. However the triggering of failure recovery may be delayed due to a larger value is configured. A trade-off solution may be a new counter is introduced to prevent counting too close failure.

Proposal 1: It is beneficial to introduce a counter to prevent counting too close UL LBT failure.

2.2 Suspending transmission due to LBT failure on SCells

R2-1915141 UL LBT failure handling.docx

100 KB

Information Show Less

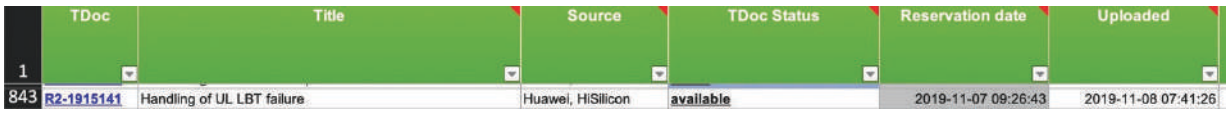
Created 8. November 2019 at 08:37

Modified 8. November 2019 at 08:37

74. This last modified date is consistent with the November 8, 2019, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

75. The final meeting report of the RAN WG2 meeting #108 held on November 18-22, 2019, can be found in Appendix C.

76. The meeting report mentions R2-1915141 on page 77 which clearly indicates that the document was registered for this meeting. Furthermore, the meeting report includes in the zip file the meeting's document list of which an excerpt can be found in Appendix D[5]. R2-1915141 is listed in row 843 and is tagged as "available" which clearly shows the document was available at the meeting. Furthermore, the "Upload" date is shown as "2019-11-08" as can be seen by the screenshot below:



	TDoc	Title	Source	TDoc Status	Reservation date	Uploaded
1						
843	R2-1915141	Handling of UL LBT failure	Huawei, HiSilicon	available	2019-11-07 09:26:43	2019-11-08 07:41:26

77. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, EX1008 is an authentic copy of 3GPP TDoc R2-1915141 that was uploaded and made available via the 3GPP FTP server to the general public by November 8, 2019, at the latest.

[5] Given the size of the document list with over 2000 rows (documents) and over 30 columns the Appendix only includes the columns relevant for this declaration: TDoc, Title, Source, TDoc Status, Reservation date, Uploaded.

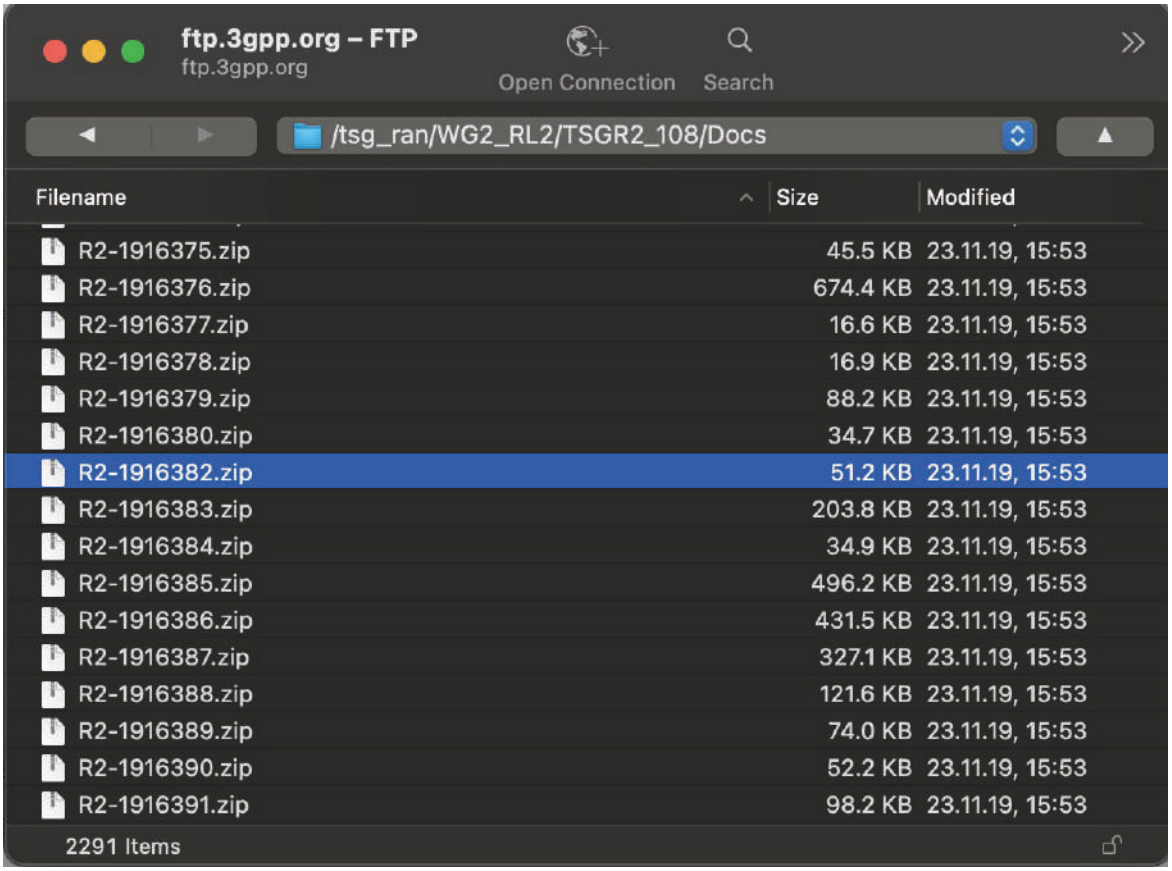
3. TDoc R2-1916382

78. Based on my personal knowledge and my review of 3GPP's business records, I recognize EX1009 as a true and correct copy of 3GPP TDoc R2-1916382, which represents a 3GPP document with the title "Report of offline-403 - Remaining issues of consistent UL LBT failure." The document was authored by OPPO and represents a summary of an offline discussion of the RAN2#108 meeting regarding remaining issues on consistent uplink LBT failure for NR-U.

79. On its face, R2-1914882 refers to the RAN WG2 meeting #108 held on Nov. 18th–22nd, 2019, in Reno, USA. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that R2-1914882 was available either prior to or during that meeting to at least all attending 3GPP members.

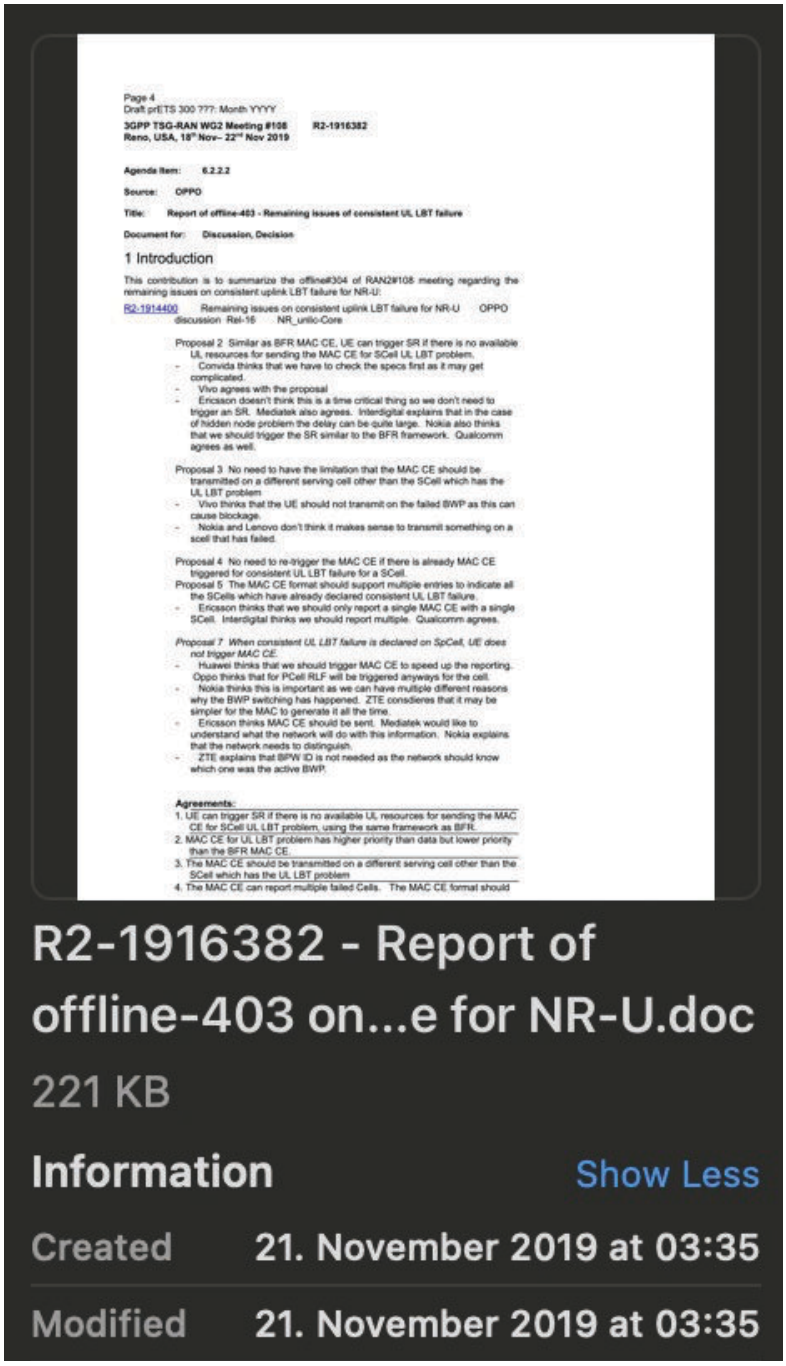
80. The public availability of the document is confirmed by the date stamp, November 23, 2019, shown on the historic 3GPP FTP server for the corresponding downloadable file ("R2-1916382.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20200626124042/https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_108/Docs/. This information is also shown on the date stamp for the present-day listing of the same document on the 3GPP FTP server at

https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_108/Docs as shown in the screenshot below:



81. Experts in the field of determining the public availability of 3GPP documents would reasonably rely upon the FTP server upload date on the 3GPP FTP server as the date the document became available to the public.

82. In addition, metadata information for the downloaded and extracted TDoc file states a last Modified date of "21. November 2019," as shown in the screenshot below.



Page 4
Draft prETS 300 777: Month YYYY

3GPP TSG-RAN WG2 Meeting #108 **R2-1916382**
Reno, USA, 18th Nov– 22nd Nov 2019

Agenda item: 6.2.2.2

Source: OPPO

Title: Report of offline-403 - Remaining issues of consistent UL LBT failure

Document for: Discussion, Decision

1 Introduction

This contribution is to summarize the offline#304 of RAN2#108 meeting regarding the remaining issues on consistent uplink LBT failure for NR-U:

R2-1914400 Remaining issues on consistent uplink LBT failure for NR-U discussion Rel-16 NR_unlic-Core OPPO

Proposal 2 Similar as BFR MAC CE, UE can trigger SR if there is no available UL resources for sending the MAC CE for SCell UL LBT problem.
- Convida thinks that we have to check the specs first as it may get complicated.
- Vivo agrees with the proposal
- Ericsson doesn't think this is a time critical thing so we don't need to trigger an SR. Mediatek also agrees. Interdigital explains that in the case of hidden node problem the delay can be quite large. Nokia also thinks that we should trigger the SR similar to the BFR framework. Qualcomm agrees as well.

Proposal 3 No need to have the limitation that the MAC CE should be transmitted on a different serving cell other than the SCell which has the UL LBT problem
- Vivo thinks that the UE should not transmit on the failed BWP as this can cause blockage.
- Nokia and Lenovo don't think it makes sense to transmit something on a scell that has failed.

Proposal 4 No need to re-trigger the MAC CE if there is already MAC CE triggered for consistent UL LBT failure for a SCell.

Proposal 5 The MAC CE format should support multiple entries to indicate all the SCells which have already declared consistent UL LBT failure.
- Ericsson thinks that we should only report a single MAC CE with a single SCell. Interdigital thinks we should report multiple. Qualcomm agrees.

Proposal 7 When consistent UL LBT failure is declared on SpCell, UE does not trigger MAC CE.
- Huawei thinks that we should trigger MAC CE to speed up the reporting. Oppo thinks that for PCell RLF will be triggered anyways for the cell.
- Nokia thinks this is important as we can have multiple different reasons why the BWP switching has happened. ZTE consdieres that it may be simpler for the MAC to generate it all the time.
- Ericsson thinks MAC CE should be sent. Mediatek would like to understand what the network will do with this information. Nokia explains that the network needs to distinguish.
- ZTE explains that BPW ID is not needed as the network should know which one was the active BWP.

Agreements:
1. UE can trigger SR if there is no available UL resources for sending the MAC CE for SCell UL LBT problem, using the same framework as BFR.
2. MAC CE for UL LBT problem has higher priority than data but lower priority than the BFR MAC CE.
3. The MAC CE should be transmitted on a different serving cell other than the SCell which has the UL LBT problem
4. The MAC CE can report multiple failed Cells. The MAC CE format should

R2-1916382 - Report of offline-403 on...e for NR-U.doc

221 KB

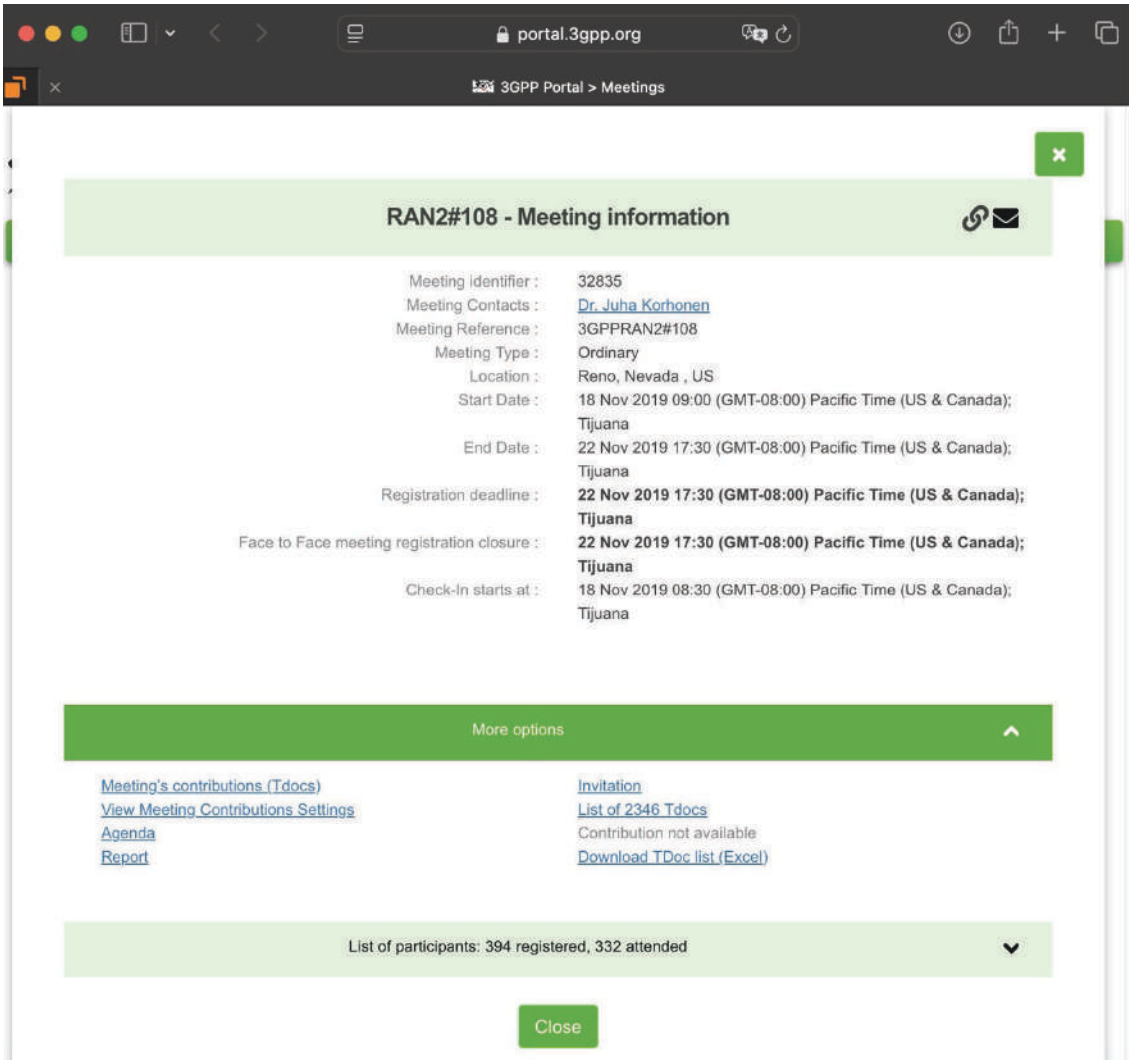
Information Show Less

Created 21. November 2019 at 03:35

Modified 21. November 2019 at 03:35

83. This last modified date is well aligned with the November 23, 2019, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

84. The final meeting report of the RAN WG2 meeting #108 held on November 18-22, 2019, can be found in Appendix C. According to the 3GPP website at https://portal.3gpp.org/Meetings.aspx#/ which is shown by the screenshot below, that meeting was attended by 332 individuals (out of 394 registered participants):



85. The RAN2 #108 meeting report mentions R2-1916382 on page 76 which clearly indicates that the document was registered for this meeting. Furthermore, the meeting report mentions the document as "Noted" – as shown below - which implies the document was treated at the meeting:

R2-1916382 Summary of UL LBT offline discussion Oppo
=> Noted

86. Furthermore, the meeting report includes in the zip file the meeting's document list of which an excerpt can be found in Appendix F[6]. R2-1916382 is listed in row 11, as can be seen by the screenshot below:

	TDoc	Title	Source	TDoc Status	Reservation date	Uploaded
1						
2084	R2-1916382	Report of offline-403 - Remaining issues of consistent UL LBT	OPPO	noted	2019-11-27 02:28:12	2019-11-27 02:38:04

87. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, EX1009 is an authentic copy of 3GPP TDoc R2-1916382 that was uploaded and made available via the 3GPP FTP server to the general public by November 23, 2011, at the latest.

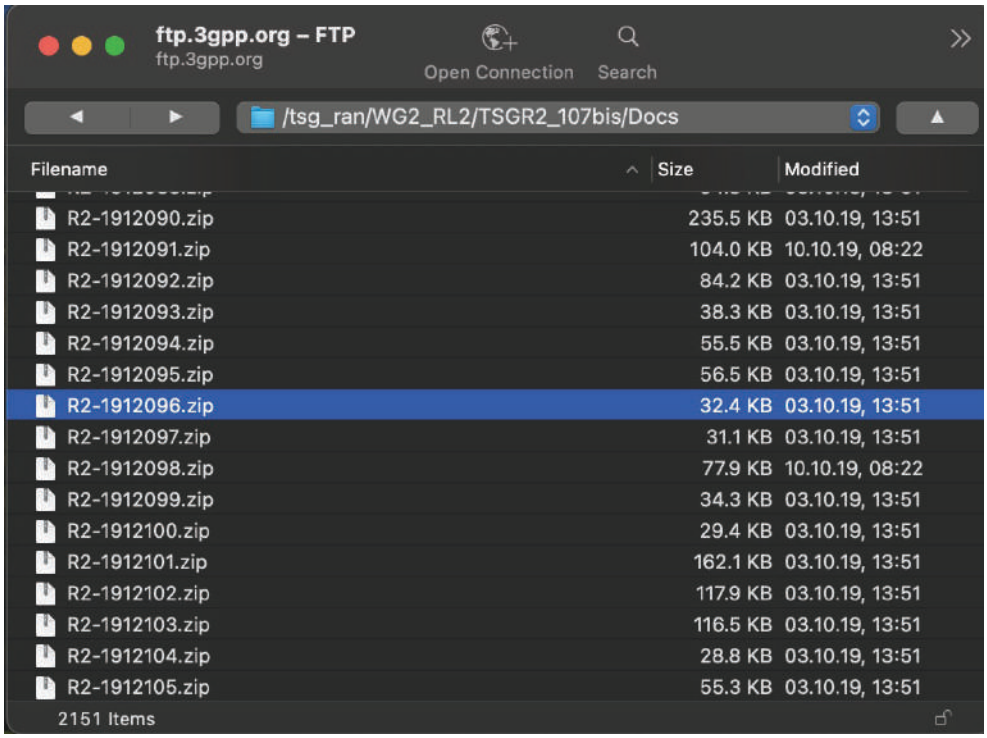
4. TDoc R2-1912096

[6] Given the size of the document list with over 2000 rows (documents) and over 30 columns the Appendix only includes the columns relevant for this declaration: TDoc, Title, Source, TDoc Status, Reservation date, Uploaded.

88. Based on my personal knowledge and my review of 3GPP's business records, I recognize EX1018 as a true and correct copy of 3GPP TDoc R2-1912096, which represents a 3GPP document with the title "Uplink LBT failure recovery for NR-U." The document was authored by Oppo and it discussed remaining issues on uplink LBT failure including the recovery behavior.

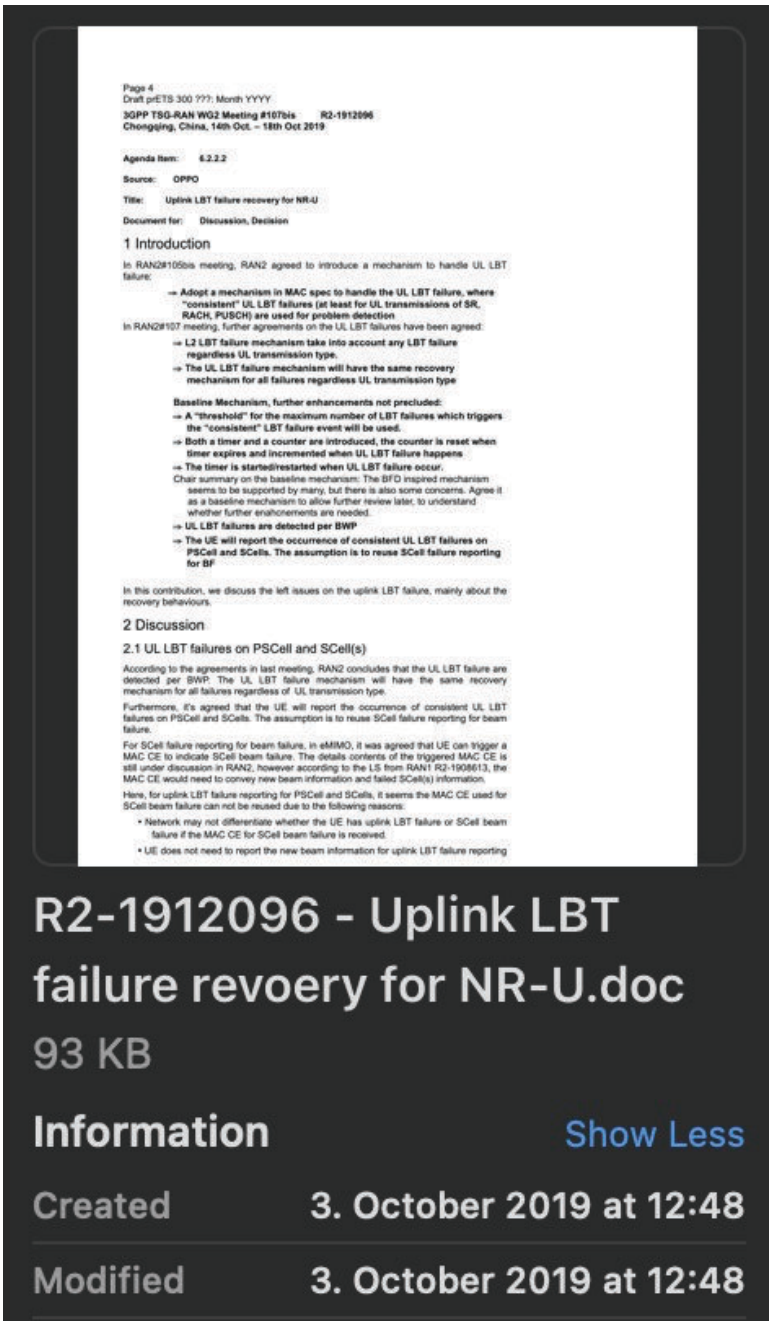
89. On its face, R2-1912096 refers to the RAN WG2 meeting #107bis held on October 14-18, 2019, in Chongqing, China. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that R2-1912096 was available either prior to or during or shortly after that meeting to at least all attending 3GPP members.

90. The public availability of the document is confirmed by the date stamp, October 3, 2019, shown on the historic 3GPP FTP server for the corresponding downloadable file ("R2-1912096.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20200621063846/https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_107bis/Docs. This information is also shown on the date stamp for the present-day listing of the same document on the 3GPP FTP server at https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_107bis/Docs as shown in the screenshot below:



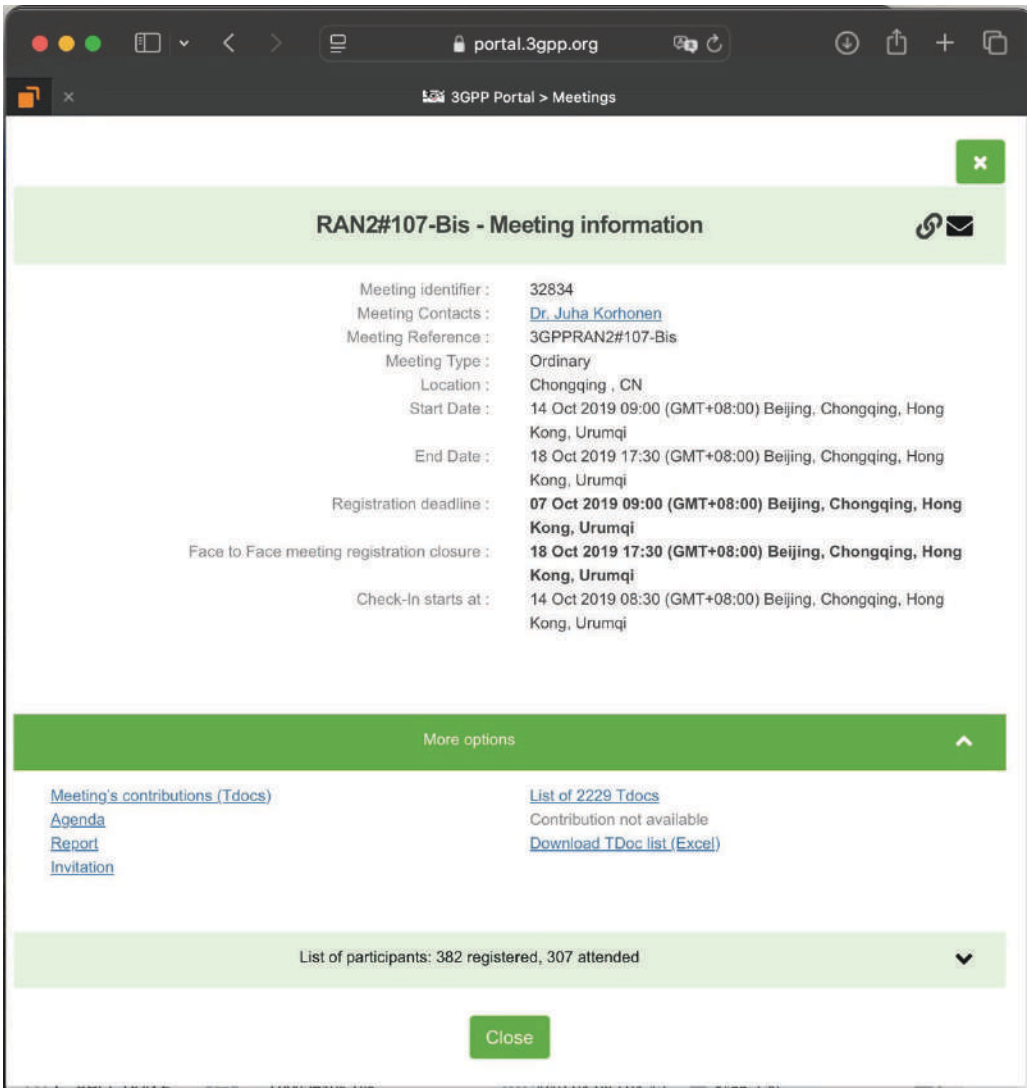
91. Experts in the field of determining the public availability of 3GPP documents would reasonably rely upon the FTP server upload date on the 3GPP FTP server as the date the document became available to the public.

92. In addition, metadata information for the downloaded and extracted TDoc file states a last Modified date of "3. October 2019," as shown in the screenshot below.



93. This last modified date is consistent with the October 3, 2019, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

94. The final meeting report of the RAN WG2 meeting #107bis held on October 14-18, 2019, in Chongqing, China, can be found in Appendix G. According to the 3GPP website at https://portal.3gpp.org/Meetings.aspx#/ which is shown by the screenshot below, that meeting was attended by 307 individuals (out of 382 registered participants):



95. The meeting report mentions R2-1912096 on page 69 which clearly indicates that the document was registered for this meeting, however, it is tagged as not treated (most likely due to meeting time constraints):

Not treated

R2-1912095	Remaining issues on detecting uplink LBT failure for NR-U	OPPO	discussion
R2-1912096	Uplink LBT failure revoery for NR-U	OPPO	discussion
R2-1912177	Remaining Issues on Uplink LBT Failure	vivo	discussion

69 / 283

96. Furthermore, the meeting report includes in the zip file the meeting's document list of which an excerpt can be found in Appendix H[7]. R2-1912096 is listed in row 98 which clearly shows the document registered for the meeting. Furthermore, the "Upload" date is shown as "2019-10-03" as can be seen by the screenshot below:

	TDoc	Title	Source	TDoc Status	Reservation date	Uploaded
1						
98	R2-1912096	Uplink LBT failure revoery for NR-U	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35

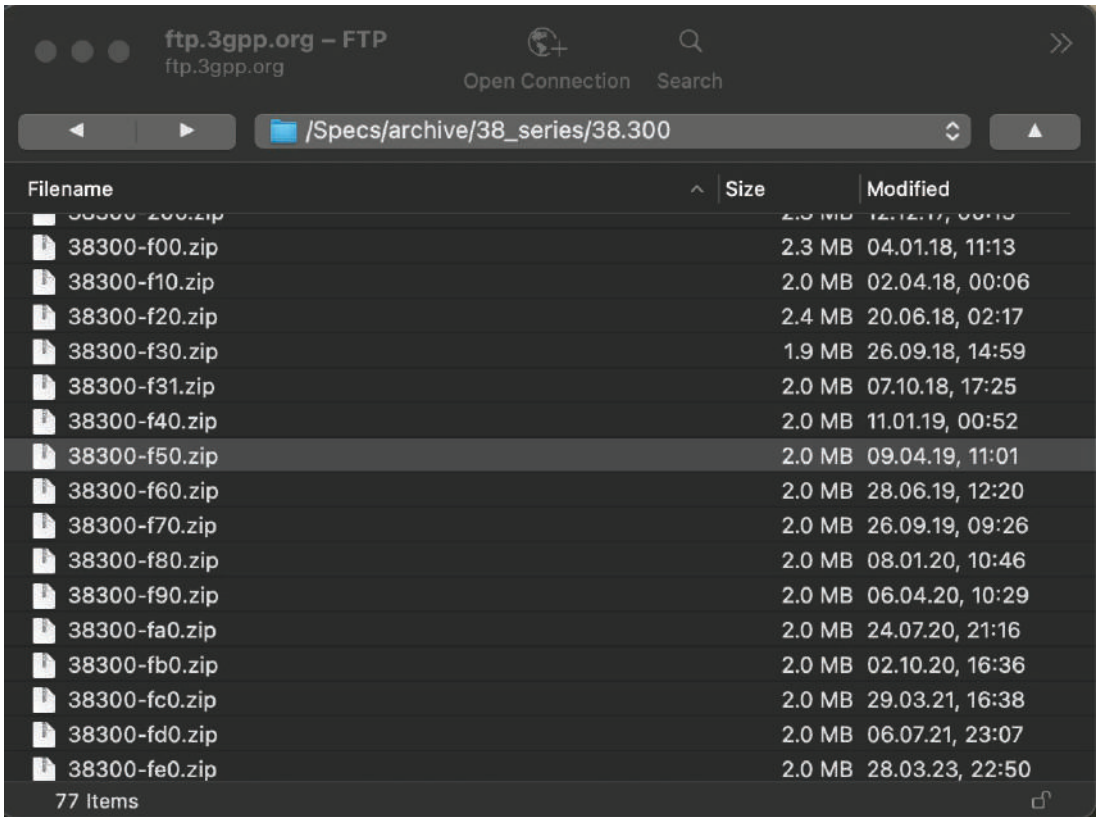
97. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, Ex. xxx is an authentic copy of 3GPP TDoc R2-1912096 that was uploaded and made available via the 3GPP FTP server to the general public by October 3, 2019, at the latest.

[7] Given the size of the document list with over 2000 rows (documents) and over 30 columns the Appendix only includes the columns relevant for this declaration: TDoc, Title, Source, TDoc Status, Reservation date, Uploaded.

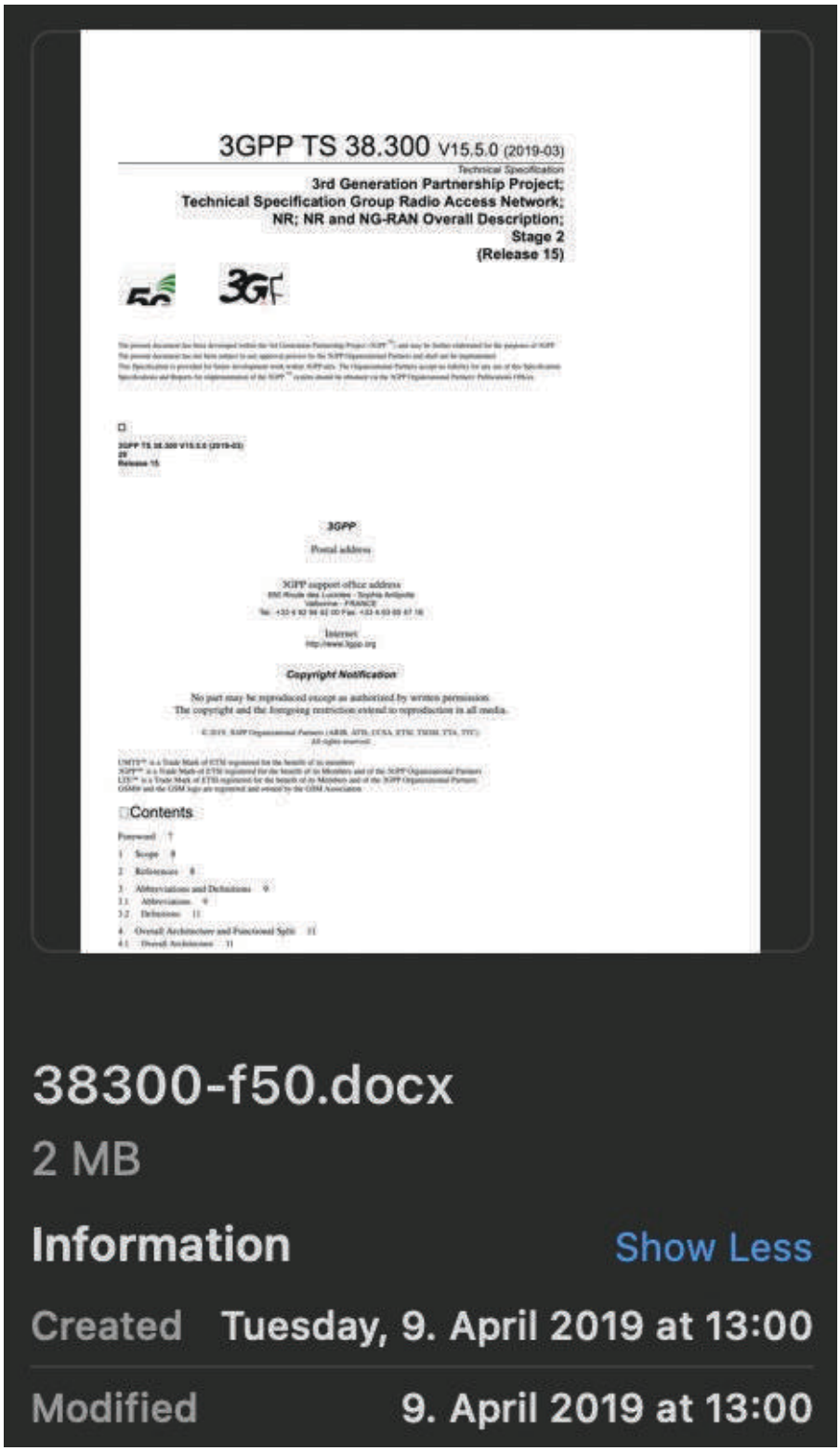
5. TS 38.300 V15.5.0

98. Based on my personal knowledge and my review of 3GPP's business records, I recognize EX1017 as a true and correct copy of version 15.5.0 of technical specification 3GPP TS 38.300 ("3rd Generation Partnership Project; Technical Specification Group Radio Access Network; NR; NR and NG-RAN Overall Description; Stage 2 (Release 15)"), which shows on its cover page "2019-03" as the year (2019) and month (March) during which this document was released by 3GPP.

99. The document was published and freely available on 3GPP's ftp server by April 9, 2019. This is confirmed by the date stamp shown on the historic 3GPP ftp server for the corresponding downloadable file ("38300-f50.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20200306020914/https://www.3gpp.org/ftp/Specs/archive/38_series/38.300/. This information is also shown on the date stamp for the present-day listing of the same document on the 3GPP ftp server at https://www.3gpp.org/ftp/Specs/archive/38_series/38.300, as shown by the screen shot below:

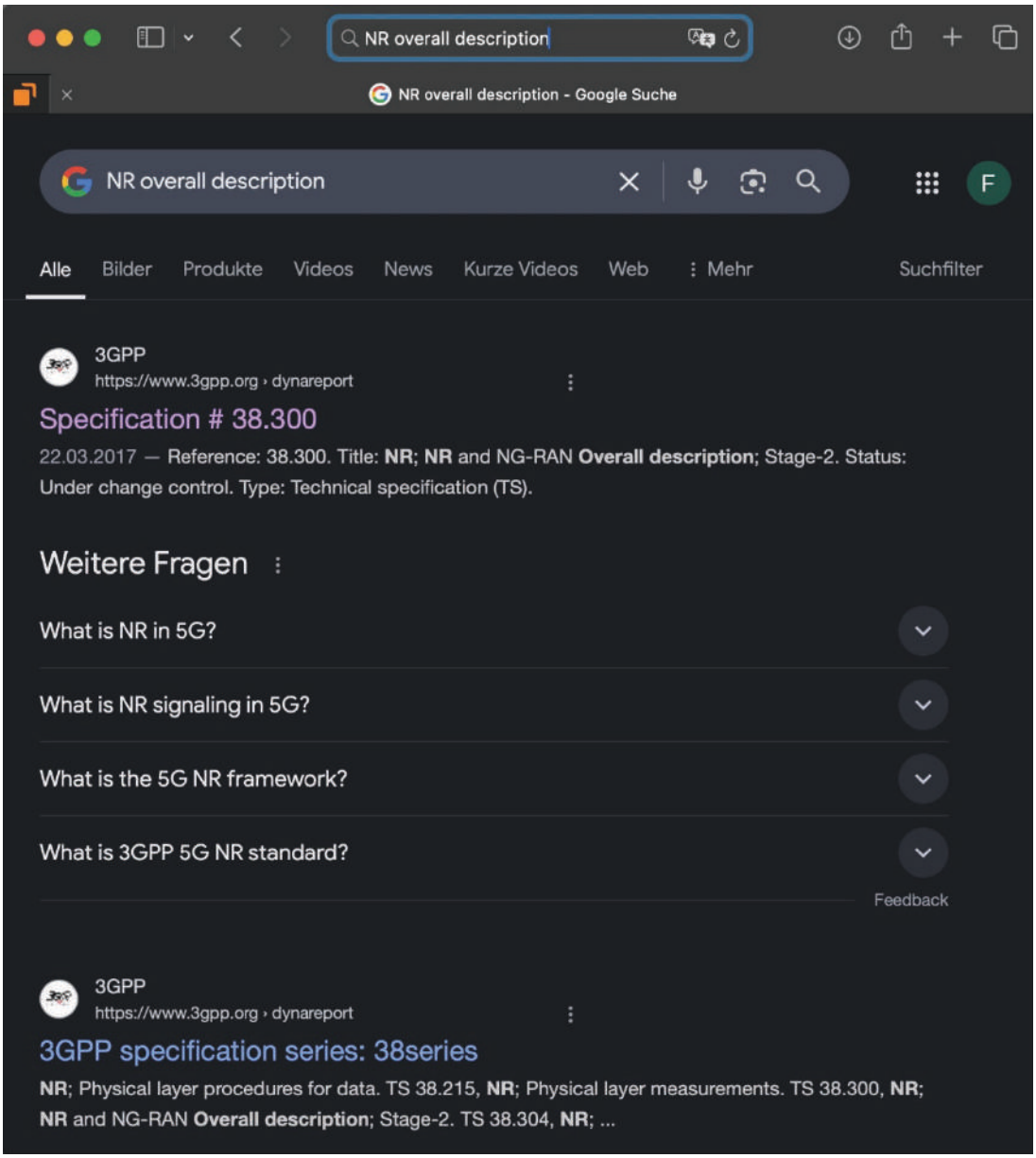


100. In addition, metadata information for the downloaded and extracted specification file states a last Modified date of "9. April 2019", as shown in the screenshot below:

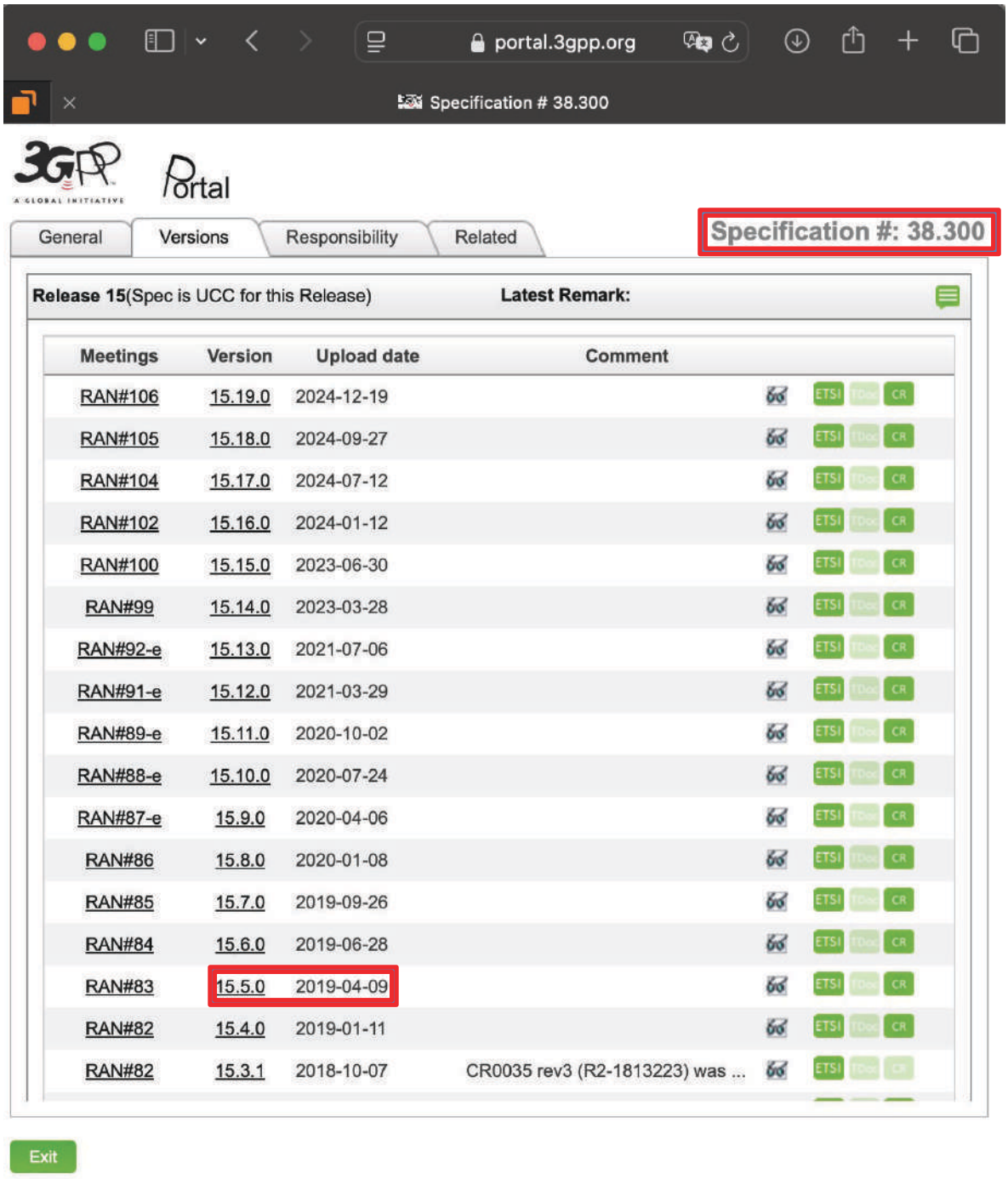

3GPP TS 38.300 V15.5.0 (2019-03)
Technical Specification
3rd Generation Partnership Project;
Technical Specification Group Radio Access Network;
NR; NR and NG-RAN Overall Description;
Stage 2
(Release 15)
3GPP
Postal address
Internet
Copyright Notification
No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.
Contents
38300-f50.docx
2 MB
Information
Show Less
Created
Tuesday, 9. April 2019 at 13:00
Modified
9. April 2019 at 13:00

101. This last modified date well aligned with the April 9, 2009, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

102. I believe that a person without prior knowledge of 3GPP and/or the technical specification (TS) number would have been able to easily find the TS for download via internet search. For instance, a Google search for "NR overall description" provides the TS number "38.300" as one of the top results as can be seen in the screenshot below:



103. Following the provided search result link “Specification # 38.300” leads to a 3GPP web page offering under the tab “Versions” download links to all versions of TS 38.300 including version 15.5.0, as shown by the screenshot below:



104. The above example search illustrates that it is very easy for an interested member of the public without prior knowledge of the TS number and even

without prior knowledge of 3GPP to locate any version of TS 38.300, including version 15.5.0, for download.

105. The above search was performed at the time of writing this report. According to my personal experience, in April 2019 or around that timeframe it would have been similarly straightforward to locate a path to download version 15.5.0 of TS 38.300.

106. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that this document was available to all 3GPP members and the general public by April 9, 2019, at the latest.

V. AVAILABILITY FOR CROSS-EXAMINATION

107. In signing this declaration, I recognize that the declaration may be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross examination in the case and that cross examination will take place within the United States. If cross examination is required of me, I will cooperate to the best of my ability to appear for cross examination within the United States during the time allotted for cross examination.

A. Right To Supplement

108. I reserve the right to supplement my opinions in the future to respond to any arguments that the Patent Owner raises and to take into account new information as it becomes available to me.

B. Signature

109. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

110. I declare under penalty of perjury that the foregoing is true and correct.

Dated: April 24, 2025



Friedhelm Rodermund

APPENDIX A

CURRICULUM VITAE

I. PERSONAL DATA

Name: **Friedhelm RODERMUND**

Mailing address: Am Steiner Graben 18
56077 Koblenz, Germany

Phone: +49 172 2606489

Email: fred@iotecc.com

II. PROFESSIONAL EXPERIENCE

Summary

Senior expert in telecommunications and Internet of Things (IoT) technology. 25 years of experience within the mobile communications industry, and several years in the IoT domain in various roles such as project management, technology innovation and evolution, standards development, technology strategy, patent creation and patent litigations, and development/introduction of new services.

Recognized standards expert who was actively involved in leading roles in the development of key standards for mobile telephony/data and service anablers across standards development organizations such as 3GPP, ETSI, GSMA, IETF, OMA, and oneM2M. Currently focussing on standards for the Internet of Things including ETSI and 3GPP standards such as 5G and 6G, and OMA Lightweight M2M (LwM2M).

Founder and director of IOTECC GmbH which provides consulting services around technologies and standards enabling the Internet of Things, and consulting and expert services related to patents for mobile telcommunications and IoT.

01/2015 – present **IOTECC GmbH** **Koblenz, Germany**

Founder and CEO

- Mobile telecommunications, Internet of Things (IoT) technology and standards consulting
- Telecommunications and IoT patent consulting
  - Consulting services around telecommunications and IoT patents in particular related to 3GPP, ETSI and OMA standards
  - State of the art/prior art research services related to patent filing e.g. for 5G and 6G
  - Prior art research, essentiality assessment, patent infringement analysis related to litigations and validity actions
  - Advising on IP strategy
  - Advising on Standards Development Organisations (SDO) e.g. ETSI and 3GPP working processes and IPR policy
  - Conducting seminar on Standards Essential Patents (SEPs) for the Internet of Things at the Technical University of Ilmenau, Germany
  - Experienced expert witness (please see section III for a list of supported actions)

11/2014 – 12/2014 **Friedhelm Rodermund Consulting** **Koblenz, Germany**

Internet of Things (IoT) Consultant

- IoT standards development and introduction of new IoT services

01/2011 – 10/2014 **Vodafone Germany / Vodafone Group R&D** **Düsseldorf, Germany**

Senior Standards Strategist
- Representing Vodafone in various standardisation bodies
- Creating technical standards for the Internet of Things
- Work item lead, technical editor and key contributor of Open Mobile Alliance (OMA) "Lightweight M2M (LwM2M)" – the new standard for the Internet of Things
- Advising and supporting various IoT/M2M projects related to e.g. smart metering
- Advising on the introduction of new IoT/M2M technologies and services
- Leading Proof of Concepts of emerging technologies
- Involved in innovation projects
- Supporting the creation and protection of Intellectual Property

01/2009 – 12/2010 **Vodafone Germany** **Düsseldorf, Germany**

Vice Chairman Open Mobile Alliance (OMA) Device Management (DM)
- Responsible for Vodafone's Device Management standardisation
- As OMA DM Vice Chairman, co-leading the group, chairing committee meetings and web conferences, steering the technical direction, management of the different work items
- Editor of several specifications, rapporteur of various work items
- Support of projects for the introduction of device management
- Delegate to 3GPP SA1 with responsiblity for the introduction of MTC (machine type communications) related service/network requirements

01/2005 – 12/2008 **Vodafone Germany** **Düsseldorf, Germany**

Project Manager Mobile Broadcast Standards
- Responsible for Mobile Broadcast standardisation across different broadcast systems/standards bodies and across all Vodafone local operations
- Responsible for Mobile Broadcast standardisation strategy development and implementation
- Delegation Lead for the Open Mobile Alliance (OMA) BCAST working group
- Initiated and managed the BCAST device profile development in the BMCO Forum
- Leading the "Service Protection" (pay-TV) stream of the German DVB-H Consortium
- Filed several patents
- Supporting patent litigations and patent portfolio evaluation (various technical areas)

04/2003 – 12/2003 **GSM Association** **London, United Kingdom**

Member of the MMS Task Force
- Verification of the MMS operator interworking framework
- Supporting the definition and specification of the MMS functional evolution
- Acting as a "link" between 3GPP and GSMA in the area of MMS

06/1998 – 12/2004 **European Telecommunications Standards Institute (ETSI)**
Sophia Antipolis, France

01/2002 – 12/2004: Secretary 3GPP Technical Specifications Group *"Terminals"* and Terminals Working Group 2 *"Terminal Services and Capabilities"*

01/1999 – 12/2001: Secretary 3GPP Terminals Working Group 2 *"Terminal Services and Capabilities"* and GERAN 3 *"Base Station Testing"*

06/1998 – 03/1999: Secretary ETSI SMG4 *"Data Services"* and SMG8 *"Base Station Testing"*

- Supported the establishment of 3GPP (3rd Generation Partnership Project) as the leading standards organization for mobile telecommunications
- Project manager and secretary of TSG "Terminals" reponsbile for Terminal Conformance Testing, Terminal Services and Capabilities, Universal Subscriber Identity Module (USIM)
- Project manager and secretary of Terminals Working Group 2 "Terminal Services and Capabilities" that was responsible for Terminal Execution Environments, Messaging including Short Message Service (SMS), Cell Broadcast Service (CBS), Enhanced Messaging Service (EMS), Multimedia Messaging Service (MMS), Terminal Interfaces incl. AT-commands, Generic User Profile, Data Synchronization and others
- Establishment and management of the Work Plan and follow-up and report on the progress of the related work items
- Advising the chairmen and the standards groups on technical, procedural and political issues
- Editorship of various GSM and UMTS technical specifications
- Responsible for presenting the technical results of the working groups to the parent body
- Responsible for the communication with other standards bodies inside and outside 3GPP
- PR activities (articles, interviews)

12/1993 – 06/1998 Mannesmann Mobilfunk GmbH Düsseldorf, Germany

System Engineer and Project Manager in Quality Assurance and Technical Standards

- Leadership and management of acceptance test projects in the area of GSM Base Station Controller (BSC) and GSM Base Station (BTS) hardware and software.
- Leading project teams of around 15 people
- Responsible for the clearance of releasing new software/hardware into the network
- Supported Request for Quotations, supplier evaluation and pre-selection, project manager of System Verification as a central part of the supplier selection process.
- Representation of Mannesmann Mobilfunk to the ETSI standardization group "Standardization Technical Committee SMG3 System Architecture"
- Conduction of product and hardware development quality audits
- Representative of Mannesmann Mobilfunk in A-interface interoperability testing activities
- Member of BSS product planning group which was defining operator requirements for future BSS releases
- Development of process improvements for type acceptance

III. LIST OF SUPPORTED PATENT LITIGATIONS AND VALIDITY ACTIONS

2024

Pantech Corporation v. Oppo Mobile Telecommunications Corp., Ltd.
Inter Partes Review matters
On behalf of Oppo
Counsel: Bayes PLLC
Role: Expert witness and consulting services

2024

Pantech Corp. et al. v. LG Electronics Inc. et al.
Civil Action No. 5:22-cv-00113-RWS-JBB (E.D.Tx.)
On behalf of LG Electronics
Counsel: Ropes & Gray LLP
Role: Expert witness and consulting services

2024

Ericsson v. Lenovo
Inter Partes Review matters
On behalf of Lenovo
Counsel: Kirkland & Ellis LLP
Role: Expert witness and consulting services

2024

Pantech Corp. et al. v. OnePlus Technology Co., Ltd.
Civil Action No. 5:22-cv-00069-RWS (E.D.Tx.)
On behalf of OnePlus
Counsel: Leydig, Voit & Mayer, Ltd.
Role: Expert witness and consulting services

2024

G+ Communications, LLC, v. Samsung Electronics Co., Ltd.
Civil Action No. 2:22-CV-78 (E.D.Tx.)
On behalf of Samsung
Counsel: Fish&Richardson P.C.
Role: Expert witness and consulting services

2023

Unified Patents, LLC v. Helios Streaming LLC
Inter Partes Review matters
On behalf of Unified Patents
Counsel: Akin
Role: Expert witness and consulting services

2023

Unified Patents, LLC v. SLS Manager Technologies
Inter Partes Review matters
On behalf of Unified Patents
Counsel: Unified Patents
Role: Expert witness and consulting services

2023

Headwater Research LLC v. Samsung Electronics Co., Ltd.
Inter Partes Review matters
On behalf of Samsung
Counsel: Fish&Richardson P.C.
Role: Expert witness and consulting services

2023

Pantech Corp. et al. v. LG Electronics Inc. et al.
Inter Partes Review matters
On behalf of LG Electronics
Counsel: Ropes & Gray LLP
Role: Expert witness and consulting services

2023

Apple Computer Trading (Shanghai) Co., Ltd, Apple Electronics Products Commerce (Beijing) Co., Ltd. v. Optis Cellular Technology LLC
Shenzhen, China, Intermediate People's Court
On behalf of Apple
Counsel: WilmerHale
Role: Expert witness and consulting services

2023

Huawei Technologies Co., Ltd. v. MediaTek Inc.
Inter Partes Review matters
On behalf of MediaTek
Counsel: Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
Role: Expert witness and consulting service

2023

Apex Beam Technologies LLC v. Samsung
Inter Partes Review matters
On behalf of Samsung
Counsel: Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
Role: Expert witness and consulting services

2022

Constellation Designs LLC v. LG Electronics, Inc.
Inter Partes Review matters
On behalf of LG Electronics
Counsel: Fish&Richardson P.C.
Role: Expert witness and consulting services

2022

Unified Patents, LLC v. Togail Technologies LTD.
Inter Partes Review matters
On behalf of Unified Patents
Counsel: Duane Morris LLP
Role: Expert witness and consulting services

2022

Ericsson v. Apple
Certain Mobile Telephones, Tablet Computers With Cellular Connectivity, And Smart Watches With Cellular Connectivity, Components Thereof, And Products Containing Same, Inv. No. 337-TA-1299 (U.S.I.T.C.)
On behalf of Apple
Counsel: WilmerHale
Role: Expert and consulting services

2022

Ericsson v. Apple
Civil Action No. 2:21-cv-376 (E.D.Tex.)
On behalf of Apple
Counsel: WilmerHale
Role: Expert and consulting services

2022

Intellectual Ventures II LLC v. Toyota Motor Cooperation.
Inter Partes Review matters
On behalf of Toyota

Counsel: Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.
Role: Expert witness and consulting services

2022

Ericsson v. Apple
2nd Business Court, Rio de Janeiro, Brazil
On behalf of Apple
Counsel: WilmerHale
Role: Expert and consulting services

2022

Ericsson v. Apple
Civil Court, Bogotá, Columbia
On behalf of Apple
Counsel: WilmerHale
Role: Expert and consulting services

2022

Proven Networks LLC. v. NetApp Inc.
Inter Partes Review matters
On behalf of NetApp
Counsel: Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., Ropes & Gray LLP
Role: Expert witness and consulting services

2022

Ericsson v. Apple
Inter Partes Review matters
On behalf of Apple
Counsel: Fish&Richardson, Erise IP
Role: Expert witness and consulting services

2021

AEGIS 11 LLC v. Hisense Company, Ltd. and Hisense USA Corporation
Inter Partes Review matters
On behalf of Hisense
Counsel: Orrik Herrington & Sutcliffe LLP
Role: Expert witness and consulting services

2021

Nokia v. Lenovo
Certain Electronic Devices, Including Computers, Tablet Computers, and Components and Modules Thereof, Inv. No. 337-TA-1208 (U.S.I.T.C.)
On behalf of Lenovo
Counsel: WilmerHale
Role: Expert witness and consulting services

2021

Optis Cellular Technology LLC et al. v. Apple
Claim No. HP-2019-000006 (High Court of Justice, Business and Property Courts of England and Wales)
On behalf of Apple
Counsel: WilmerHale
Role: Expert witness and consulting services

2021

Ericsson v. Samsung
Inter Partes Review matters
On behalf of Samsung
Counsel: Kirkland&Ellis LLP, Fish&Richardson
Role: Expert witness and consulting services

2020

Panoptis Patent Management LLC et al. v. Apple Inc.
Civil Action No. 2:19-cv-66 (E.D. Tex.)
On behalf of Apple
Counsel: WilmerHale
Role: Expert witness at bench trial

2020

Sol IP, LLC v. AT&T Mobility, LLC et al.
Civil Action No. 2:18-cv-526 (E.D. Tex.)
On behalf of AT&T, Verizon, Sprint
Counsel: Gibson Dunn
Role: Expert witness and consulting services

2020

Bell Northern Research LLC v. LG Electronics Inc. et al.
Civil Action No. 18-CV-2864-CAB-BLM (S.D. Cal.)
On behalf of LG Electronics Inc.
Counsel: Fish&Richardson
Role: Expert witness and consulting services

2019

Conversant Wireless Licensing S.a.r.l. v. LG Electronics Deutschland GmbH
Civil Action No. 7 O 3277/18 (Landgericht Munich, Germany)
On behalf of LG Electronics Deutschland GmbH
Counsel: Wildanger Kehrwald Graf von Schwerin & Partner mbB
Role: Expert witness and consulting services

2019

Bell Northern Research, LLC v. Huawei Device Co., Ltd, et al.
Civil Action No. 3:18-cv-01784-CAB-BLM
On behalf of Huawei
Counsel: Fish&Richardson
Role: Expert witness and consulting services

2019

Uniloc USA, Inc., et al. v. Samsung Electronics America, Inc. and Samsung Electronics Co. Ltd.
Civil Action Nos. 2:18-cv-00040-JRG, 2:18-cv-00041-JRG, 2:18-cv-00042-JRG and 2:18-cv-00044-JRG (United States District Court for the Eastern District of Texas)
On behalf of Samsung
Counsel: Greenberg Traurig
Role: Expert witness and consulting services

2019

Uniloc USA, Inc., et al. v. Huawei Device USA, Inc. et al.
Civil Action No. 2:18-cv- 00072-JRG-RSP (E.D. Tex.)
On behalf of Huawei
Counsel: McGuireWoods
Role: Expert witness and consulting services

2019

Microsoft Corporation v. Uniloc 2017 LLC
Inter Partes Review of U.S. Pat. No. 7,167,487
Inter Partes Review of U.S. Pat. No. 7,075,917
On behalf of Microsoft and on behalf of Apple as joinder petitioner
Counsel: Klarquist Sparkman (Microsoft), Erise IP (Apple)
Role: Expert witness and consulting services

2019

Qualcomm v. KFTC
South Korean Case, Seoul High Court
On behalf of intervenor Apple supporting the KFTC

Counsel: Boies Schiller Flexner
Role: Expert witness

2018/19

Evolved Wireless, LLC v. Apple, Inc.
Civil Action No. 1:15-cv-00542-JFB-SRF
On behalf of Apple
Counsel: DLA Piper
Role: Expert witness and consulting services

2018/19

Cisco Systems Inc. v. Traxcell Technologies
Inter Partes Review of Traxcell Technologies patents
On behalf of Cisco
Counsel: King&Spalding
Role: Expert witness and consulting services

2018/19

Qualcomm Inc. v. Apple Inc.
Civil Action No. 3:17- cv-02398-DMS-MDD (United States District Court for the Southern District of California)
Civil Action No. 3:17-cv-02402-WQH-MDD
Certain Mobile Electronic Devices and Radio Frequency and Processing Components Thereof (II), Inv. No. 337-TA-1093
Inter Partes Review of U.S. PATENT NO. 9,154,356
Cases IPR2019-00047, IPR2019-00048, IPR2019-00049, IPR2019-00128, IPR2019-00129
On behalf of Apple and Intel
Counsel: WilmerHale
Role: Expert witness and consulting services

2018/19

Apple Inc. v. Qualcomm Inc.
Civil Action No. 3:17-CV-00108-GPC-MDD (United States District Court for the Southern District of California)
On behalf of Apple
Counsel: Fish&Richardson, Boies Schiller Flexner
Role: Expert witness and consulting services

2018

3G Licensing, S.A. et al. v. LG Electronics Inc. et al
Inter Partes Review of U.S. Patent No. 7,995,091
On behalf of LG Electronics
Counsel: Fish&Richardson
Role: Expert witness

2017

Huawei Technologies Co. LTD. v. T-Mobile US, Inc. & T-Mobile USA, Inc.
E.D. Tex. Case Nos. 2:16-cv-00052-JRG-RSP; 2:16-cv-00055-JRG-RSP; 2:16-cv-00056-JRG-RSP; and 2:16-cv-00057-JRG-RSP
On behalf of T-Mobile
Counsel: Gibson Dunn
Role: Expert witness and consulting services

2016

Koninklijke KPN N.V. v. Samsung Electronics America, Inc. et al.
Civil Action No. 14-cv-1165
On behalf of Samsung Electronics
Counsel: Baker Botts
Role: Expert witness and consulting services

2016

SSH v. Sony

OLG Düsseldorf, Germany
On behalf of SSH
Counsel: Cohausz&Florack
Role: Technical expert support

2015/16

LG Electronics v. Core Wireless Licensing S.A.R.L.
Inter Parles Review of U.S. Patent No. 8,165,049
On behalf of LG Electronics
Counsel: Greenberg Traurig
Role: Expert witness

2015/16

Core Wireless Licensing S.A.R.L. v. LG Electronics Inc. and LG Electronics MobileComm U.S.A., Inc
Civil Action No. 2:14-cv-911 (lead case) and Civil Action No. 2:14-cv-912 (consolidated)
On behalf of LG Electronics
Counsel: Greenberg Traurig, Sidley Austin
Role: Expert witness

2015

Intellectual Ventures I LLC v. T-Mobile USA, Inc. & T-Mobile US, Inc.
D. Del. Case No. 1:13-cv-01632
Intellectual Ventures II LLC v. T-Mobile USA, Inc. & T-Mobile US, Inc.
D. Del. Case No. 1:13-cv-01633
On behalf of T-Mobile
Counsel: Gibson Dunn
Role: Technical expert support

IV. EDUCATION

10/1984 – 10/1993 **University of Technology Aachen** **Aachen, Germany**
Graduate of Electrical Engineering with a focus on telecommunications technologies (Dipl.-Ing. TH)

10/1992 – 04/1993 **University of Technology Trondheim** **Trondheim, Norway**
Diploma Thesis "Design of a dual processor computer for digital signal processing in power electronics"

V. LANGUAGES

German, English, French

VI. PUBLICATIONS (selection)

- ”Unlocking the internet of things and driving the need for interoperability”, Global Telecoms Business, December 2013
- “The need for standardisation in the M2M services layer”, Global Telecoms Business, February 2014
- Co-authored white paper “Lightweight M2M: Enabling device management and applications for the internet of things”, Open Mobile Alliance, March 2014
- “Objects are a new way to create M2M applications”, Global Telecoms Business, April 2014
- “The need for standardisation in the M2M services layer”, M2M Now, July 2015

APPENDIX B

Appendix	Description
A	Curriculum Vitae of Friedhelm Rodermund
B	List of Appendices
C	Report of 3GPP TSG RAN WG2 meeting #108, Reno, USA, 18 - 22 November, 2019
D	Document list of 3GPP TSG RAN WG2 meeting #108
E	Report of 3GPP TSG RAN WG2 meeting #109-e, Online, 24 February - 06 March, 2020
F	Document list of 3GPP TSG RAN WG2 meeting #109-e
G	Report of 3GPP TSG RAN WG2 meeting #107bis, Chongqing, China, 14 - 18 October, 2019
H	Document list of 3GPP TSG RAN WG2 meeting #107bis
I	Draft document list of 3GPP TSG RAN WG2 meeting #108

APPENDIX C

3GPP TSG-RAN WG2 meeting #109-e **R2-2000009**
Agenda Item: 2.2
Source: ETSI MCC
Title: Report of 3GPP TSG RAN2#108 meeting, Reno, USA

Document for: Approval

Report of 3GPP TSG RAN WG2 meeting #108
Reno, USA
18 - 22 November, 2019

3GPP

Postal address

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Internet

http://www.3gpp.org

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ORGANISATION OF THE MEETING 12

STATISTICS/EXECUTIVE SUMMARY 12

1 OPENING OF THE MEETING (9 AM) 12

1.1 Call for IPR 12

1.2 Network usage conditions 13

1.3 Other 13

1.4 Statement Regarding Engagement with Companies Added to the U.S. Export Administration Regulations (EAR) Entity List in 3GPP Activities 13

2 GENERAL 14

2.1 Approval of the agenda 14

2.2 Approval of the report of the previous meeting 14

2.3 Reporting from other meetings 15

2.4 Others 15

Rapporteur changes 15
Spec former rapporteur proposed new rapporteur 15
Isolated impact analysis 15
RAN2 WG Handbook 15
Drafting rules 15
Time Budget 15
Tdoc Limitation 15
Offline discussions during RAN2 meeting 15
Efficient handling of comebacks 15

3 INCOMING LIAISONS 17

4 EUTRA CORRECTIONS REL-15 AND EARLIER 18

4.1 NB-IoT corrections Rel-15 and earlier 18
4.1.0 In-principle agreed CRs 20
4.2.0 In-principle agreed CRs 21

4.3 V2X and Sidelink corrections Rel-15 and earlier 21
4.3.0 In-principle agreed CRs 21

4.4 Positioning corrections Rel-15 and earlier 21
4.4.0 In-principle agreed CRs 21

4.5 Other LTE corrections Rel-15 and earlier 21
4.5.0 In-principle agreed CRs 21

4.5.1 Others 22

5 WI: NEW RADIO (NR) ACCESS TECHNOLOGY 26

5.1 Organisational 26

5.2 Stage 2 27
5.2.1 Stage 2 corrections for TS 38.300 27
5.2.1.0 In-principle agreed CRs 27
5.2.2 Stage 2 corrections for TS 37.340 28
5.2.2.0 In-principle agreed CRs 28
5.2.3 Positioning 30
5.2.3.0 In-principle agreed CRs 30

5.3 Stage 3 user plane 30
5.3.1 MAC 30
5.3.1.0 In-principle agreed CRs 32
5.3.2 RLC 32
5.3.2.0 In-principle agreed CRs 32
5.3.3 PDCP 32
5.3.3.0 In-principle agreed CRs 32
5.3.4 SDAP 32
5.3.4.0 In-principle agreed CRs 32

5.4 Stage 3 control plane 32
5.4.1 NR RRC 32
5.4.1.0 In-principle agreed CRs 32
5.4.1.3 Connection control procedures 34
5.4.1.3.1 Corrections to L1 Parameters 34
5.4.1.3.2 Corrections to L2 Parameters 35
5.4.1.3.3 Connection establishment procedure 36
5.4.1.3.4 Connection reconfiguration procedure 36
Text Enhancements 38
5.4.1.3.5 Connection re-establishment procedure 38
Text Enhancement 38
5.4.1.3.6 Connection resume procedure and RRC_INACTIVE state 38
Text Enhancements 39
5.4.1.3.7 Connection release procedure 39
Further enhancements 39
5.4.1.3.8 Security procedures 39
5.4.1.3.10 Access control 40
5.4.1.3.11 Other 40
Text Enhancements 41
5.4.1.4 RRM 42
5.4.1.6 System information 43
5.4.1.9 Inter-Node RRC messages 44
5.4.2 LTE changes related to NR 46
Text Enhancements 46
5.4.2.0 In-principle agreed CRs 46
5.4.4 UE capabilities 47
LS in 47
Other 47
5.4.4.0 In-principle agreed CRs 53
5.4.5 Idle/inactive mode procedures 53
5.4.5.1 Cell selection/reselection 53
In principle Agreed 53
Other 54

5.4.5.2 Idle/inactive paging 54

5.5 Late Drop 55
5.5.0 In-principle agreed CRs 55
5.5.1 Stage 2 CRs 55
5.5.2 UE capabilities and capability coordination 55
5.5.3 Measurements and measurement coordination 57
5.5.4 Other 57

6 REL-16 NR WORK ITEMS 57

6.1 Integrated Access and Backhaul for NR 58
6.1.1 Organisational 58
LS in 58
Work plan 59
CR and TS 59
6.1.2 Stage-2 and general 60
F1AP transport in EN-DC 60
Load Reporting 61
MR-DC multi-connectivity 61
Configuration Security 61
Support for UE split and duplicated bearers 61
Parent Selection 61
Multiple MTs 61
Other 61
6.1.3 BAP functionality 61
General 61
6.1.3.1 Routing 62
Upstream Routing ID 62
Local Routing 62
General 63
6.1.3.2 Bearer Mapping 63
Remapping intermediate nodes 63
6.1.3.3 Flow Control 63
Source Information 63
Triggering 63
Buffering Information 64
General 65
6.1.3.4 Other 65
General 65
Control Message 65
PDU format 65
6.1.4 User plane aspects 65
6.1.4.1 Scheduling and QoS 65
Preemptive BSR 65
Preemptive BSR more details 66
Scheduling 67
6.1.4.2 LCID extension 67
6.1.4.3 Other 67
Timing Signalling 67
IAB specific RACH Configuration 68
Flow Control and Congestion handling 68
Scheduling Further enhancements 68
Over tdoc limitation 68
6.1.5 Control plane aspects 68
6.1.5.1 RLF handling 68
Cell selection, reestablishment 69

Security 69
6.1.5.2 Configuration 69
General 69
BAP 69
IP Address 70
6.1.5.3 Other 70

6.2 NR-based Access to Unlicensed Spectrum 72
6.2.1 General 72
6.2.2 User plane 73
6.2.2.1 4-step RACH 73
6.2.2.2 Handling UL LBT failures 75
6.2.2.3 2-step RACH 77
6.2.2.4 DRX 78
6.2.2.5 Configured grant operation 78
6.2.2.6 CAPC 80
6.2.2.7 Other 81
6.2.3 Control plane 83
6.2.3.1 Paging 83
6.2.3.2 Mobility and RRM 84
6.2.3.3 RLM/RLF 85
6.2.3.5 Other 85

6.5 Optimisations on UE radio capability signalling 120
6.5.1 Organisational 120
6.5.2 UE radio capability signalling using UE capability identity 121
6.5.3 Segmentation of UE radio capabilities 122

6.6 Study on NR non-terrestrial network 122
6.6.1 General 122
6.6.2 Requirements and Scenarios 124
6.6.3 User Plane 124
6.6.3.1 MAC Enhancements 124
6.6.3.2 RLC and PDCP Enhancements 125
6.6.4 Control Plane 125
6.6.4.1 Mobility 126
6.6.4.2 Idle mode 127
6.6.4.3 Other 128

6.7 NR Industrial Internet of Things (IoT) 128
6.7.1 General 128
LS in 128
CRs 129
6.7.2 TSC 130
6.7.2.1 Accurate reference timing 130
Propagation Delay Compensation 130
Reference Cell 130
Uncertainty 131
6.7.2.2 Scheduling Enhancements 131
6.7.2.2.1 CG and SPS for TSC - General and configuration impact 131
General 131
Traffic CG/SPS alignment 133
Other 134
Collisions etc 134
HF boundary 134
Further Enhancements 134
6.7.2.2.2 CG and SPS for TSC - L2 impacts 134
General 134

LCH restrictions and grant applicability 134
Confirmation MAC CE 135
HARQ 135
Further Enhancements 135
6.7.2.2.3 Other 135
6.7.2.3 Ethernet Header Compression 135
Padding removal 135
General 136
Further Enhancements 137
6.7.3 Intra-UE prioritization and multiplexing 137
6.7.3.1 Handling of deprioritized transmissions 137
Autonomous transmission - Not 137
Autonomous Transmission Same HARQ process 138
Autonomous Transmission - Diff HARQ Proc 139
Autonomous Transmission – and Further Enhancement 140
Dynamic Retransmission 140
6.7.3.2 Data Data prioritization with CG 141
L1 Priority General 141
General 141
Equal Priority 142
6.7.3.3 SR Data prioritization 143
6.7.3.4 Other 143
6.7.4 PDCP duplication enhancements 143
6.7.4.1 Network Controlled Duplication 143
Network coordination 143
General 144
MAC CE 146
LCH-to-Cell Restrictions 146
RLC stuck 146
Further enhancements 146
6.7.4.2 UE controlled Duplication 146
6.7.4.3 Other 147

6.8 NR Positioning Support 147
6.8.1 Organisational 147
6.8.2 Architecture and protocol aspects 148
6.8.2.1 Support of NR RAT-dependent positioning 148
6.8.2.2 Support of SSR phase 2 (PPP-RTK) 155
6.8.2.3 Broadcast assistance data 157
6.8.2.3.1 Content and delivery of broadcast assistance data 157
6.8.2.3.2 On-demand system information in connected mode 159
6.8.2.4 UE-based positioning 160
6.8.3 Other 161

6.9 NR mobility enhancements 161
6.9.1 Organisational 161
6.9.2 Reduction in user data interruption during DAPS handover 164
6.9.3 Conditional handover and fast handover failure recovery 166
6.9.3.1 Conditional handover – configuration and execution details 166
6.9.3.2 Conditional handover – failure handling 169
6.9.3.3 Conditional handover - other aspects 171
6.9.3.4 Fast handover failure recovery 174
6.9.3.5 Conditional handover - beam specific aspects 175
6.9.4 Conditional PSCell addition change 175

6.10 DC and CA enhancements 179
6.10.1 Organisational 179
Email Discussions 180

6.10.2 NR-NR Dual Connectivity 180
6.10.3 Early measurement reporting 181
Validity Area 183
Resume 184
Misc 184
New Cases 185
UE capability 185
6.10.4 Efficient and low latency configuration signalling 185
6.10.4.1 Direct SCell activation 185
6.10.4.2 Fast SCell activation 185
SCell Dormancy 185
Temporary RS 187
6.10.4.3 MCG SCell and SCG Configuration with RRC Resume 187
Suspended SCG 187
SCG at Resume 188
6.10.4.4 Other 189
New Cases 189
Capability 189
6.10.5 Fast MCG link Recovery 189
Re-est cause 190
New cases 190
6.10.6 Cross-Carrier scheduling with different numerologies 190
6.10.7 Other 190
Timing 191
UE Capabilities 192
Other 192

6.11 UE Power Saving in NR 193
6.11.1 Organisational 193
6.11.2 PDCCH-based power saving signals/channel Additional stage-3 RAN2 aspects 195
6.11.3 UE assistance 197
6.11.6 RRM measurement relaxation 199

6.12 SON/MDT support for NR 201
6.12.1 General 201
6.12.2 MDT 201
6.12.3 L2 measurements 207
6.12.4 SON 208
6.12.5 Others 210

6.13 2-step RACH for NR 211
6.13.1 General 211
6.13.2 Other user plane stage-3 aspects 212
6.13.3 RRC stage-3 related aspects 217
6.13.4 Other 218

6.14 Single Radio Voice Call Continuity from 5G to 3G 219
6.14.1 Organisational 219
6.14.2 Inter RAT handover to UTRAN for SRVCC 220
6.14.3 Other 220

6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR 221
6.15.1 Organisational 221
6.15.2 Remaining issues 223

6.16 Enhancements on MIMO for NR 224
6.16.1 Organisational 224
6.16.2 RRC aspects 224

6.16.3 DL MAC CE design 225
6.16.4 General beam management enhancements 226

6.18 Private Network Support for NG-RAN 228
6.18.1 Organisational 228
6.18.2 Cell selection and reselection 229
6.18.3 Connected mode aspects 233
6.18.4 Other 234

6.19 Other NR Rel-16 WIs/SIs 234
LS in cc R2 234
Discussions 235

6.20 NR TEI16 enhancements 235
6.20.1 RAN2 led TEI16 enhancements - Control plane related 236
Open proposals 236
New Proposals 239
Positioning, Treated in parallel session 242
Beyond Tdoc Limitation 243
6.20.2 RAN2 led TEI16 enhancements - User plane related 243
Open Proposals 243
New Proposals 245
Beyond tdoc limitation 246
6.20.3 TEI16 enhancements led by other WGs 246

6.21 On demand SI in connected 248

6.22 Physical layer enhancements for NR ultra-reliable and low latency case (URLLC) 250
6.22.1 Control Plane 250
6.22.2 User Plane 250

7 REL-16 LTE WORK ITEMS 251

7.2 Additional enhancements for NB-IoT 265
7.2.1 Organisational 265
7.2.2 Mobile-terminated (MT) early data transmission (EDT) 266
7.2.3 UE-group wake-up signal (WUS) 266
7.2.4 Transmission in preconfigured resources 270
7.2.5 Scheduling multiple DL/UL transport blocks 275
7.2.6 Network management tool enhancement 275
7.2.7 Improved multi-carrier operation 275
7.2.8 Inter-RAT cell selection 275
7.2.9 Coexistence with NR 275
7.2.10 Connection to 5GC (Other common aspects, NB-IoT specific aspects) 276
7.2.11 UE specific DRX 279
7.2.12 Other 280

7.3 Even further mobility enhancement in E-UTRAN 280
7.3.1 Organizational 280
7.3.2 Reduction in user data interruption for dual active protocol stack (DAPS) handover 281
7.3.2.1 User plane aspects of DAPS HO 281
7.3.2.1.1 PDCP/RLC aspects of DAPS HO 281
7.3.2.1.2 MAC and UL transmission aspects of DAPS HO 287
7.3.2.2 Control plane aspects of DAPS HO 287
7.3.2.2.1 RRC procedures during DAPS HO 287
7.3.2.2.2 UE capabilities for DAPS HO 290
7.3.2.3 Other aspects of DAPS HO 291

7.3.3 Conditional handover 291

7.4 Further performance enhancement for LTE in high speed scenario 291

7.5 Other LTE Rel-16 WIs 291

7.6 LTE TEI16 enhancements 293

7.7 Support of Indian Navigation Satellite System (NavIC) 296

7.8 DL MIMO efficiency enhancements for LTE 297

7.9 LTE-based 5G Terrestrial Broadcast 298

8 BREAKOUT SESSION REPORTS 298

8.1 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility 298
NR feMOB 298

8.2 Report from session on SRVCC, CLI, PRN, eMIMO, RACS 299

8.3 Report from session on eMTC 299

8.4 Report from session on NR-U, Power Savings, NTN and 2-step RACH 299

8.5 Report from session on Rel-15 and 16 LTE and NR positioning 299

8.6 Report from session on SON/MDT 300

8.7 Report from session on NB-IoT 300

8.8 Report from session on LTE V2X and NR V2X 300

CLOSING OF THE MEETING (17:00) 300

ANNEX A: LIST OF PARTICIPANTS 301

ANNEX B: LIST OF TDOCS 301

ANNEX C: INCOMING LIAISON STATEMENTS 301

ANNEX D: OUTGOING LIAISON STATEMENTS 306

ANNEX E: LIST OF AGREED CRS 307

ANNEX F: EMAIL APPROVALS 311

SHORT EMAIL DISCUSSIONS FOR INPUT TO RP (1 WEEK): DEADLINE THURSDAY, 2019-11-28, 23:59 PACIFIC TIME (UNLESS STATED) 311

SHORT II EMAIL DISCUSSIONS NOT FOR RP (3 WEEKS): DEADLINE THURSDAY, 2019-12-13, 23:59 PACIFIC TIME (UNLESS STATED) 312

RRC DISCUSSIONS: DEADLINE THURSDAY, 2020-01-23, 23:59 PACIFIC TIME (UNLESS STATED) 314
Short II, for R2#108 315
Long 315

NEXT MEETING (LONG) DISCUSSIONS: DEADLINE THURSDAY, 2020-01-30, 23:59 PACIFIC TIME (UNLESS STATED) 317
Feature List and UE capabilities, Short 317
Feature List and UE capabilities, Long 317
Other Email Discussions 317

ANNEX G: HISTORY 323

Organisation of the meeting

Meeting:	3GPP TSG RAN2#108
Meeting location:	Reno, USA
Duration:	18.11 - 22.11.2019
Host:	NF3
TSG RAN WG2 Chairman:	Johan Johansson (MediaTek) (johan.johansson@mediatek.com)
TSG RAN WG2 Vice chairman:	Tero Henttonen (Nokia) (tero.henttonen@nokia.com)
TSG RAN WG2 Vice chairman:	Sergio Parolari (ZTE) (sergio.parolari@zte.com.cn)
TSG RAN WG2 MCC Support:	Juha Korhonen (ETSI MCC) (juha.korhonen@etsi.org)
Email reflector:	3GPP_TSG_RAN_WG2@LIST.ETSI.ORG
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_108/Docs
Next meetings:	TSG RAN2#109, 24.02 - 28.02.2019, Athens, Greece
	TSG RAN2#109bis, Japan

Statistics/Executive Summary

TSG RAN2#108 was held in Reno, USA, hosted by NF3. The meeting had 8 breakout sessions in addition to the main session. The main session was mainly about NR. The breakout sessions were:

- LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility
- SRVCC, CLI, PRN, eMIMO, RACS
- eMTC
- NR-U, Power Savings, NTN and 2-step RACH sessions
- Rel-15 and 16 LTE and NR positioning
- SON/MDT session
- NB-IoT breakout session
- LTE V2X and NR V2XNR idle/inactive mobility

The statistics from this meeting are:

- 332 participants checked in (registered: 394 participants).
- 2346 Tdoc numbers allocated with 2289 available contributions. (See the attached tdoc list)
- 75 incoming liaison statements, out of which 68 were treated. The remaining liaisons are to be treated in RAN2#109 meeting.
- 46 outgoing liaison statements.
- 113 email approvals/discussions scheduled after RAN2#108 meeting, see Annex F for details.
- Number of CRs submitted: 384. Out of these, 114 agreed. See Annex E for details.

1 Opening of the meeting (9 AM)

1.1 Call for IPR

The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners **to inform their respective Organizational Partners of Essential IPRs** they become aware of.
The delegates were asked to take note that they were hereby invited:

- to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.
- to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by

means of the IPR Statement and the Licensing declaration forms (https://www.etsi.org/images/files/IPR/etsi-ipr-form.doc)

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

1.2 Network usage conditions

The PCG has laid down the following network usage conditions

1. **Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.**

2. **Users shall not engage in non-work related activities that consume excessive bandwidth** or cause significant degradation of the performance of the network.
Since the network is a shared resource, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

1. DON'T place your WiFi device in ad-hoc mode
2. DON'T set up a personal hotspot in the meeting room
3. DO try 802.11a if your WiFi device supports it
4. DON'T manually allocate an IP address
5. DON'T be a bandwidth hog by streaming video, playing online games, or downloading huge files
6. DON'T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)

1.3 Other

In accordance with the Working Procedures it is reaffirmed that:
(i) compliance with all applicable antitrust and competition laws is required;
(ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and
(iii) the chairman will conduct the meeting with strict impartiality and in the interests of 3GPP

Note on (i): In case of question please contact your legal counsel.
Note on (ii): WIDs don't need to be submitted to the RAN2 meeting and will typically not be discussed here either.

1.4 Statement Regarding Engagement with Companies Added to the U.S. Export Administration Regulations (EAR) Entity List in 3GPP Activities

Updated 2019-10-10
1. Public Information is Not Subject to EAR

3GPP is an open platform where all contributions (including technology protected or not by patent) made by the different Individual Members under the membership of each respective Organizational Partner are publicly available. Indeed, contributions by all and any Individual Members are uploaded to a public file server when received and then the documents are effectively in the public domain.

In addition, since membership of email distribution lists is open to all, documents and emails distributed by that means are considered to be publicly available.

As a result, information contained in 3GPP contributions, documents, and emails distributed at 3GPP meetings or by 3GPP email distribution lists, because it is made available to the public without restrictions upon its further dissemination, is not subject to the export restrictions of the EAR.

Meeting minutes are maintained for 3GPP meetings. Such meeting minutes for 3GPP meetings are made available to the public without restrictions upon its further dissemination. As a result, information, including information conveyed orally, contained in 3GPP meetings is not subject to the export restriction of the EAR; this would include information conveyed during side meetings that may occur during the main meetings, if these meetings are open to any participants and the results of all said meetings are publicly available without restrictions upon their further dissemination.

2. Non-Public Information

Non-public information refers to the information not contained or not intended to be contained in 3GPP contributions, documents or emails. Such non-public information may be disclosed during informal meetings, exchanges, discussions or any form of other communication outside the 3GPP meetings and email distribution lists, and may be subject to the EAR.

3. Other Information

Certain encryption software controlled under the International Traffic in Arms Regulations (ITAR), even if publicly available, may still be subject to US export controls other than the EAR.

4. Conduct of Meetings

The situation should be considered as "business as usual" during all the meetings called by 3GPP.

5. Responsibility of Individual Members

It should be remembered that contributions, meetings, exchanges, discussions or any form of other communication in or outside the 3GPP meetings are of the accountability, integrity and the responsibility of each Individual Member. In addition, Individual Members remain responsible for ensuring their compliance with all applicable export control regulations, including but not limited to EAR.

Individual Members with questions regarding the impact of laws and regulations on their participation in 3GPP should contact their companies' legal counsels.

2 General

2.1 Approval of the agenda

R2-1914300 Agenda for RAN2#108 Chairman agenda

⇒ **approved**

2.2 Approval of the report of the previous meeting

R2-1914301 RAN2#107bis Meeting Report MCC report Late

⇒ **approved**

2.3 Reporting from other meetings

2.4 Others

⇒ **We can take into account progress (agreements) in other groups ASAP, is particular LSes**

Rapporteur changes

Spec	former rapporteur	proposed new rapporteur
37.324	Hao Bi (Huawei)	Hao Bi (Futurewei)

⇒ **approved**

Isolated impact analysis

Note that an isolated impact analysis is required for Rel-8 to Rel-15 CRs from Q3 2018 onwards.
Only corrections where there is a proven problem are allowed for frozen releases (Rel-8 to Rel-15).

RAN2 WG Handbook

Latest version can always be found at ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Org/RAN2_Handbook/

Drafting rules

Note that specification drafting rules in TR 21.801 must be followed when drafting a CR and draft TS/TR.
Latest version can always be found at http://www.3gpp.org/ftp/specs/archive/21_series/21.801/

Time Budget

The time budget endorsed at RAN-85 can be found in RP-192351.

Tdoc Limitation

A limit of max number of allowed tdocs for a company for submission towards an Agenda Item and its sub-agenda-items. Co-source documents counts towards the tdoc limitation of the presenting company, which is assumed to be the first in the list if not presented. The following is not counted towards the tdoc limitation:
- Rapporteur input (TS rapporteur, TR rapporteur, WI/SI rapporteur)
- One Draft Reply LS by contact company.
- Pre-agreed volunteer input (email discussion report, update of running CRs etc)
- At-Meeting-decided input (revisions, offline discussion reports, LS outs etc).

Offline discussions during RAN2 meeting

Chairs will allocate a number for offline discussions during the meeting. Create a folder starting with this number within inbox/drafts and use this to share any documents relating to the offline discussion (please use format "[Offline-nnn] ....", i.e. a 3 digit number). Also use this number in the title of any reflector emails relating to this offline discussion. (please use format "[RAN2#107bis Offline-nnn]....."). Do not share documents over the reflector during the meeting.

The outcome of offline discussions need to be clear and public. One way to achieve that is to provide the outcome in a tdoc (e.g. discussion paper, CR, LS). Verbal-only reporting need to be captured by the session chair, and is suitable only for very simple outcomes, e.g. discussion didn't happen, no result, or a very simple result.

Efficient handling of comebacks

Please allocate tdoc numbers for comebacks as soon as possible. Allocate tdoc numbers for your Friday comebacks on Thursday.

Agreement of RAN3 endorsed stage-2 CRs to RAN2 specifications

✉ **[108#113][eMTC] [RAN3_CRs] Agreement of RAN3 endorsed stage-2 CRs (MCC)**
Intended outcome: Set of agreed CRs
Deadline: 2019-12-02
=>Agreed CRs in R2-1916603 (37.340), R2-1916604 (37.340), R2-1916605 (38.300), R2-1916606 (37.340), R2-1916607 (38.300), R2-1916608 (38.300), R2-1916609 (38.300), R2-1916612 (38.300), R2-1916613 (37.340), R2-1916615 (37.340), R2-1916616 (37.340), R2-1916617 (37.340), R2-1916618 (36.300), R2-1916624 (37.340), R2-1916625 (37.340), R2-1916631 (37.340), R2-1916635 (37.340)

R2-1916603 IP version on X2-U R3 (Huawei) CR Rel-15 37.340 15.7.0 0170 - F NR_newRAT-Core R3-196107
=> Agreed

R2-1916604 Correction to MR-DC with 5GC with RRC_INACTIVE R3 (Google) CR Rel-15 37.340 15.7.0 0171 - F NR_newRAT-Core R3-196172
=> Agreed

R2-1916605 Independent migration to IPv6 on NG-U R3 (Samsung) CR Rel-15 38.300 15.7.0 0182 - F NR_newRAT-Core R3-196248
=> Agreed

R2-1916606 Correction of SN Status Transfer during HO with DC R3 (Nokia, Nokia Shanghai Bell) CR Rel-15 37.340 15.7.0 0172 - F NR_newRAT-Core R3-196260
=> Agreed

R2-1916607 Correction of QoS flow re-mapping before handover R3 (Ericsson) CR Rel-15 38.300 15.7.0 0183 - F NR_newRAT-Core R3-196279
=> Agreed

R2-1916608 CR TS 38.300 Remote Interference Management R3 (Ericsson, CMCC) CR Rel-16 38.300 15.7.0 0184 - B NR_CLI_RIM R3-196444
=> Agreed

R2-1916609 Introduction of Additional RRM Policy Index (ARPI) R3 (Ericsson, Vodafone, Deutsche Telekom, Verizon Wireless, TIM, AT&T, Orange) CR Rel-16 36.300 15.7.0 1256 - B TEI16 R3-196458
=> Agreed

R2-1916610 Stage2 Introduction of ARPI&SPID for EN-DC R3 (ZTE) CR Rel-16 37.340 15.7.0 0173 - B TEI16 R3-196465
=> Revised in R2-1916631

R2-1916631 Stage2 Introduction of ARPI&SPID for EN-DC R3 (ZTE) CR Rel-16 37.340 15.7.0 0173 1 B TEI16
=> Agreed

R2-1916611 DRB ID co-ordination between MN and SN R3 (Ericsson) CR Rel-15 37.340 15.7.0 0174 - F NR_newRAT-Core R3-197341
=> Revised in R2-1916624

R2-1916624 DRB ID co-ordination between MN and SN Ericsson, ZTE Corporation (Rapporteur) CR Rel-15 37.340 15.7.0 0174 1 F NR_newRAT-Core
=> Agreed

R2-1916612 Introduction of direct data forwarding for inter-system HO between EPS and 5GS R3 (Ericsson, NTT DoCoMo, Samsung, Nokia, Huawei, ZTE, CATT) CR Rel-16 38.300 15.7.0 0185 - B Direct_data_fw_NR-Core R3-197389
=> Agreed

R2-1916613 Correcting misbehaviors and clean-ups on 37.340 related to PDU session spilt R3 (Intel Corporation, Nokia, Nokia Shanghai Bell) CR Rel-15 37.340 15.7.0 0175 - F NR_newRAT-Core R3-197505
=> Agreed

R2-1916614 Resuming SCG in RRC Resume R3 (Ericsson) CR Rel-16 37.340 15.7.0 0176 - B LTE_NR_DC_CA_enh-Core R3-197599
=> Revised in R2-1916625

R2-1916625 Resuming SCG in RRC Resume Ericsson, ZTE Corporation (Rapporteur) CR Rel-16 37.340 15.7.0 0176 1 B LTE_NR_DC_CA_enh-Core
=> Agreed

R2-1916615 Stage2 Clarifications for RRC_Inactive with MR-DC@5GC R3 (ZTE, Qualcomm Incorporated, China Telecom, China Unicom) CR Rel-15 37.340 15.7.0 0177 - F NR_newRAT-Core R3-197639
=> Agreed

R2-1916616 Correction of NG connection in MR DC R3 (Nokia, Nokia Shanghai Bell, Orange) CR Rel-15 37.340 15.7.0 0178 - F NR_newRAT-Core R3-197671
=> Agreed

R2-1916617 Correcting misbehaviors and clean-ups on 37.340 related to data forwarding and SN status transfer R3 (Intel Corporation, CATT, Google) CR Rel-15 37.340 15.7.0 0179 - F NR_newRAT-Core R3-197672
=> Agreed

R2-1916618 TS36.300 Removal of Requirement for Exchanging Complete Cell List over X2 R3 (ZTE, Ericsson, China Unicom) CR Rel-16 36.300 15.7.0 1257 - F TEI16 R3-197686
=> Agreed

R2-1916619 Clarification on the offered non-GBR resources R3 (Huawei, Ericsson, China Unicom, CMCC) CR Rel-16 37.340 15.7.0 0180 - F NR_newRAT-Core R3-197752
=> Revised in R2-1916635

R2-1916635 Clarification on the offered non-GBR resources R3 (Huawei, Ericsson, China Unicom, CMCC) CR Rel-16 37.340 15.7.0 0180 1 F LTE_NR_DC_CA_enh-Core R3-197752
=> Agreed

3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

R2-1914321 LS on Rel-16 LTE and NR parameter lists (R1-1911745; contact: Qualcomm) RAN1 LS in Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core, LTE_DL_MIMO_EE-Core, LTE_terr_bcast-Core, NR_2step_RACH-Core, NR_unlic-Core, NR_IAB-Core, 5G_V2X_NRSL-Core, NR_L1enh_URLLC-Core, NR_IIOT-Core, NR_eMIMO-Core, NR_UE_pow_sav-Core, NR_pos-Core, NR_Mob_enh-Core, LTE_NR_DC_CA_enh-Core To:RAN2, RAN3

- Chair wonder what we do if we have different opinion than R1 on the excel columns. QC think we can discuss informally with R1 people. QC think we can also feedback in LS. Nokia think we limit this.
- Ericsson think the WI rapporteur need to take main responsibility for the related work. ZTE think also the RRC running CR editor can do this.

⇒ **Noted**

R2-1914303 LS on support of high peak data rate for Cat-M1 UEs in HD-FDD (R1-1911398; contact: Qualcomm) RAN1 LS in Rel-16 TEI16 To:RAN2
- QC point out that there are papers on this in the LTE TEI session.
- Reply LS is expected
- Huawei think this is bigger than TEI and think there need to be another UE category and this thus need to be looked at in RP.

⇒ **noted**

R2-1914323 LS on aspects of Mission Critical Services over 5MBS (S6-192003; contact: AT&T) SA6 LS in Rel-17 FS_MC5MBS To:SA, RAN, SA2, RAN2, RAN3 Cc:SA1

R2-1916280 LS on further aspects of Mission Critical Services over 5MBS (S6-192404; contact: AT&T) SA6 LS in Rel-17 FS_MC5MBS To:SA, RAN, SA2, RAN2, RAN3 Cc:SA1

⇒ **both noted**

4 EUTRA corrections Rel-15 and earlier

See Appendix A for reference to Work items, work item codes and WIDs.
No documents should be submitted to 4. Please submit to 4.x

4.1 NB-IoT corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.2.
Including outcome of the email discussion [107bis#88][NB-IoT R15] NPDCCH monitoring start/stop timers (NTT DoCoMo)

R2-1914475 Report of email discussion [107bis#88][NB-IoT R15] NTT DOCOMO INC. discussion Rel-15 NB_IOTenh2-Core
- Huawei are fine with P1 and early implementation P3/4. For P2 we don't usually refer to PSCCH candidates in the MAC spec.
- QC wonders whether the clarification would impact UE implementation, UE has to handle the legacy eNB anyway.

⇒ **From RAN2 point of view, partial search spaces are supported for onDurationTimer in NB-IoT.**

R2-1914482 Clarification of PDCCH monitoring when not fully aligned with PDCCH periods NTT DOCOMO INC. CR Rel-15 36.321 15.7.0 1459 - F NB_IOTenh2-Core Late
- DoCoMo would be fine to capture the last sentence in the chair notes only.
- HW think the second sentence is not needed.
- Intel would be OK with this

⇒ **When incrementing the timer, the two partial PDCCH periods are considered as one full PDCCH period equal to a length of 1 pp, and when onDurationTimer ends the UE considers that the required number of candidates has been monitored.**

⇒ **Change the text in the CR to "For NB-IoT, onDurationTimer may start within a PDCCH period and end within a PDCCH period. The UE shall monitor NPDCCH during these partial PDCCH periods while the onDurationTimer is running."**

⇒ **Revised in R2-1916421**

R2-1916421 Clarification of PDCCH monitoring when not fully aligned with PDCCH periods NTT DOCOMO INC. CR Rel-15 36.321 15.7.0 1459 1 F NB_IOTenh2-Core Late
- ZTE wonders if this gives requirement to the NW. Huawei thinks no new requirement as there are UEs already doing this. ZTE thinks we don't need early implementation allowed. DoCoMo

and HW prefer early implementation, since NW anyway has to support. NEC thinks we have the REl-15 CR because it is not major impact, but it clarifies Rel-13 behaviour so we have to have early implementation. Fujitsu agrees with NEC.

⇒ **Change WIC to "NB_IOT-Core, TEI15"**

⇒ **Move "magic sentence" after the impact analysis in bold**

⇒ **With the above changes the CR is agreed in R2-1916439**

R2-1914894 Allow Delta Configuration of ParametersListFmt2 and ParametersListEDTFmt2 in SIB2-NB MediaTek Inc., ZTE Corporation, Sanechips, Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4143 - F NB_IOTenh2-Core

- QC are OK with the CR.

⇒ **Remove change marks from cover page**

⇒ **Correct impacted functionality to "Cell Range enhancements"**

⇒ **With the above change the CR is agreed in R2-1916423**

R2-1916026 Reselection to a Cell with Valid Dedicated Frequency Offset MediaTek Inc. discussion R2-1912998

- HW thinks redirection is supported in earlier releases and there is no offset, so no need to completely remove as per p2.
- LG thinks there is an issue as Mediatek pointed out so support p1.
- QC thinks when UE reselects away from the redirected frequency the UE should delete the offset, this is what would also happen when UE reselects another RAT. Mediatek has a different understanding on the intention of the feature. Huawei thinks the feature was an enhancement to redirection to another frequency to make sure the UE stays longer on the frequency. Nokia agrees with Huawei.
- Gemalto thinks the intention is to keep the UE on the redirected carrier and don't see a benefit keeping the offset after. LG thinks if UE deletes the parameter then the issue isn't solved.
- Mediatek wonder about existing UE behaviour changing. Huawei think there is no interoperability issue so can just have a Rel-15 CR with early implementation.
- QC thinks there is anyway no guarantee the UE will select the redirected frequency as it depends on the radio conditions.

⇒ **noted**

R2-1915297 Stop using redirectedCarrierOffsetDedicated after reselection to another frequency Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4144 - F NB_IOTenh-Core, TEI15

⇒ **Change consequences if not approved to "What happens in the case the UE reselects to another frequency is unclear".**

⇒ **With the above change the CR is agreed in R2-1916422**

R2-1915659 System support for NB-IoT Paging across Multiple Carriers VODAFONE Group Plc CR Rel-14 36.300 14.11.0 1253 - F NB_IOTenh-Core

- Huawei agree that this is essential functionality to capture, but maybe UE capability is more suitable because it may apply to other features. Also for eMTC this is needed.
- QC think this functionality is left to NW implementation in general, so prefer to mandate that the information is forwarded. Nokia think it can be left to implementation. Vodafone think we can't leave to implementation because it has to work between different operators.
- Ericsson think this problem happens specifically in RAN sharing scenario, and would like to think about consequences if we capture something. Vodafone thinks RAN sharing is a particular case but it is not the only case, it applies on any PLMN even when not shared.
- Huawei think this is fundamental for paging, without it paging won't work.
- Ericsson wonder what happens in a legacy eNB not implementing multicarrier. Vodafone thinks in this case the eNB just uses the single carrier information, but the information needs to be forwarded for use when the UE moves. Ericsson thinks TAU will allow the UE to report capabilities after moving. Vodafone thinks we can't rely on TAU.

- QC thinks the issue doesn't impact UE, but it might be a lot of work for NW. Vodafone thinks this is how paging anyway would have to work, not doing this in the NW would mean the feature doesn't work.
- Ericsson think that it would also be possible to address in other ways, mandating NW behaviour is not the usual way to solve in 3GPP. Ericsson would like to consider other solutions before deciding what to do.
- Huawei think that for NB-IoT at least, this mandatory NW behaviour was the intended behaviour. To keep asking for UE capability would not be a nice solution.
- Nokia thinks this is RAN3 and SA2 discussion. Vodafone points out 36.300 is a RAN2 spec and the feature was specified by RAN2. Huawei think the problem occurs in RAN2 so we need to agree in RAN2 that something needs to be fixed.
- QC thinks if we agree a 36.300 CR in RAN2 then RAN3 would need to correct their spec. Ericsson think if RAN3 make a correction then maybe we don't also need to correct 36.300. Another alternative is new signalling in SA2.
- Vodafone think that eMTC could be further checked.
- Nokia would be fine to capture an understanding of the NW behaviour but not a stage 2 CR.
- Intel thinks we have 3 solutions – capture in RAN3 normative specification, in Stage 2, or in chair notes.

⇒ **RAN2 agrees that paging on non-anchor carriers and paging with WUS do not work as intended in some scenarios, and needs to be addressed.**

⇨ Offline discussion #700 (Qualcomm) Try to decide how to address the problem with multicarrier and WUS radio paging capability exchange between CN and RAN.

After offline;

- QC reports there is no document but there seems to be no problem in terms of signalling, but companies should check offline with SA2 + RAN3 if there is something to add in 36.300. Should look at a generic change applying to other features too, to avoid maintaining every time there is a new applicable feature.

⇒ **postponed**

R2-1915678 System support for NB-IoT Paging across Multiple Carriers VODAFONE Group Plc CR Rel-15 36.300 15.7.0 1254 - A NB_IOTenh-Core

R2-1915806 System support for Wake Up Signal VODAFONE Group Plc CR Rel-15 36.300 15.7.0 1255 - F LTE_eMTC4-Core, NB_IOTenh2-Core

- Vodafone points out that in addition to the issue discussed above, the WUS impacts MME which is contrary to the current stage 2.
- Ericsson understands this applies to both eMTC and NB-IoT. Also that WUS is not broken. Vodafone indicates the power savings are not achieved unless the paging load is reduced and this impacts MME.
- DoCoMo thinks we have already sent an LS to SA2 and received the response with a CR, and this is fixed in Rel-16.

⇒ **Will consider as part of SA2 LS discussion**

4.1.0 In-principle agreed CRs

R2-1914649 Correction on T322 Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.12.0 4112 2 F NB_IOTenh-Core R2-1914091

⇒ **agreed**

R2-1914650 Correction on T322 Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.7.0 4113 1 A NB_IOTenh-Core R2-1913192

⇒ **agreed**

4.2 eMTC corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.1.

R2-1915308 Clarification on default configuration and SRB1 for UP-EDT Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4104 2 F LTE_eMTC4-Core, NB_IOTenh2-Core R2-1914043

[CB Offline #300] Whether "and SRB1 is used only for the transfer of *RRCConnectionResume* message" can be removed or new text should be introduced to capture all other relevant cases. The outcome is updated CR with agreeable text in R2-1916356 (Huawei)

R2-1916356 Clarification on default configuration and SRB1 for UP-EDT Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4104 3 F LTE_eMTC4-Core, NB_IOTenh2-Core R2-1915308

⇒ **Postponed till the next meeting with the intention to discuss in LTE legacy breakout session.**

4.2.0 In-principle agreed CRs

4.3 V2X and Sidelink corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

4.3.0 In-principle agreed CRs

4.4 Positioning corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

4.4.0 In-principle agreed CRs

4.5 Other LTE corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

4.5.0 In-principle agreed CRs

R2-1915367 (IPA) Correction to SIB5 acquisition for idle mode measurements Ericsson CR Rel-15 36.331 15.7.0 4120 2 F LTE_5GCN_connect-Core, LTE_euCA-Core R2-1913984
⇨ Revised in R2-1916303

R2-1916303 Correction to SIB5 acquisition for idle mode measurements Ericsson CR Rel-15 36.331 15.7.0 4120 3 F LTE_5GCN_connect-Core, LTE_euCA-Core R2-1915367
⇨ **Change "No inter-operability issues foreseen" for inter-operability analysis**
⇨ **Revised with this change in R2-1916305, to be agreed unseen**

R2-1916305 Correction to SIB5 acquisition for idle mode measurements Ericsson CR Rel-15 36.331 15.7.0 4120 3 F LTE_5GCN_connect-Core, LTE_euCA-Core R2-1915367
⇨ **CR is agreed unseen**

R2-1915524 (IPA) Correction on inter-frequency neighbour cell measurements Ericsson CR Rel-15 36.300 15.7.0 1252 2 F LTE_5GCN_connect-Core, LTE_euCA-Core R2-1913985
⇨ Revised in R2-1916304

R2-1916304 Correction on inter-frequency neighbour cell measurements Ericsson CR Rel-15 36.300 15.7.0 1252 3 F LTE_5GCN_connect-Core, LTE_euCA-Core R2-1915524
⇨ **CR is agreed**

R2-1915624 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR Rel-14 36.321 14.11.0 1456 4 F LTE_VoLTE_ViLTE_enh R2-1913981
⇨ Revised in R2-1916301

R2-1916301 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR Rel-14 36.321 14.11.0 1456 5 F LTE_VoLTE_ViLTE_enh R2-1915624
⇨ **CR is agreed**

R2-1915625 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR Rel-15 36.321 15.7.0 1457 3 A LTE_VoLTE_ViLTE_enh R2-1913982
⇨ Revised in R2-1916302

R2-1916302 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR Rel-15 36.321 15.7.0 1457 4 A LTE_VoLTE_ViLTE_enh R2-1915625
⇨ **CR is agreed**

Withdrawn:

R2-1915368 (IPA)Correction on inter-frequency neighbour cell measurements Ericsson CR Rel-15 36.331 15.7.0 1252 2 F LTE_5GCN_connect-Core, LTE_euCA-Core R2-1913985 Withdrawn

4.5.1 Others

Rel-13 CA SCell AddModList handling:

R2-1915663 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR Rel-15 36.331 15.7.0 4160 - F LTE_CA_enh_b5C-Core, TEI15

R2-1915833 Discussion on Scell handling for CA Huawei, HiSilicon discussion Rel-13 LTE_CA_enh_b5C-Core

R2-1915834 Correction on Scell handling for CA Huawei, HiSilicon CR Rel-13 36.331 13.14.0 4169 - C LTE_CA_enh_b5C-Core

R2-1915835 Correction on Scell handling for CA Huawei, HiSilicon CR Rel-14 36.331 14.12.0 4170 - A LTE_CA_enh_b5C-Core

R2-1915836 Correction on Scell handling for CA Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4171 - A LTE_CA_enh_b5C-Core

Discussion (based on R2-1915663)

- Ericsson indicates that removal of the sentence in the 2nd change might mean legacy UEs can also use the extended list for legacy UEs. Mtek thinks that if UE doesn't support more than 5CCs, it doesn't need to support the extended signalling. Ericsson agrees this is not clearly specified.
- Huawei thinks the legacy text cannot be removed. Mixing IEs from different releases causes complexity.
- Qualcomm wonders how handovers work if source and target support different signalling releases. Ericsson thinks that legacy eNB must always be able to use th legacy fields.
- MediaTek thinks we need to ensure legacy signalling is used for UEs supporting only <5CCs.
- Huawei thinks removal of text allows mixing of IEs, which is not clear. Should clarify that in specifications. Qualcomm thinks the flexibility is already there and only Rel-10 UE doesn't understand the Rel-13 signalling.
- Nokia wonders if the signalling is tied to the AS release of support of 5CCs. MediaTek thinks it's only UEs supporting 5CCs. Intel thinks it's AS release and 5CC band combination. Ericsson thinks it's support of 5CCs, which is done via supported band combinations.
- Intel thinks we could also only clarify the ambiguous cases discussed in last meeting.

Offline discussion 100 (Ericsson): Discuss the exact wording of CRs from Rel-13 to clarify the cases where ambiguity exists. CRs can be provided in R2-1916306 (R13), R2-1916307 (R14)and R2-1916308 (R15) (CBT)

R2-1916308 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR
Rel-15 36.331 15.7.0 4160 1 F LTE_CA_enh_b5C-Core, TEI15
- ⇨ Correct revision number
- ⇨ Add “support” to “than 4 SCells might not support Rel-13 versions”
- ⇨ Align with 36.306 wording
- ⇨ Remove “However, as concluded by RAN2 (see above) this is not a problem with existing UE implementations.” from inter-operability analysis

- Huawei thinks inter-operability impact is not correct. Ericsson thinks the current description is aleady based on Huawei comments. Huawei clarifies we should be clear on whether there is problems or not.
- Huawei thinks UE CA capability is not well-defined currently in 36.331. Ericsson thinks it’s good enough already. MediaTek thinks we should align with 36.306 wording.
- Huawei thinks we should add indication that SCG-versions of the fields only apply to UEs supporting DC. Ericsson thinks it’s good enough already. Nokia and Mediatek agrees.

⇨ **As continuation of offline discussion 100, revised Rel-15 CR can be provided in R2-1916323 (CBF)**

R2-1916306 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR
Rel-15 36.331 13.14.0 4181 - F LTE_CA_enh_b5C-Core, TEI15

R2-1916307 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR
Rel-15 36.331 14.12.0 4182 - F LTE_CA_enh_b5C-Core, TEI15

R2-1916323 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR
Rel-15 36.331 15.7.0 4160 2 F LTE_CA_enh_b5C-Core, TEI15

eLTE (postponed last time):

R2-1915837 Correction to the handling of stored AS context upon CN type change Huawei, HiSilicon
CR Rel-15 36.304 15.4.0 0772 2 F TEI15 R2-1913986
- ⇨ **To be merged with the next CR (R2-1915838)**

R2-1915838 Correction on RRC_INACTIVE state Huawei, HiSilicon CR Rel-15 36.304
15.4.0 0775 - F LTE_5GCN_connect-Core
- ⇨ **Add also case of CN type change to the text**

Discussion
- Ericsson thinks this could be merged to the other CR.
- Qualcomm asks if CP IOT is supported for all UEs.
- Ericsson thinks the INACTIVE CR doesn’t address the CN type change scenario. MediaTek wonders if UE always moves from INACTIVE to IDLE if CN type changes. Nokia thinks it does.
- Qualcomm thinks UP CIOT support was not discussed in Rel-15 with LTE connected to 5GC but was discussed in eMTC WID.

⇨ **Offline discussion 101 (Huawei): Provide merged CR in R2-1916309. Also clarify WID codes in cover page. (CBT)**

R2-1916309 Correction on handling of stored AS context for UP optimization and RRC_INACTIVE state
Huawei, HiSilicon CR Rel-15 36.304 15.4.0 0775 1 F
LTE_5GCN_connect-Core, TEI15
- ⇨ **CR is agreed.**

eLTE:

R2-1915526 Correction to nonCriticalExtension of RRCConnectionRelease Huawei, HiSilicon CR
Rel-15 36.331 15.7.0 4150 - F LTE_5GCN_connect-Core, TEI15
- Lenovo wonders if this was a mistake or intention. Huawei thinks it was a mistake. Intel agrees it was a mistake.

- Lenovo thinks we don't neecd field description for dummy as it's obvious. T-Mobile thinks we should be careful and have the descripton.
  - ⇨ **CR is agreed**

R2-1916080 Clarification on UE Inactive AS context Google Inc. CR Rel-15 36.304 15.4.0 0776 - F LTE_5GCN_connect-Core
- Qualcomm thinks this is the same issue as with Huawei CR.
  - ⇨ **Discussed together with R2-1915838 in offline discussion 101**

R2-1916082 Clarification on UE Inactive AS context Google Inc. CR Rel-15 36.331 15.7.0 4177 - F LTE_5GCN_connect-Core
- Ericsson agrees. Nokia thinks the CR is not wrong but maybe not critical.
- Huawei thinks this is a clarification.
  - ⇨ **Correct cover page order for "R2" and "Google"**
  - ⇨ **Revised with these changes in R2-1916313, to be agreed unseen.**

R2-1916313 Clarification on UE Inactive AS context Google Inc. CR Rel-15 36.331 15.7.0 4177 1 F LTE_5GCN_connect-Core

⇨**CR is agreed unseen**
[MCC]: In coversheet the other specs affected field is empty
=> Revised in R2-1916625

R2-1916626 Clarification on UE Inactive AS context Google Inc. CR Rel-15 36.331 15.7.0 4177 2 F LTE_5GCN_connect-Core
=> Agreed

Miscellaneous corrections to 36.306:

R2-1914714 Miscellaneous corrections Lenovo, Motorola Mobility (Rapporteur) CR Rel-15 36.306 15.6.0 1719 - F TEI15, LTE_1024QAM_DL-Core, NR_newRAT-Core

⇨**CR is agreed**

Miscellaneous corrections to 36.331:

R2-1914715 Miscellaneous corrections Lenovo, Motorola Mobility CR Rel-15 36.331 15.7.0 4142 - F LTE_sTTIandPT-Core, TEI15, NR_newRAT-Core, LTE_QMC_Streaming-Core
- Qualcomm thinks the part with "*both EPC and*" is not needed.
- Nokia would like to avoid using "miscellaneous corrections" in Tdoc title and would like a better title.
  - ⇨**Do not add "both EPC and" in SIB1 field descriptions**
  - ⇨**Also use "-" for FDD/TDD diff for field en-DC in UE capabilities**
  - ⇨**Remove extra whitespace before n21 in ue-CategoryUL**
  - ⇨**Revised with these changes in R2-1916310, to be agreed unseen.**

R2-1916310 Miscellaneous corrections Lenovo, Motorola Mobility CR Rel-15 36.331 15.7.0 4142 - F LTE_sTTIandPT-Core, TEI15, NR_newRAT-Core, LTE_QMC_Streaming-Core

⇨**CR is agreed unseen**

UE capability enquiry security requirements:

R2-1914745 Security requirement for UE capability enquiry for LTE Intel Corporation, NTT DoCoMo, Ericsson, Apple CR Rel-15 36.331 15.7.0 4041 2 C TEI15, LTE-L23 R2-1911651
- ⇨ Check SA3 progress on this issue (CBT)
- ⇨ **Postponed to next meeting.**

UDC (postponed last time):

R2-1915657 Specify UDC Header is part of Data Field Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Huawei, HiSilicon, CATT CR Rel-15 36.323 15.4.0 0277 - F LTE_UDC-Core

(moved from 4.5)

⇨ **CR is agreed**

QMC:

R2-1915569 Correction to full configuration Google Inc. CR Rel-15 36.331 15.7.0 4151 - F LTE_QMC_Streaming-Core

- Huawei thinks this CR is not needed as UE always removes all dedicated configurations already.
- Intel thinks this could be 1>.
- Ericsson thinks we should chck also SRB3
- Qualcomm wonders if RAN should be ticked in cover page.
- Ericsson thinks the reason for change is very brief and could be expanded to clarify the reason.

⇨ **Offline discussion 102 (Google): Modify the CR and improve cover page according to comments. CR revision can be provided in R2-1916311. (CBT)**

R2-1916311 Correction to full configuration Google Inc. CR Rel-15 36.331 15.7.0 4151 1 F LTE_QMC_Streaming-Core

- Ericsson would like a more generic wording. Google thinks we only have SRB4 currently.
- Ericsson indicates they provided more generic wording but it wasn't agreed.

⇨**CBF to explore better wording. Revision can be provided in R2-1916324**

R2-1916324 Correction to full configuration Google Inc. CR Rel-15 36.331 15.7.0 4151 2 F LTE_QMC_Streaming-Core

⇨**Postponed to next meeting**

euCA:

R2-1915667 Correction to early measurement reporting results Ericsson CR Rel-15 36.331 15.7.0 4161 - F LTE_euCA-Core

- Nokia and Qualcomm think this was a mistake.
- Qualcomm would prefer option 2 or 3.
- Huawei wonders if this can be solved by UE implementation. Qualcomm thinks this might not work.
- MediaTek prefers option 1. Nokia agrees this would be how the RRC works now. Ericsson thinks this is not a huge cost.
- Qualcomm thinks we could dummify the unused values.

⇨ **Go for option 1**

⇨ **Modify the CR to say "in this version of specification, E-UTRAN sets the value to "both"".**

⇨ **Revised CR can be provided in R2-1916312 (CBT)**

R2-1916312 Correction to early measurement reporting results Ericsson CR Rel-15 36.331 15.7.0 4161 1 F LTE_euCA-Core

- Lenovo wonders if this fixes the issue in Rel-16. Ericsson thinks this is only Rel-15.
- Qualcomm thinks we should align with normal wording on "E-UTRAN always configures the value "both"".
-

⇨**Use "E-UTRAN always configures the value "both"" in the field description**

⇨ **Remove brackets from "no" in "there is (no)" in cover page.**

⇨ **Revised with these changes in R2-1916325, to be agreed unseen.**

R2-1916325 Correction to early measurement reporting results Ericsson CR Rel-15 36.331 15.7.0 4161 2 F LTE_euCA-Core

⇨ **The CR is agreed unseen.**

R2-1915668 Correction to maximum number of carriers for idle mode measurements Ericsson CR Rel-15 36.331 15.7.0 4162 - F LTE_euCA-Core

- Nokia thinks network normally doesn't configure more than UE supports but we don't write this to specification.
- Qualcomm agrees it's left up to UE implementation. Ericsson thinks UE should report the strongest carriers. Huawei agrees with Qualcomm.
- Qualcomm thinks procedural text also has a quality threshold controlling which cells are reported.

⇨**RAN2 agrees it's up to UE implementation which carriers to report.**

TEI15:

R2-1915839 Discussion on segment number for CMAS notification Huawei, HiSilicon discussion Rel-15 TEI15

Observation 1: Regarding SIB12 in LTE and SIB8 in NR, if warning area coordinates are provided for the warning message, the total number of warning area coordinates segments is less than or equal to the total number of warning message segments.

- Nokia agrees with the examples but thinks this is only one possible implementation and other implementations are possible so that coordinates are distributed. Qualcomm agrees with observation but sees no need to capture it.
- Huawei thinks we could capture the observation in chairman notes.
- Nokia thinks the lastSegment triggers UE to collect all the recived segments and that's already specified.
- Apple agrees with Nokia.

⇨ **Noted**

R2-1916529 Restoring RoHC/SDAP during INACTIVe Resume Intel CR Rel-15 36.331 15.7.0 4183 - F LTE_5GCN_connect-Core Late

⇨ **Discuss together with NR CR in main session. (CBF)**

Withdrawn:

R2-1915634 Correction to maximum number of carriers for idle mode measurements Ericsson CR Rel-15 36.331 15.7.0 4159 - F LTE_euCA-Core Withdrawn

R2-1915629 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR Rel-15 36.331 15.7.0 4157 - F LTE_CA_enh_b5C-Core, TEI15 Withdrawn

R2-1915633 Correction to early measurement reporting results Ericsson CR Rel-15 36.331 15.7.0 4158 - F LTE_euCA-Core Withdrawn

R2-1914631 Dummify one of the cellReservedForOperatorUse-CRS-flags Ericsson CR Rel-15 36.331 15.7.0 4139 - F LTE_5GCN_connect-Core Withdrawn

5 WI: New Radio (NR) Access Technology

(NR_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

5.1 Organisational

Incoming LSs, etc.

R2-1914320 Reply LS on ambiguity of UE L1 FDD/TDD FR1/FR2 capabilities (R1-1911741; contact: ZTE) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2

- ZTE indicate that this is alrady in email disc 34

⇒ **noted**

R2-1914335 Reply LS on SFTD measurement (R4-1912705; contact: Intel) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2 Cc:RAN1
- intel think this means we don't need to change anything. QC agrees.

⇒ **noted**

R2-1914334 Reply LS on definition for SFTD measurement (R4-1912704; contact: Apple) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN1 Cc:RAN2

⇒ **noted wo presentation**

R2-1916542 LS on UE capability of intraBandENDC-Support (R4-1913130; Qualcomm) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2

5.2 Stage 2

5.2.1 Stage 2 corrections for TS 38.300

You should discuss your stage 2 CRs with the specification rapporteurs before submission.

R2-1914597 RNA Configuration Nokia (Rapporteur) CR Rel-15 38.300 15.7.0 0177 - F NR_newRAT-Core
- Huawei wonder about the first change. Several companies think only the second change is correct. Nokia think the reason for the first change is to refer to RANAC. Ericsson think it si already there.
- Samsung think also the second change is not needed as the current text is correct.

⇒ **Not pursued**

R2-1916184 Correction on mini-slot scheduling Fujitsu, Nokia (Rapporteur) CR Rel-15 38.300 15.7.0 0181 - F NR_newRAT-Core

⇒ **Agreed**

R2-1915025 Clarification on NR suitable cell for NR re-establishment Spreadtrum Communications CR Rel-15 38.300 15.7.0 0179 - F NR_newRAT-Core
- Ericsson think suitable here implicitly means NR.
- Samsung think this is correct, but this is already clear in stage-3.
- Vivo think we can refer to 38.304. Oppo think this is Pcell.
- Chair: the correction seems correct, but as stage-3 is crystal clear there is no possibility for misunderstanding.

⇒ **Not pursued**

5.2.1.0 In-principle agreed CRs

R2-1914685 Correction on PUCCH transform precoding vivo, Nokia (rapporteur) CR Rel-15 38.300 15.7.0 0178 - F NR_newRAT-Core
- Vivo explains that coversheet has been updated.

⇒ **agreed**

R2-1914955 Clarification on measurement gap configuration in NR SA MediaTek Inc., Nokia (Rapporteur), Samsung, ZTE Corporation, Sanechips, Intel CR Rel-15 38.300 15.7.0 0173 2 F NR_newRAT-Core R2-1913978
- MTK indicate that intra-RAT part has been added.
- Huawei suggest to correct language by removing word "same" in the paragraph of the first change. Intel think "same" is useful in this context.

⇒ **Agreed**

5.2.2 Stage 2 corrections for TS 37.340

You should discuss your stage 2 CRs with the specification rapporteurs before submission.

R2-1915884 Missing RACH aspect for DC Nokia, Nokia Shanghai Bell, ZTE Corporation (Rapporteur) CR Rel-15 37.340 15.7.0 4134 - F NR_newRAT-Core

- Huawei think “as on PCell” shall be removed. Nokia think PCell case is covered in 38.300.
- [MCC]: This CR was initially allocated for 36.331 and thus it has a wrong CR number

⇒ **Revised in R2-1916413**

R2-1916413 Missing RACH aspect for DC Nokia, Nokia Shanghai Bell, ZTE Corporation (Rapporteur) CR Rel-15 37.340 15.7.0 0169 1 F NR_newRAT-Core

⇒ **Agreed**

R2-1914559 Correction on split PDU session OPPO CR Rel-15 37.340 15.7.0 0164 - F NR_newRAT-Core

- Intel think that this should be discussed in R3. ZTE agrees
- Chair: this is a R3 topic
- Oppo think the third change can be a R2 topic. ZTE think also this is R3.

⇒ **Not pursued**

R2-1915574 Clarification on PDCP version change Huawei, HiSilicon CR Rel-15 37.340 15.7.0 0166 - F NR_newRAT-Core

- Ericsson think the current text is not wrong.
- Huawei think there is a stage-3 proposal to do the opposite
- intel wonders if the intention is to say that this can be done by handover without qualifications, as there is a comma. Huawei explains that this is not the case. Can be clarified in the text.
- ZTE think this CR is good.
- Ericsson think for DRBs this can be changed without handover but just release/add. Huawei wonder what would be the benefit. There is a related Ericsson tdoc in R2-1916253

Moved to here:

R2-1916253 Allowing PDCP version change without handover Ericsson CR Rel-15 38.331 15.7.0 1424 - F NR_newRAT-Core Late

- Discussed in offline 02

Offline 02, discuss and conclude on intended behaviour for DRB, R2-1915574 + R2-1916253 (Huawei , Ericsson)

- Huawei report that there are several UE impl that cannot do PDCP change without handover.
- Huawei suggest to capture something, e.g. that the network doesn’t do that.
- Nokia wonder if a UE capability would be ok

Chair: can consider for next meeting of any clarification to current TS is needed

Moved to here:

R2-1915573 Clarification on PDCP version change Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4152 - F NR_newRAT-Core

Come back after offline 02.

5.2.2.0 In-principle agreed CRs

R2-1914810 Clarification on security key change and bearer termination point change ZTE Corporation, Ericsson, Intel CR Rel-15 37.340 15.7.0 0163 1 F NR_newRAT-Core R2-1913976

- ZTE explains that conseq if not approved has been softened.

⇒ **Agreed**
[MCC]: Wrong CR number in the coversheet
=> Revised in R2-1916633

R2-1916633 Clarification on security key change and bearer termination point change ZTE Corporation, Ericsson, Intel CR Rel-15 37.340 15.7.0 0163 2 F NR_newRAT-Core
=> .Agreed

R2-1914811 Clarification of NR-DC synchronization ZTE Corporation CR Rel-15 37.340 15.7.0 0160 1 F NR_newRAT-Core R2-1913482

⇒ **Agreed**
[MCC]: Wrong CR number in the coversheet
=> Revised in R2-1916634

R2-1916634 Clarification of NR-DC synchronization ZTE Corporation CR Rel-15 37.340 15.7.0 0160 2 F NR_newRAT-Core
=> .Agreed

R2-1915122 PDCP version in EN-DC Ericsson CR Rel-15 37.340 15.7.0 0155 2 F NR_newRAT-Core R2-1914122

⇒ **Agreed**

R2-1915365 (IPA) Correction on sending Failure Information via SRB3 Ericsson, ZTE Corporation (Rapporteur), Huawei CR Rel-15 37.340 15.7.0 0159 2 F NR_newRAT-Core R2-1913980
- Ericsson indicate that cover sheet has been updated

⇒ **Revised in R2-1916471 (rev 3), remove "(IPA)" from the title, which is agreed unseen.**

R2-1915505 SMTC setting in MR-DC PSCell change Nokia, Nokia Shanghai Bell CR Rel-15 37.340 15.7.0 0157 2 F NR_newRAT-Core R2-1913979
- R2-190xxxx to be updated to a real tdoc number
- Nokia comments in general that it is good practice to have revision history on the cover page. Secretary think we should have a R2 process of this. Huawei think is depends on the case.

⇒ **Revised in R2-1916473 (rev 3), R2-190xxxx to be updated to a real tdoc number, which is agreed unseen**

R2-1915588 PDCP configuration generation (email discussion of 107#25) Huawei, HiSilicon CR Rel-15 37.340 15.7.0 0158 1 F NR_newRAT-Core R2-1913273
- Intel think we need TS change for the case 3.
- QC think this anyway doesn't impact the UE. The UE should handle this. Intel think the release can be in the same message.

Offline 01, Check whether any change is needed wrt Case3 (cover page or TS text).

R2-1916560 PDCP configuration generation (email discussion of 107#25) Huawei, HiSilicon CR Rel-15 37.340 15.7.0 0158 2 F NR_newRAT-Core
- Intel think the problem is still there

✉ **[108#01][R15] PDCP configuration generation (Huawei)**
Intended outcome: agreed CR
Deadline: Short
=> Agreed in R2-1916602, 37.340 CR#0158 r3

R2-1915709 Clarification regarding QoS handling in MRDC with 5G CN Samsung, ZTE Corporation CR Rel-15 37.340 15.7.0 4133 - F NR_newRAT-Core R2-1913589

- [MCC]: This CR was initially allocated for 36.331 and thus it has a wrong CR number

⇒ **Revised in R2-1916400**

R2-1916400 Clarification regarding QoS handling in MRDC with 5G CN Samsung, ZTE Corporation CR Rel-15 37.340 15.7.0 0168 1 F NR_newRAT-Core R2-1913589

⇒ **Agreed**

5.2.3 Positioning

Corrections to both the stage 2 and stage 3 aspects related to positioning.
To be treated in a parallel session.

R2-1915653 Corrections of terminology for stage 2 Ericsson CR Rel-15 38.305 15.4.0 0016 - F NR_newRAT-Core
=> Agreed

5.2.3.0 In-principle agreed CRs

R2-1914983 Correction on the EUTRAN terminology Huawei, HiSilicon CR Rel-15 38.305 15.4.0 0014 1 F NR_newRAT-Core
⇨ Agreed
[MCC]: Specification number in the coversheet needs update
=> Revised in R2-1916628

R2-1916628 Correction on the EUTRAN terminology Huawei, HiSilicon CR Rel-15 38.305 15.4.0 0014 2 F NR_newRAT-Core
=> Agreed

R2-1915655 Corrections for Positioning Architecture Ericsson CR Rel-15 38.305 15.4.0 0015 2 F NR_newRAT-Core R2-1914072
⇨ Agreed

5.3 Stage 3 user plane

Essential functional corrections.

5.3.1 MAC

R2-1914958 Clarification on the uplink skipping vivo discussion
DISCUSSION
- LG think R1 specifications do not take into account UL skipping, and would prefer to fix in R1
- ZTE think option 3 is the right way.
- QC would prefer option 3 which has no R2 impact,
- Nokia think option 3 is the current behaviour, Lenovo as well.
- Fujitsu are not sure there is a misalignment between R1 and R2. Lenovo are also not sure.
- Docomo also support option 3. Apple as well. Catt as well.
- Ericsson think we could have done O1 but now think opt 3 is more suitable.
- Oppo wonder if for option 3 there is no PUSCH transmission at all.

⇒ **Option 3 is the R2 understanding of desired behaviour, i.e. there will be no PUSCH transmission for the case of UL skipping. R2 think there should be no further R2 impact, even if there would be a misalignment between R1 and R2 TS.**

Offline 29, Draft LS to R1 on UL skip in R2-1916503 (vivo)

R2-1916503 [DRAFT] LS on Uplink skipping vivo LS out Rel-15 NR_newRAT-Core To:RAN1
- Changemarks need to be removed

⇒ **LS is approved in R2-1916572**

R2-1916174 Correction to long truncated BSR Qualcomm Inc CR Rel-15 38.321 15.7.0 0684 - F NR_newRAT-Core
- LG think there is no misalignment. Samsung and Ericsson agrees.
- ZTE think this CR has issues.
- Chair: no support, no issue

⇒ **Not pursued**

R2-1916008 Correction on PRACH procedure with SRS switching Huawei, HiSilicon CR Rel-15 38.321 15.7.0 0680 - F NR_newRAT-Core
- Ericsson think that the use of “carrier” is not suitable and think there is no real risk of misunderstanding.
- CATT are ok to clarify but note that “Carrier” is used with different meaning in MAC
- LG would like to keep the current text, if changed would prefer PUCCH-less Scell
- Samsung would be ok to clarify, but think the wording can be improved.
- Vivo think the cover page indicate that an extension of the use case is the target, and cannot be a correction.
- Nokia think there is no issue, and the correction doesn’t fix anything.
- Chair: no consensus to fix anything, although most companies seems to agree that the intention is correct.

Offline 30, to attempt to agree on the problem, and possibly am agreeable text for clarification, either in a CR or text for CM notes (Huawei)
=> Revised in R2-1916551

R2-1916551 Correction on PRACH procedure with SRS switching Huawei, HiSilicon CR Rel-15 38.321 15.7.0 0680 1 F NR_newRAT-Core

⇒ **agreed**

R2-1916009 Correction on description of BFR RAR window in 38.321 Huawei, HiSilicon CR Rel-15 38.321 15.7.0 0681 - F NR_newRAT-Core
- LG think the CR is not needed. Nokia agrees. Lenovo as well
- no support

⇒ **Not pursued**

R2-1916044 Issue related to CG overridden by PDCCH ASUSTeK discussion Rel-15 NR_newRAT-Core
=> Revised in R2-1916497

R2-1916497 Issue related to CG overridden by PDCCH ASUSTeK discussion Rel-15 NR_newRAT-Core

⇒ **Noted**

R2-1916045 CG overridden ASUSTeK CR Rel-15 38.321 15.7.0 0682 - F NR_newRAT-Core
- LG think this is not needed, and not correct
- Chair: no support

⇒ **Not pursued**

R2-1916072 The CR to 38.321 for on UL grant reception in RAR ZTE Corporation, Sanechips CR Rel-15 38.321 15.7.0 0683 - F NR_newRAT-Core
- Ericsson think we have the same text in LTE, LG think this is not needed
- Samsung have some sympathy for the clarification but think there is no risk of misunderstanding.

⇒ **Not pursued**

5.3.1.0 In-principle agreed CRs

R2-1916172 Clarification to CSI reporting in C-DRX Qualcomm Inc CR Rel-15 38.321 15.7.0 0672 3 F NR_newRAT-Core R2-1914175

⇒ **agreed**

R2-1916173 Correction to PHR in dual connectivity Qualcomm Inc, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-15 36.321 15.7.0 0660 3 F NR_newRAT-Core R2-1913898

- QC indicate that a reference has been changed to [xx] acc to comment last meeting. Samsung indicate that the change is not fully correct but can be fixed in implementation.
- Revised by MCC to update the wrongly allocated CR number

=> Revised in R2-1916398

R2-1916398 Correction to PHR in dual connectivity Qualcomm Inc, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-15 36.321 15.7.0 1462 - F NR_newRAT-Core

⇒ **agreed**

5.3.2 RLC

5.3.2.0 In-principle agreed CRs

5.3.3 PDCP

R2-1915486 Correction on header compression, integrity protection and ciphering Huawei, HiSilicon CR Rel-15 38.323 15.6.0 0037 - F NR_newRAT-Core

- LG explains that this was intentionally not included and it is just mentioned in respective section once.
- Samsung also think this is not needed.
- Chair no support

⇒ **Not pursued**

5.3.3.0 In-principle agreed CRs

5.3.4 SDAP

5.3.4.0 In-principle agreed CRs

5.4 Stage 3 control plane

Essential functional corrections.

5.4.1 NR RRC

Including outcome of the email discussion [107bis#32][NR R15] Miscellaneous CR 331 (Ericsson)

5.4.1.0 In-principle agreed CRs

R2-1915362 (IPA) Correction to integrity protection in DRB addition and modification Ericsson CR Rel-15 38.331 15.7.0 1309 1 F NR_newRAT-Core R2-1913310

⇒ **Revised in R2-1916474 (rev 2), remove (IPA), which is agreed unseen**

R2-1915722 Correction to field conditions in NE-DC Ericsson CR Rel-15 36.331 15.7.0 4128 2 F NR_newRAT-Core, LTE_5GCN_connect-Core R2-1914124

⇒ **Agreed**

R2-1915589 Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC Huawei, HiSilicon CR Rel-15 37.340 15.7.0 4132 2 F NR_newRAT-Core R2-1914125
- [MCC]: This CR was allocated as a 37.340 CR, but submitted as a 36.331 CR. Needs a revision to fix the discrepancy between the tdoclist and the CR coversheet.

⇒ **Revised in R3-1916399**

R2-1916399 Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4185 - F NR_newRAT-Core R2-1914125

⇒ **Agreed**

R2-1915672 Presence and absence of TAC in NR cell Ericsson CR Rel-15 38.331 15.7.0 1325 2 F NR_newRAT-Core R2-1914127

⇒ **agreed**

R2-1915076 Configuration limitation for RRCRelease message in R15 OPPO CR Rel-15 38.331 15.7.0 1362 - F NR_newRAT-Core

⇒ **agreed**

R2-1915031 KgNB derivation upon mobility Qualcomm Incorporated CR Rel-15 38.300 15.7.0 0174 1 F NR_newRAT-Core R2-1914129

⇒ **agreed**

R2-1914907 CR to introduce timer for DRX based SFTD measurement ZTE Corporation, Sanechips, MediaTek Inc. CR Rel-15 38.331 15.7.0 1273 1 F NR_newRAT-Core R2-1912767
- Change timer name and some text moved to other indentation

⇒ **agreed**

R2-1915426 CR to 36.331 on performing L3 filtering for NR related measurements Ericsson CR Rel-15 36.331 15.7.0 4148 - F NR_newRAT-Core
- wording changed to “expect for NR”, but should be “except for NR”

⇒ **Revised in R2-1916475 (rev 1), change “expect for NR” to “except for NR”, which is agreed unseen**

R2-1914667 CR to 38.331 on CGI information Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.7.0 1341 1 F NR_newRAT-Core R2-1913737

⇒ **agreed**

R2-1914662 Correction on frequency indication in SIB1 and SIB2 Huawei, HiSilicon, Ericsson, MediaTek CR Rel-15 38.331 15.7.0 1296 2 F NR_newRAT-Core R2-1914209
- Changes from last meeting: remove “ ..for FDD ..” as agreed last meeting, and change title

⇒ **agreed**

R2-1915482 Correction on the Msg3 based on demand system information Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1333 1 F NR_newRAT-Core R2-1913673

⇒ **agreed**

R2-1914908 CR to INM on absence of gapPurpose ZTE Corporation, Sanechips CR Rel-15 38.331 15.7.0 1274 1 F NR_newRAT-Core R2-1912768

⇒ **agreed**

R2-1915354 (IPA) Corrections on scg-RB-Config in CG-Config Ericsson CR Rel-15 38.331 15.7.0 1301 1 F NR_newRAT-Core R2-1913298

⇒ **Revised in R2-1916476 (rev 2), remove (IPA), which is agreed unseen**

R2-1914534 Corrections on CG-Config CATT CR Rel-15 38.331 15.7.0 1267 1 F NR_newRAT-Core R2-1912141

⇒ **agreed**

R2-1916262 Security Algorithms for Radio Bearers Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1332 4 F NR_newRAT-Core R2-1914225 Late

⇒ **agreed**

Withdrawn

R2-1915627 Presence and absence of TAC in NR cell Ericsson CR Rel-15 38.331 15.7.0 1391 - F NR_newRAT-Core Withdrawn

R2-1915661 Presence and absence of TAC in NR cell Ericsson CR Rel-15 38.331 15.7.0 1396 - F NR_newRAT-Core Withdrawn

5.4.1.3 Connection control procedures

No documents should be submitted to 5.4.1.3. Please submit to 5.4.1.3.x.

5.4.1.3.1 Corrections to L1 Parameters

R2-1916035 Correction on initial BWP bandwidth capabilities Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0215 - F NR_newRAT-Core

- QC think this CR doesn't capture R4 intention. If so we should have IoT bit, but think we can also leave it as it is and just be careful on testing.
- Intel agrees this is not needed.
- ZTE think the CR is valid but it is problematic to agree for UE vendors, and think the real UE support is based on test cases.
- Docomo think we should avoid reconfiguration failure in field.
- Nokia think this can be tested later.
- MTK prefers to keep the current text.
- TMO support this CR.
- Intel think this causes problems and we don't need to change.
- Ericsson think we should do some change.

=> Revised in R2-1916546

R2-1916546 Correction on initial BWP bandwidth capabilities Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0215 1 F NR_newRAT-Core

⇒ **agreed**

R2-1915488 Correction on camping conditions Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1378 - F NR_newRAT-Core

- Intel think this is also not agreeable.
- QC point out that we don't discriminate between tested and supported.
- TMO think is it not clear whether this is actual BW, and think this is not only about testing.
- Chair: agreement seems to be difficult at least for Rel-15.

Offline 03, on the two tdocs above, attempt to converge to capture something (Huawei).

⇒ **agreed**

⇒ **It is allowed for a UE that has not conformance tested to not camp on the cell**

R2-1915489 Correction on CORESET location Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1379 - F NR_newRAT-Core
- Intel preclude the case when initial BWP overlap with other BWP, so the current text is clear. Ericsson think R1 came up with this, and we shouldn't change unless agreed with R1. QC agrees with the Intel explanation.
- Chair: there seems to be resistance to change as the proposed text seems to preclude a case that is wanted.
- Huawei want to clarify what is possible vs what is not possible, and if we don't agree the CR this is not clear. Ericsson think it is ok to have an offline.

Offline 04, clarify what is possible vs not possible and whether a clarification is needed. (Huawei)
=> Revised in R2-1916552

R2-1916552 Correction on CORESET location Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1379 1 F NR_newRAT-Core

⇒ **agreed**

R2-1915591 PUCCH configuration for MR-DC and NR standalone Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core
- Intel support, and think it is ok to send LS. MTK agrees with Intel. Vivo agrees. Samsung think this was not discussed in R1 and should be concluded there. MTK also think we can ask this.
- QC think we don't need to send LS. ZTE agrees

⇒ **P1 agreed**

R2-1915593 Draft LS to RAN1 for clarification of PUCCH configuration Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:RAN1
- Ericsson point out that NG-EN-DC should be NGEN-DC

⇒ **Remove the dash acc to above comment. Approved in R2-1916481**

R2-1915592 Correction on PUCCH configuration Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1388 - F NR_newRAT-Core

⇒ **Postpone**

R2-1916081 Correction on PUSCH-less Scell Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1417 - F NR_newRAT-Core
- Nokia think we don't need to clarify as this is not used anywhere else.
- Oppo agrees the change is not needed.
- Ericsson think we don't use the word carrier in such contexts.

Comeback, check other related discussions
- Huawei indicate that for UP language was not changed

⇒ **Not pursued**

R2-1915487 Correction on initial BWP bandwidth capabilities Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1377 - F NR_newRAT-Core Late
=> withdrawn

5.4.1.3.2 Corrections to L2 Parameters

Including outcome of the email discussion [107bis#30][NR R15] Correction on the condition of RBTermChange (Ericsson)

R2-1915356 Email discussion on remaining issues for correction on the condition of RBTermChange Ericsson discussion Rel-15 NR_newRAT-Core Late
- Samsung pont that that the sedonc case in P2 is to be regarded intersystem HO rather than Inter-RAT.

⇒ **Noted**

R2-1915366 Correction on the condition of RBTermChange Ericsson CR Rel-15 38.331 15.7.0 1369 - F NR_newRAT-Core Late
- Ericsson think there are other cases of “Inter-system” “Inter-RAT” issues.

⇒ **Intention is agreed, revised**

Offline 05, Revision in R2-1916479, polish the wording to be stringently correct (e.g. acc to Samsung comment above). (Ericsson)

R2-1916479 Correction on the condition of RBTermChange Ericsson CR Rel-15 38.331 15.7.0 1369 1 F NR_newRAT-Core

⇒ **Agreed**

R2-1915483 Correction on the configuration of split SRB Huawei, HiSilicon, Samsung CR Rel-15 38.331 15.7.0 1375 - F NR_newRAT-Core
- Samsung think this is needed. MTK is ok with the CR, and think it clarifies the CA duplication case. LG also support.
- Nokia think this is not needed in any case.
- Nokia think that possibly both title and entire cover page need to be changed.

Offline 06, to check, revision in R2-1916480 (Huawei).

R2-1916480 Correction on the configuration of split SRB Huawei, HiSilicon, Samsung CR Rel-15 38.331 15.7.0 1375 1 F NR_newRAT-Core

⇒ **Agreed**

R2-1916034 Corrections on the PDCP duplication Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1416 - F NR_newRAT-Core
- Samsung think that “initial” is the state after reception of this. First and second changes are not needed but the last one is ok.
- QC think that the current wording is clear, and the CR doesn’t change anything.
- Nokia and LG think that RRC can not be used for activation and deactivation. Samsung think this can be changed by RRC. Ericsson think that this value cannot be changed once configured.

Offline 07, clarify whether some clarification is needed (Huawei)
=> Revised in R2-1916549

R2-1916549 Corrections on the PDCP duplication Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1416 1 F NR_newRAT-Core
=> Revised in R2-1916557

R2-1916557 Corrections on the PDCP duplication Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1416 2 F NR_newRAT-Core

R2-1916550 Clarification for PDCP duplication (de)activation by RRC Huawei discussion

⇒ **postponed**

5.4.1.3.3 Connection establishment procedure

Access control and establishment cause are discussed in the access control agenda item 5.4.1.3.10

5.4.1.3.4 Connection reconfiguration procedure

Including corrections related to handover (i.e. reconfig with sync)
Including outcome of the email discussion [107bis#31][NR R15] Correction to AS security key update (Ericsson)

R2-1915357 Email discussion on security key derivation Ericsson discussion Rel-15 NR_newRAT-Core Late

R2-1915358 Correction on security key derivation Ericsson CR Rel-15 36.331 15.7.0 4145 - F NR_newRAT-Core Late

R2-1915359 Correction on security key derivation Ericsson CR Rel-15 38.331 15.7.0 1368 - F NR_newRAT-Core Late

DISCUSSION
- Intel think this is not strictly BW compatible. Intel think that algorithms and sk counter can be provided independently. MTK think the RRC design have diverged from the original intention.
- Intel think the intention was to be able to establish SRB3 without MN involvement. Nokia then think we should not do this.
- Huawei would be ok with the 36.331 CR.

Offline 08, continue discussion (Ericsson)

R2-1916534 Correction on security key derivation Ericsson CR Rel-15 36.331 15.7.0 4145 1 F NR_newRAT-Core Late

R2-1916535 Correction on security key derivation Ericsson CR Rel-15 38.331 15.7.0 1368 1 F NR_newRAT-Core Late

⇒ **2 CRs agreed**

R2-1915576 Clarification on sending of sk-counter for (NG)EN-DC Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4153 - F NR_newRAT-Core
- Same as above, skip

R2-1915577 Correction to key derivation for the UE configured with sk-counter Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1381 - F NR_newRAT-Core
- Intel wonders what is wrong without this.
- Huawei think the first change is needed. The second and third changes are clarification. Ericsson agrees with the first change.
- ZTE think we don't need to make the clarifications.
- Samsung wonders for the first change, whether there is really a problem. Ericsson wonders if this will bring new problems.
- Chair: There seems to be support to do the first change

Offline 09, focusing on the first change, find an agreeable CR if possible, Revision In R2-1916483 (Huawei)

R2-1916483 Correction to key derivation for the UE configured with sk-counter Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1381 1 F NR_newRAT-Core

⇒ **Agreed**
[MCC]: Wrong CR number in the coversheet
=> Revised in R2-1916629

R2-1916629 Correction to key derivation for the UE configured with sk-counter Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1381 2 F NR_newRAT-Core
=> Agreed

R2-1915484 Correction for random access initiation due to reconfiguration with sync Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.7.0 1376 - F NR_newRAT-Core
- LG think in this case RRC triggers RA so RA can be initiated in any case. Huawei think this is not the case,
- MTK think TA timer will not be running and thus only RACH can be done, and there is no problem. ZTE agrees. Samsung agrees as well.
- QC think there is nothing broken.

⇒ **Not pursued**

R2-1915579 Correction on the pre-condition for reconfiguration with sync of SCG Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1383 - F NR_newRAT-Core

- QC think this gives the network the flexibility to just provide L1 params without RLC bearers.
- ZTE propose to change DRB to RLC bearer.

⇒ **Change DRB to RLC bearer**

⇒ **Revision in R2-1916484, which is agreed unseen.**

R2-1915669 Correction on reestablishRLC and reestablishPDCP Ericsson CR Rel-15 38.331 15.7.0 1399 - F NR_newRAT-Core

- Intel think this CR is mainly for consistency and may not be strictly needed.
- Huawei propose to merge with the Miscellaneous CR.
- Samsung think the first change is ok, but other changes are overkill. LG agrees with Samsung.

⇒ **First change is agreed, merged with the rapporteur CR**

R2-1916085 RLC re-establishment when PDCP is re-established Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1418 - F NR_newRAT-Core

- Samsung think this is not needed.
- ZTE think this is a note and about network behaviour and think this is not needed. Huawei agrees.
- QC think the packets in RLC is anyway useless.
- Chair: no support for this clarification

⇒ **Not pursued**

Text Enhancements

R2-1915575 Correction to DRB addition/modification for the LTE UE not in EN-DC Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1380 - F NR_newRAT-Core

R2-1915578 Correction on the need for reconfiguration with sync in NR-DC Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1382 - F NR_newRAT-Core

R2-1915580 Correction on the SCG RRCReconfigurationComplete for NR-DC Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1384 - F NR_newRAT-Core

R2-1916144 DL BWP Configuration mandatory fields upon SCell addition Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1422 - F NR_newRAT-Core

R2-1915642 Addition of indication for successful Random access procedure Ericsson CR Rel-15 38.321 15.7.0 0665 1 F NR_newRAT-Core R2-1913014

R2-1915666 Clarification of submission of RRCReconfigurationcomplete Ericsson CR Rel-15 38.331 15.7.0 1398 - F NR_newRAT-Core

Withdrawn

R2-1915632 Clarification of submission of RRCReconfigurationcomplete Ericsson CR Rel-15 38.331 15.7.0 1393 - F NR_newRAT-Core Withdrawn

R2-1915635 Correction on reestablishRLC and reestablishPDCP Ericsson CR Rel-15 38.331 15.7.0 1394 - F NR_newRAT-Core Withdrawn

5.4.1.3.5 Connection re-establishment procedure

Text Enhancement

R2-1914557 Correction on RRC Reestablishment procedure OPPO CR Rel-15 38.331 15.7.0 1351 - F NR_newRAT-Core

5.4.1.3.6 Connection resume procedure and RRC_INACTIVE state

R2-1914746 Restoring RoHC/SDAP during Resume Intel CR Rel-15 38.331 15.7.0 1357 - F NR_newRAT-Core

- QC think that the ROHC resume is dependent on *ROHC-continue*
- Intel confirms that this part is just a clarification / consistency change, taking ROHC continue into account comes later.
- Huawei think this is dependent on network ability to forward this always.

⇒ **Agree that SDAP rules that are built by reflective mapping shall be restored at resume.**

Offline 10, exact wording, revision in R2-1916485 (Intel)

R2-1916485 Restoring RoHC/SDAP during Resume Intel CR Rel-15 38.331 15.7.0 1357 1 F NR_newRAT-Core

⇒ **Agreed**

Text Enhancements

R2-1914686 Cell re-selection during RRC connection resume vivo CR Rel-15 38.331 15.7.0 1355 - F NR_newRAT-Core R2-1912327

R2-1916047 Correction on RRC Resume procedure OPPO CR Rel-15 38.331 15.7.0 1269 1 F NR_newRAT-Core R2-1912404

5.4.1.3.7 Connection release procedure

Including release from connected to inactive and connected to idle.

Further enhancements

R2-1914558 Correction Release cause for RRC signalling only connection OPPO CR Rel-15 38.331 15.7.0 1352 - F NR_newRAT-Core

5.4.1.3.8 Security procedures

Including initial security activation and counter check procedure.

R2-1914744 Security requirement for UE capability enquiry for NR Intel Corporation, NTT DoCoMo, Ericsson, Apple CR Rel-15 38.331 15.7.0 1147 2 C NR_newRAT-Core R2-1911650

- Huawei think we could just refer to the SA3 TS for the case when capability is obtained without security.
- Intel point out that this CR was previously endorsed.

⇒ **agreed**

R2-1915683 Security requirements for split PDU session (38.331) Ericsson, Qualcomm CR Rel-15 38.331 15.7.0 1403 - F NR_newRAT-Core

- NEC think we should remove EN-DC from impacted arch. Ericsson agrees.
- Huawei think the wording is ambiguous. QC think the wording is from 23.501.

⇒ **intention is agreed**

Offline 11, improve the wording, revision in R2-1916486 (Ericsson)

R2-1916486 Security requirements for split PDU session (38.331) Ericsson, Qualcomm CR Rel-15 38.331 15.7.0 1403 1 F NR_newRAT-Core

- Huawei wonder if it mandates IP when ciphering is on and vice versa
- Huawei proposes ..”same setting (enable/disable) for integrity protection and same setting (enable/disable) for ciphering”
- Nokia just proposes a note with ref to TS 33.501. Intel think the wording in that TS is using “policy”, which is not so easy to understand.

⇒ **Use the text “ … same setting (enable/disable) for integrity protection and same setting (enable/disable) for ciphering .. ” in a NOTE.**

⇒ **Revised in R2-1916589, which is agreed unseen.**

5.4.1.3.10 Access control

5.4.1.3.11 Other

Including RRC processing delay requirements

R2-1915671 Miscellaneous non-controversial corrections Set IV Ericsson CR Rel-15 38.331 15.7.0 1323 1 F NR_newRAT-Core R2-1913540
- There was an email discussion for this CR.
- Ericsson expect an email discussion for checking of new merged corrections is needed.

✉ **[108#x02[NR Rel15] Miscellaneous Corrections (Ericsson)**
Intended outcome: Agreed CR
Deadline: Short RP
=> Agreed in R2-1916350, 38.331 CR#1323 r2
[MCC]: Category information is missing
=> Revised in R2-1916627

R2-1916627 Miscellaneous non-controversial corrections Set IV Ericsson CR Rel-15 38.331 15.7.0 1323 3 F NR_newRAT-Core
=> Agreed

R2-1915673 Definition of NR standalone Ericsson CR Rel-15 38.331 15.7.0 1324 2 F NR_newRAT-Core R2-1914139
- Huawei think that with these alternatives some FD may become wrong, and it should only be related to PCell.
- intel wonders if it also includes SN terminated bearers.
- MTK think we need to define something.
- LG think Alt1 is similar to the R4 definition.
- QC think we should look at Stage-2 and the meaning we apply on CR cover-sheets.

Offline 14, revision in R2-1916488 (Ericsson)

R2-1916488 Definition of NR standalone Ericsson CR Rel-15 38.331 15.7.0 1324 3 F NR_newRAT-Core

⇒ **postponed**

R2-1915890 Clarification for aggregated bandwidth for overheating Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.7.0 1335 2 F NR_newRAT-Core R2-1914140
- QC prefer channel BW rather than BWP BW. Intel agrees with QC, at least for UL.
- Vivo think this is active BWP and support the CR.
- LG want to check.
- Ericsson anyway think we need to clarify anyway.

Offline 15, time to check
- Huawei think this is now agreeable

⇒ **agreed**

R2-1915352 Stop timer T310 in SCGFailureInformation Ericsson CR Rel-15 38.331 15.7.0 1366 - F NR_newRAT-Core
- Huawei think nothing is broken. Samsung agrees and think the only side effect would be that the UE may send SCG failure a second time, but there is no problem.
- LG think this is not needed.
- MTK think the CR makes sense but is not important.

⇒ **Not pursued**

R2-1915355 Clarification on timer T304 for SCGFailureInformation Ericsson CR Rel-15 38.331 15.7.0 1367 - F NR_newRAT-Core
- MTK think the wording should be “for the SCG” and think this can be merged with the rapporteur CR. Huawei agrees.

⇒ **Agree the change "for the SCG", merged with the rapporteur CR**

R2-1915706 Remaining issues regarding UE assistance information discussion Samsung Telecommunications NR_newRAT-Core

R2-1915707 Correction of UE assistance information 38.331 15.7.0 1405 - F Samsung Telecommunications NR_newRAT-Core CR R2-1914161 Rel-15

R2-1915708 Correction of UE assistance information 36.331 15.7.0 4164 - F Samsung Telecommunications NR_newRAT-Core CR R2-1913588 Rel-15

DISCSSUSION on the 3 tdocs above
- Nokia think that the timer handling need update, e.g. timer should not start restart if not running.
- Intel wonder if the assumption is that the network stores the information received. Samsung think we already discussed to move to "individual" reporting. Intel think it relates to P2.
- Nokia and Ericsson think we don't need the UE to indicate no preference. Intel wonders about handover.

P3
- Nokia don't like the note in the RRC CR.
- Nokia don't want any change to LTE rel-15 but Rel-16 would be ok. Huawei agrees as well
- Samsung don't understand why we would not have the CR for Rel-15 as the CR can also allow legacy / incorrect behaviour.
- Ericsson think that UE vendors are ok with Rel-15 CR for LTE, and from network perspective there shouldn't be a problem.
- Intel want to clarify whether the network stores this or not, and how handover works.

⇒ **Use the earlier agreed general UE assistance principles from REL-15 in NR RRC**

⇒ **Have a Rel-16 LTE RRC CR to reflect the individual per-function handling of prohibit timers. Allow that UEs may still start/ restart the timers also when UE assistance information is sent for reporting concerning another feature.**

Offline 16, arrive at agreeable CRs, clarify behaviour at handover, Revision of NR CR in R2-1916489, Draft Rel-16 CR for LTE in R2-1916490

R2-1916489 Correction of UE assistance information 38.331 15.7.0 1405 1 F Samsung Telecommunications NR_newRAT-Core CR Rel-15

⇒ **Agreed**
[MCC]: Corrupted tdoc number in the coversheet
=> Revised in R2-1916632

R2-1916632 Correction of UE assistance information 38.331 15.7.0 1405 2 F Samsung Telecommunications NR_newRAT-Core CR Rel-15
=> Agreed

R2-1916490 Correction of UE assistance information 36.331 15.7.0 4164 1 F Samsung Telecommunications NR_newRAT-Core CR Rel-16

⇒ **Endorsed**

Text Enhancements

R2-1916032 Clarification on informative timer table 15.7.0 1414 - F Huawei, HiSilicon NR_newRAT-Core CR Rel-15 38.331

R2-1916033 Clarification on the using of RRCSetup 15.7.0 1415 - F Huawei, HiSilicon NR_newRAT-Core CR Rel-15 38.331

Withdrawn

R2-1915626 Miscellaneous non-controversial corrections Set IV 15.7.0 1390 - F Ericsson NR_newRAT-Core CR Rel-15 38.331 Withdrawn

R2-1915628 Definition of NR standalone Ericsson CR Rel-15 38.331 15.7.0 1392 - F NR_newRAT-Core Withdrawn

R2-1915660 Miscellaneous non-controversial corrections Set IV Ericsson CR Rel-15 38.331 15.7.0 1395 - F NR_newRAT-Core Withdrawn

R2-1915662 Definition of NR standalone Ericsson CR Rel-15 38.331 15.7.0 1397 - F NR_newRAT-Core Withdrawn

5.4.1.4 RRM

R2-1915590 Correction on measurement reporting in NR-DC Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1387 - F NR_newRAT-Core

- MTK agrees with the CR

⇒ **agreed**

R2-1915594 Correction on SIB1 description Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1389 - F NR_newRAT-Core

- ZTE think these timers are needed for PScell but is provided in another way.
- MTK think the intention is correct.

Offline 18, perfect the wording, revision in R2-1916491 (Huawei).

R2-1916491 Correction on SIB1 description Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1389 1 F NR_newRAT-Core

⇒ **agreed**

R2-1915674 CR to 36.306 - On explicit NR FR1 related CGI reporting capability indication Ericsson CR Rel-15 36.306 15.6.0 1721 - F NR_newRAT-Core

- Nokia think this is not needed, and this is a simple capability. Huawei agrees. Samsung think it is too late to introduce this.
- Ericsson think the problem is that CGI reporting is not needed for FR2 if UE support just EN-DC.
- MTK support this.
- LG think this capability is not needed.
- Chair: not much support

⇒ **Not pursued**

R2-1915676 CR to 38.306 - On NR CGI reporting related issues Ericsson CR Rel-15 38.306 15.7.0 0203 - F NR_newRAT-Core

- Ericsson proposes to discuss the first 2 changes.
- MTK think the change for NGEN-DC is ok but the others cases need more discussion. QC agrees.

⇒ **Agree the change (NG) EN-DC, merge with rapporteur CR**

⇒ **For extension to NE-DC NR-DC postpone.**

R2-1916244 CR to 38.306 on DRX-based intra-frequency SFTD measurement Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0196 1 F NR_newRAT-Core R2-1914665

- QC think we don't need this CR, as R4 said IntraFreq SFTD is not needed, and no requirements would be specified. Intel agrees.
- Chair: no support

⇒ **Not pursued**

R2-1916245 CR to 38.331 on DRX-based intra-frequency SFTD measurement Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1353 1 F NR_newRAT-Core R2-1914666

R2-1915423 On SSB-ToMeasure clarifications Ericsson discussion Rel-15 NR_newRAT-Core

R2-1915424 CR to 38.331 on SSB-ToMeasure clarifications Ericsson CR Rel-15 38.331 15.7.0 1370 - F NR_newRAT-Core

R2-1915425 CR to 36.331 on SSB-ToMeasure clarifications Ericsson CR Rel-15 36.331 15.7.0 4147 - F NR_newRAT-Core

DISCUSSION
- Huawei think CR is not needed.
- MTK think we can agree P1 but think CR is not needed. QC can also agree P1 but think the CRs are not correct.
- QC think that “within SMTC duration” is R1 text and is ok because if SMTC is not configured, the UE will anyway have a default assumption.

⇒ **RAN2 confirms that the SSB-ToMeasure is based on the absolute SSBIndexes.**

⇒ **Not pursued**

R2-1915427 CR to 38.331 on A2 event definition clarification Ericsson CR Rel-15 38.331 15.7.0 1371 - F NR_newRAT-Core
- LG think this CR is not needed.
- Chair: no support

⇒ **Not pursued**

Not Treated

R2-1915675 CR to 36.331 - On explicit NR FR1 related CGI reporting capability indication Ericsson CR Rel-15 36.331 15.7.0 4163 - F NR_newRAT-Core

R2-1915677 CR to 38.331 - On NR CGI reporting related issues Ericsson CR Rel-15 38.331 15.7.0 1400 - F NR_newRAT-Core

R2-1915428 CR to 36.331 on A2 event definition clarification Ericsson CR Rel-15 36.331 15.7.0 4149 - F NR_newRAT-Core

5.4.1.6 System information

R2-1914972 Clarification on PSCell/SCell SI reception MediaTek Inc. CR Rel-15 38.331 15.7.0 1360 - F NR_newRAT-Core
- Google think the 2nd change is not needed.
- Ericsson has doubts about all changes.
- Samsung think nothing is broken, and the CR is not needed. MTK can agree to not have this if it is clarified that the UE in PSCell only uses SFN in the MIB.
- Huawei also think this CR is not needed.
- MTK clarifies that it is found in field that other MIB configuration for PSCell is not consistent with dedicated configuration.
- Vivo think whether UE uses other config from PSCell MIB is up to UE impl.
- Chair: It is FFS if UE uses only the SFN from the MIB of PSCell

Offline 19, clarify whether a clarification is needed (MTK)

⇒ **Not pursued**

R2-1916556 Clarification on PSCell/SCell SI reception MediaTek Inc.

⇒ **RAN2 confirm that the UE uses only the SFN from the MIB of PSCell**

R2-1916109 plmn-IdentityList in CellAccessRelatedInfo broadcast in SIB1 Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1419 - F NR_newRAT-Core
- Ericsson think this is not needed.

- Nokia think the references in the current text are not correct.
- Oppo think there is part of this CR that is not correct.
- Samsung think the old text is ok, and it cannot easily be misunderstood.
- Chair: no support.

⇒ **Not pursued**

R2-1916112 Stopping of SI acquisition for ETWS/CMAS Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1420 - F NR_newRAT-Core

- Ericsson agrees with this CR
- QC think the first and second part of the note is inconsistent. Ericsson think this is UE-friendly.
- Samsung think this is not essential.
- Ericsson think that stop monitoring CMAS is a complicated discussion and it would be good to capture this.
- Vivo agree with Ericsson on UE behaviour, but are not sure the Note is needed.
- QC wonder what happen if the UE misses an indication.
- MTK agree with Samsung and think this is anyway just a note with no normative impact. LG agrees.
- CATT think that either we do nothing or we have the NOTE as is, so offline is not needed.
- Apple think this is not urgent.
- Chair: Limited support

⇒ **Not pursued**

5.4.1.9 Inter-Node RRC messages

Including outcome of the email discussion [107bis#33][NR R15] Exchanging used IDs of SN terminated DRBs (Huawei)

R2-1915570 Summary of E-mail discusion [107bis#33][NR R15] Exchanging used IDs of SN terminated DRBs Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core Late

P1
- Ericsson are ok with the principle.
- NEC don't think this is applicable to EN-DC as MN can control the DRB IDs. Huawei agrees that for EN-DC the IDs are known to the MN.
- Ericsson wonders if this is just for SN terminated bearers. Huawei confirms
- ZTE think this is just for inter-MN-HO without Sn context query.

LS to R3
- Huawei think we should ask for a solution.
- Nokia think we can use the inter-node message so we don't need to ask R3. Ericsson think that the majority want to ask R3.

⇒ **RAN2 confirms that for handover, there is a need to allow the source MN to indicate to the target MN that up-to-date information is not available for a list of DRBs, which are in use or potentially in use by the SN.**

⇒ **Assume to Send an LS to R3 to ask for signalling solution.**

Offline 20, Draft LS in R2-1915571 (Huawei)

R2-1915571 LS on handover without SN configuration query Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:RAN3 Late

⇒ **Remove "In this scenario, the up-to-date configuration of SN terminated bearers, which is normally provided to the target MN in *sn-RB-Config* in the *HandoverPreparationInformation* message (in TS 36.331 or TS 38.331), is not available so the target MN needs to first release all SN terminated bearers. In order to do that, "**

⇒ **Approved with this change in R2-1916599**

[MCC]: Added RAN2 as the source
=> Revised in R2-1916622

=> Approved

R2-1914904 Conditional presence on ue-CapabilityInfo and servCellIndexRangeSCG for inter-MN handover without SN change NTT DOCOMO, INC., Ericsson CR Rel-15 38.331 15.7.0 1358 - F NR_newRAT-Core R2-1913234

- NEC wonders if not for inter-MN HO without Sn change this is a SN addition in the target, so current text can work. Docomo don't consider that this is the case.
- Huawei also think this is a case of SN addition. If this is not the case, more fields may have issues.
- Docomo think this case has been discussed in R3 without progress and bring it here.
- Ericsson think the cases we need to address in R2 are in this CR, R3 may need some additional work.
- ZTE think that the CR bring flexibility to not so SN add when not changed, which is good so ZTE support this.
- NEC are ok with the CR but think the cover page might need update. Docomo think it might be difficult to converge on other explanation.
- Huawei wonders now then if we apply delta-signalling for the case of inter-MN-HO without SN change. Docomo think delta config is indeed possible.

⇒ **agreed**

R2-1915252 Change on transfer-type of handoverCommandMessage for NR SA handover Samsung CR Rel-15 38.331 15.7.0 1364 - F NR_newRAT-Core

- Nokia think it is too late for this, and nothing is broken.
- ZTE also think it is too late.
- Ericsson think this just moves the problem

⇒ **not pursued**

R2-1915581 Correction on AS-Context Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4154 - F NR_newRAT-Core

⇒ **merge with Miscellaneous correction CR**

R2-1915582 Correction on AS-Config Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1385 - F NR_newRAT-Core

- ZTE think that current FD is clear, from network po view, so there is no problem.

allow time for checking

⇒ **agreed**

R2-1915583 Addition of servCellIndexRangeSCG in AS-Context in 36331 Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4155 - F NR_newRAT-Core

- Ericsson think this info is already present. Nokia agrees.

⇒ **Not pursued**

R2-1915710 Clarification regarding inter-node transfer of UE capability containers Samsung Telecommunications CR Rel-15 38.331 15.7.0 1406 - F NR_newRAT-Core

- Ericsson think it is assumed that the UE always provides consistent containers.
- Huawei want to massage the wording

⇒ **Agree to make this clarification**

Offline 21, on the wording, Revision in R2-1916493 (Samsung)

R2-1916493 Clarification regarding inter-node transfer of UE capability containers Samsung Telecommunications CR Rel-15 38.331 15.7.0 1406 1 F NR_newRAT-Core

⇒ **agreed**

Not treated

R2-1915572 Draft CR on not up-to-date SN terminated RB configuration Huawei, HiSilicon draftCR Rel-15 36.331 15.7.0 F NR_newRAT-Core

R2-1915584 Addition of servCellIndexRangeSCG in AS-Context in 38331 Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1386 - F NR_newRAT-Core

5.4.2 LTE changes related to NR

R2-1915360 Correction to power limitations in (NG)EN-DC Ericsson, Qualcomm Incorporated, MediaTek Inc., Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.7.0 4119 2 F NR_newRAT-Core R2-1914167

⇒ **agreed**

R2-1914664 Clarification on gap sharing configuration handling at handover and re-establishment Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4141 - F NR_newRAT-Core

- MTK think this changes the UE behaviour and would like to not do this.
- Huawei think there may be a need to do something, there seems to be different UE implementations.
- Chair:

Offline 38, check if something can be agreed to be captured (Huawei)

- Huawei report that there are implementations that keep the gap sharing configuration, so the network need to be careful. Huawei suggest a NOTE saying that if the network does not configure gap sharing the network should explicitly release.
- Huawei think this was introduced in rel14, wonder is to have a rel-14 CR

⇒ **there seems to be support to have a note for r15 and r14**

⇒ **postpone to next meeting**

R2-1915369 Stop timer T313 in SCGFailureInformation for NE-DC Ericsson CR Rel-15 36.331 15.7.0 4146 - F NR_newRAT-Core

⇒ **Not treated**

R2-1915832 Clarification on candidate NR frequencies for IDC in EN-DC NTT DOCOMO, INC. CR Rel-15 36.331 15.7.0 4168 - F NR_newRAT-Core

- ZTE wonders if this is UE channel BW or cell channel BW. Docomo think this is the UE channel BW.
- MTK don't understand what is clarified, and need to think about this.

⇒ **Postpone to next meeting allow for checking**

Text Enhancements

R2-1914614 Correction on reestablishRLC CATT CR Rel-15 36.331 15.7.0 4102 1 F NR_newRAT-Core R2-1912140

R2-1915637 Full configuration in inter-RAT handover Google Inc. CR Rel-15 36.331 15.7.0 4121 1 F NR_newRAT-Core R2-1913386

5.4.2.0 In-principle agreed CRs

R2-1915370 (IPA) Miscellaneous correction for late drop Ericsson CR Rel-15 36.331 15.7.0 4117 2 F NR_newRAT-Core R2-1914173

- Revision is expected to merge additional changes.
- Remove "(IPA)"

Offline 22, Revised in R2-1916494

R2-1916494 Miscellaneous correction for late drop Ericsson CR Rel-15 36.331 15.7.0 4117 3 F NR_newRAT-Core

⇒ **agreed**

5.4.4 UE capabilities

Including outcome of the email discussion [107bis#34][NR R15] Ambiguity of UE FDD/TDD FR1/FR2 capabilities (ZTE)
Including outcome of the email discussion [107bis#35][NR R15] Consequences if not supported (Nokia)
Including outcome of the email discussion [107bis#36][NR R15] FR2 CA Fallbacks (Nokia)

LS in

R2-1916482 LS on Discussion over UE capabilities of FG2-36/2-40/2-41/2-43 (R1-1913295; contact: Huawei) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2

- Docomo think the LS says this is up to R2.
- Nokia think it is up to us in which release we do anything.

⇒ **Noted**

Other

R2-1914911 [107bis#34]Correction on ambiguity of UE FDD&TDD FR1&FR2 capabilities ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd CR Rel-15 38.306 15.7.0 1359 - F NR_newRAT-Core Late

- Huawei think that the text in brackets in Note3 TDD-FDD shall also be present for FR1/FR2 case in Note2. ZTE think that the text in brackets should be removed.
- Revision in R2-1916495, remove the text in brackets in Note3 TDD-FDD table.

Comeback R2-1916495, need to see updated CR again, ZTE detected discrepancy between understanding and chair notes.

R2-1916495 [107bis#34]Correction on ambiguity of UE FDD&TDD FR1&FR2 capabilities ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd CR Rel-15 38.306 15.7.0 1359 1 F NR_newRAT-Core Late

- [MCC]: This CR was initially allocated for 38.331 and thus it has a wrong CR number

⇒ **Revised in R2-1916571**

R2-1916571 [107bis#34]Correction on ambiguity of UE FDD&TDD FR1&FR2 capabilities ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd CR Rel-15 38.306 15.7.0 0220 - F NR_newRAT-Core

⇒ **agreed**

R2-1915508 Report for [107bis#35] [NR R15] Consequences if not supported (Nokia) Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.7.0 0176 2 F NR_newRAT-Core R2-1913964 Late

- Nokia think we need to send an LS to R1 to ask some questions.
- comeback, to check if agreement is possible for parts that we don't ask R1 about,

Offline 24, Draft LS to R1 in R2-1916496 (Nokia).

- Nokia suggest to approve the parts not related to the LS to R1, i.e. the part for ***codebookParameters***
- MTK think we anyway need to wait, but MTK would be ok with email approval. QC agrees with MTK

⇒ **Postpone**

R2-1916496 [DRAFT] [LS to RAN1] Nokia, Nokia Shanghai Bell LS out Rel-15 NR_newRAT-Core To:RAN1

⇒ **Approved in R2-1916592**

R2-1915507 Report for [107bis#36] [NR R15] FR2 CA Fallbacks (Nokia) Nokia, Nokia Shanghai Bell
discussion Rel-15 NR_newRAT-Core

DISCUSSION

- Nokia indicate that P1 comes from concerns on capability container sizes.
- Apple support Option 3
- Docomo think option 5 is already available and is just network implementation, and the question is whether we need another solution.
- Ericsson think we should tell R4 to not do this. Apple think this is not possible.
- Intel support P1 and think bw compatibility is important. Apple think for many cases there is no market yet so for many cases BW compatibility is not important.
- MTK think the discussion didn't converge, and think we could indeed ask R4 if this is needed or not.
- Verizon think a solution is needed, and there are practical scenarios that need to be resolved. Option 5 is not possible.
- Intel think we don't need to send an LS.
- Ericsson think it is not possible to support this request from R4.
- Ericsson think there is a backwards compatibility problem.
- Intel think that compatibility can be resolved such that a legacy network will not get reporting about problematic scenarios and can thus not configure those (in a wrong way).
- Docomo think we can request the UE to suppor all.
- Verizon has many BC, magnitude of 1000's.

Offline 25, progress to see if options can be narrowed down, and described more clearly. Describe the BW compatibility issue and potential solutions more clearly, updated report in R2-1916498 (Nokia)

R2-1916498 Report for [107bis#36] [NR R15] FR2 CA Fallbacks (Nokia) Nokia, Nokia Shanghai Bell
discussion Rel-15 NR_newRAT-Core

- Ericsson don't agree, and think the increase in signalling will be huge. Ericsson think we should send an LS to express concern. Docomo has same concern.
- Docomo think the R4 LS is not based on good reasons.
- Intel think capability size is indeed a side effect, but we should not let signalling drive deployments. Samsung agrees fully.
- Apple think the overhead is not increased, and think that if UE support part of superset, the UE would indicate BC one by one. Apple think the solution on the table works well and is backwards compatible. Oppo agrees. Google agrees that LS is not needed
- MTK think R4 didn't think about Signalling, but still think that R4 can in that case indicate restrictions in their TS, rather than R2 change.
- Samsung think we need to resolve this, and think we should consider cross-group solutions.
- CMCC cannot accept any solution in Rel-15.
- Nokia think the solution on the table doesn't increase the size at all.
- TMO think this can be rel-16. Apple think this can be rel-15 as no FR2 deployments are there yet.
- Verizon think this is problematic but think it is ok to postpone

Chair: A significant group of companies want this kind of solution, and a solution has been found which is acceptable to this group. However there is no consensus.

⇒ **postpone**

R2-1915446 Handling of fallbacks for combined contiguous and non-contiguous CA in FR2 Apple
discussion Rel-15 NR_newRAT-Core

- Taken into account in offline 25

⇒ **Noted wo presentation**

R2-1915447 CR to TS38.331 on FR2 intra band contiguous and non-contiguous CA fallback Apple CR
Rel-15 38.331 15.7.0 1374 - F NR_newRAT-Core

R2-1915448 CR to TS38.306 on FR2 intra band contiguous and non-contiguous CA fallback Apple CR Rel-15 38.306 15.7.0 0199 - F NR_newRAT-Core

R2-1915670 Ambiguities in channel bandwidth capabilities Ericsson discussion Rel-15 NR_newRAT-Core

DISCUSSION

P1/P3

- LG wonder if there is a backwards compatibility issue with P1. ZTE think we must go for P3. Intel agrees as well. Nokia as well.
- QC submitted a paper in R4, and think a version number is not so nice. There is another proposal in R4. Ericsson think it would simplify to just refer to a single version.
- MTK think we can indicate to R4 in the future when we refer to R4 information, and think we can agree to P3 as a specific solution for Rel-15.
- Oppo think P3 is NBC

P4

- Ericsson think this proposal is obvious.

P2

- MTK think there may be backwards compatibility issues and need to check, ZTE agrees, Huawei agrees.
- Ericsson think this is unclear and UEs likely implement differently. Samsung agrees, and think a clarification is needed.
- intel think SCS is very fundamental and the proposed clarification is obvious. Nokia agrees.

P5

- Nokia think we should have this in some guidelines.

⇒ **R2 think it is an acceptable solution to clarify that absence of the channelBWs-DL-v1530 and channelBWs-UL-v1530 means that the UE supports all bandwidths that were defined according to 38.101-1 v15.7.0 and 38.101-2 v15.7.0**

⇒ **Clarify the field description of channelBWs-DL-v1530 and channelBWs-UL-v1530 to ensure that a UE that supports X MHz shall set the code-point for X MHz no matter whether RAN4 defined it as "maximum" or not**

⇒ **Adopt the following guideline to ensure forward compatible signalling: a) Avoid signalling "incapabilities". b) The absence of an IE should not indicate better capabilities than its presence. c) Absence of a capability parameter shall never be associated with a capability that is not yet defined**

Offline 26, gather the views on P2, allow companies to check, report in R2-1916499 (Ericsson)

R2-1916499 Report of Offline#26, absence of scs-XXkHz in channelBWs-DL/UL Ericsson report

DISCUSSION

- Nokia think the network must then always apply the first interpretation.
- Huawei think most companies prefer 2nd interpretation.
- MTK think the 2nd interpretation is the legacy one, and don't understand the need for the 1st one.
- QC think that if UE indicate a separate cap e.g. 60kHz the bitmap doesn't make sense.
- ZTE and Intel think with some small changed we can agrees

✉ **[108#03][R15] ChannelBWs CR (Ericsson)**
Intended outcome: Agreed CR
Deadline: Short

=> Agreed in R2-1916353, 38.306 CR#0202 r1

R2-1915664 Correction to channelBWs Ericsson CR Rel-15 38.306 15.7.0 0202 - F NR_newRAT-Core

=> Revised in R2-1916353

R2-1916353 Correction to channelBWs NR_newRAT-Core — Ericsson — CR — Rel-15 — 38.306 — 15.7.0 — 0202 — 1 — F
=> Agreed

R2-1915901 Forward compatibility discussion on channel bandwidths parameter discussion — Huawei, HiSilicon — Rel-15 — NR_newRAT-Core

R2-1915902 CR on forward compatibility for channel bandwidths parameter — Huawei, HiSilicon — CR — Rel-15 — 38.306 — 15.7.0 — 0212 — - — F — NR_newRAT-Core

R2-1915894 On the RAN2 signalling support for new introduced channel bandwidth discussion — Huawei, HiSilicon — Rel-15 — NR_newRAT-Core

R2-1915895 CR to 38.331 on support of 70MHz channel bandwidth -option1 with IODT bit — Huawei, HiSilicon, Vodafone — CR — Rel-15 — 38.331 — 15.7.0 — 1410 — - — F — NR_newRAT-Core
=> Revised in R2-1916500

R2-1816500 CR to 38.331 on support of 70MHz channel bandwidth -option1 with IODT bit — Huawei, HiSilicon, Vodafone — CR — Rel-15 — 38.331 — 15.7.0 — 1410 — 1 — F — NR_newRAT-Core

R2-1915896 CR to 38.306 on support of 70MHz channel bandwidth -option1 with IODT bit — Huawei, HiSilicon, Vodafone — CR — Rel-15 — 38.306 — 15.7.0 — 0209 — - — F — NR_newRAT-Core
=> Revised i R2-1916501

R2-1916501 CR to 38.306 on support of 70MHz channel bandwidth -option1 with IODT bit — Huawei, HiSilicon, Vodafone — CR — Rel-15 — 38.306 — 15.7.0 — 0209 — 1 — F — NR_newRAT-Core

R2-1915897 CR to 38.331 on support of 70MHz channel bandwidth -option2 — Huawei, HiSilicon, Vodafone — CR — Rel-15 — 38.331 — 15.7.0 — 1411 — - — F — NR_newRAT-Core

R2-1915898 CR to 38.306 on support of 70MHz channel bandwidth -option2 — Huawei, HiSilicon, Vodafone — CR — Rel-15 — 38.306 — 15.7.0 — 0210 — - — F — NR_newRAT-Core

DISCUSSION
- Nokia think there are some issues with both option 1 and option 2, but think optinon 2 is preferable.

Offline 27, Arrive at agreeable CRs in R2-1916500 and R2-1916501 (Huawei)
- TMO are really wonder if IODT bits are needed.
- Ericsson think that with the signalling we can be flexible.

✉ **[108#04][R15] Support of 70MHz channel bandwidth (Huawei)**
Based on Option 1
Intended outcome: For next meeting, Report, if possible Agreeable CR
Deadline: 2020-02-13

R2-1915892 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331) — Huawei, HiSilicon — CR — Rel-15 — 38.331 — 15.7.0 — 1409 — - — F — NR_newRAT-Core

R2-1915893 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306) — Huawei, HiSilicon — CR — Rel-15 — 38.306 — 15.7.0 — 0208 — - — F — NR_newRAT-Core

⇒ **Both postponed**

R2-1914665 CR to 38.306 on DRX-based intra-frequency SFTD measurement Huawei, HiSilicon, Ericsson CR Rel-15 38.306 15.7.0 0196 - F NR_newRAT-Core Revised

R2-1914666 CR to 38.331 on DRX-based intra-frequency SFTD measurement Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.7.0 1353 - F NR_newRAT-Core Revised
Revisions Already treated

R2-1915686 Use of splitSRB-WithOneUL-Path capability Ericsson discussion

⇒ **noted**

R2-1915685 Use of splitSRB-WithOneUL-Path capability (38.331) Ericsson CR Rel-15 38.331 15.7.0 1404 - F NR_newRAT-Core

R2-1915684 Use of splitSRB-WithOneUL-Path capability (38.306) Ericsson CR Rel-15 38.306 15.7.0 0204 - F NR_newRAT-Core

- QC think this is needed to indicate if the UE support split SRB in DL.
- Nokia think split SRB is a basis for Duplication and should not be removed. Ericsson think that duplication capability is separate.
- Huawei also think we don't need to dummify this. MTK as well.
- Samsung think we should remove the SCG part in the field description. QC agrees.
- Ericsson wonder if we need to clarify anything for applicability to DL.

⇒ **Agree to make change to remove the possibility of SCG path**

Offline 28, include agreement above and can consider to clarify the applicability to DL Revision of 5684 in R2-1916502 (Ericsson)

R2-1916502 Use of splitSRB-WithOneUL-Path capability (38.306) Ericsson CR Rel-15 38.306 15.7.0 0204 1 F NR_newRAT-Core

⇒ **agreed**

R2-1915689 Correction to pdsch-RepetitionMultiSlots and pusch-RepetitionMultiSlots Ericsson CR Rel-15 38.306 15.7.0 0205 - F NR_newRAT-Core

- Huawei think this is editorial and think it can be merged with rapporteur CR. Ericsson think the wrong DCI format is a correction.

⇒ **agreed**

R2-1915711 Adding comment to avoid improper extension of per BC capabilities for MRDC Samsung Telecommunications CR Rel-15 38.331 15.7.0 1407 - F NR_newRAT-Core

- Ericsson think we don't need the comment. If we make this comment, we shold have similar comments also in other places.

⇒ **Not Pursued**

R2-1915899 On the capability of EN-DC power class Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core
DISCUSSION

- Nokia think R4 is discussing and haven't concluded.

⇒ **postpone**

R2-1915900 CR to clarify the power class for EN-DC Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0211 - F NR_newRAT-Core

⇒ **postponed**

R2-1915903 CR on CSI UE capabilities parameters (38.331) Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1412 - F NR_newRAT-Core

R2-1915904 CR on CSI UE capabilities parameters (38.306) Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0213 - F NR_newRAT-Core

R2-1916277 Alternative solution for “under-reporting” CSI-RS capabilities NTT DOCOMO, INC. discussion Rel-15 NR_newRAT-Core Late

DISCUSSION on the three docs above

- Nokia think we may need to do something for some UEs. Nokia think this is an optimization and think it should be for Rel-16.
- Huawei think this is for rel-15.
- QC support to do this. One issue is for TDM and non-TDM, and want to have an agreesive capability for TDM.
- QC support the Huawei proposal.
- Intel think Rel-15 is ok and can wait for Rel-16, suggest to add this in eMIMO WI. Docomo also think eMIMO could be a possibility.
- Nokia clarifies that R1 discussion is clear that it is up to R2 which release to do this.
- Samsung agrees with Intel and Nokia.
- Huawei think there will be a lot of rel-15 UEs.
- Nokia think that we can discuss if this should be early implementable but not do this in Rel-15.
- Huawei think we should do the signalling design first, then consider.
- Nokia think it is not acceptable to do this for Rel-15

⇒ **For now we address this as a TEI-16 item, FFS if it can be made applicable to Rel-15.**

⇒ **Postpone to next meeting.**

R2-1916146 Expectation when srs-TxSwitch capability is not supported Qualcomm Incorporated CR Rel-15 38.306 15.7.0 0218 - F NR_newRAT-Core

- Ericsson think that this is already clear, or possibly add something in the conseq if not supported CR, but not exactly this.
- Nokia think it is clear in the light of R1 TS, QC view is correct but nothing need to be clarified,
- Docomo think something indeed need to be clarified, but may not this.
- CATT think this is not needed.

⇒ **Not pursued**

⇒ **The R2 understanding is that The network does not configure the UE with SRS antenna switching capability if the UE advertised that *srs-TxSwitch* is not supported.**

R2-1916158 Discussion on LTE and EN-DC Measurement Gap configuration coordination Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

DISCUSSION

- MTK think there is no issue to be resolved.
- ZTE think the scenario is SN addition and SN release.
- Oppo think this is about understanding old agreements,
- QC also think this is not needed. QC think add release works and nothing is broken. Intel agrees.
- MTK still think there is no problem.
- ZTE think this already works.

⇒ **noted**

R2-1916188 CR on LTE and EN-DC Measurement Gap configuration coordination Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.7.0 4178 - F NR_newRAT-Core

=> Not treated

R2-1916270 Clarification on crossCarrierScheduling-OtherSCS in R15 OPPO CR Rel-15 38.331 15.7.0 1425 - F NR_newRAT-Core Late

⇒ **not pursued**

R2-1916271 Clarification on crossCarrierScheduling-OtherSCS in R15 OPPO CR Rel-15 38.306 15.7.0 0219 - F NR_newRAT-Core Late

⇒ **agreed**

DISCUSSION
- Huawei think this was submitted late and would like to check .
- Huawei think 306 is ok but maybe not 331.

R2-1915630 Correction to channelBWs Ericsson CR Rel-15 38.306 15.7.0 0201 - F NR_newRAT-Core Withdrawn

R2-1915636 Ambiguities in channel bandwidth capabilities Ericsson discussion Rel-15 NR_newRAT-Core Withdrawn

5.4.4.0 In-principle agreed CRs

R2-1914577 Miscellaneous corrections on UE capability fields Intel Corporation CR Rel-15 38.306 15.7.0 0186 2 F NR_newRAT-Core R2-1914193
- Intel explains that there is an update suggest offline check

Offline 35, revision in R2-1916507 (intel)

R2-1916507 Miscellaneous corrections on UE capability fields Intel Corporation CR Rel-15 38.306 15.7.0 0186 3 F NR_newRAT-Core

⇒ **agreed**

R2-1915891 Clarification on the feature set report in EUTRAN Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1337 1 F NR_newRAT-Core R2-1913687

⇒ **agreed**

R2-1914578 Clarification on the restriction of maximum SRS resource sets configuration for uplink beam management Intel Corporation CR Rel-15 38.306 15.7.0 0185 1 F NR_newRAT-Core R2-1913446

⇒ **agreed**

R2-1914663 Correction on parameter description of beamManagementSSB-CSI-RS in 38.306 Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0194 1 F NR_newRAT-Core R2-1913783
- added a ref to R1 TS acc to agreement.
- Ericsson wonder if this really is backwards compatible.

⇒ **postpone**

5.4.5 Idle/inactive mode procedures

This AI addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions, out of coverage, etc) are covered under RRC agenda items (5.4.1.x)

5.4.5.1 Cell selection/reselection

In principle Agreed

R2-1915287 Correction for P-Max in FR2 Ericsson, NTT DOCOMO INC. CR Rel-15 38.331 15.7.0 1292 1 F NR_newRAT-Core R2-1913195

⇒ **agreed**

R2-1915525 Correction to Pcompensation for FR2 Huawei, HiSilicon CR Rel-15 38.304 15.4.0 0140 1 F NR_newRAT-Core R2-1914169
=> withdrawn

R2-1916296 Correction to Pcompensation for FR2 Huawei, HiSilicon CR Rel-15 38.304 15.5.0 0143 - F NR_newRAT-Core R2-141169

⇒ **agreed**
[MCC]: Spec version nmber in the coversheet needs an update
=> Revised in R2-1916630

R2-1916630 Correction to Pcompensation for FR2 Huawei, HiSilicon CR Rel-15 38.304 15.5.0 0143 1 F NR_newRAT-Core
=> Agreed

Other

R2-1914570 Correction of cell reselection parameters for multi-beam operation Qualcomm Incorporated, Ericsson CR Rel-15 38.304 15.5.0 0139 1 F NR_newRAT-Core R2-1912899
=> Revised in R2-1916510

R2-1916510 Correction of cell reselection parameters for multi-beam operation Qualcomm Incorporated, Ericsson CR Rel-15 38.304 15.5.0 0139 2 F NR_newRAT-Core

⇒ **agreed**

R2-1914571 Correction on field description of cellReselectionInfoCommon Qualcomm Incorporated, Ericsson CR Rel-15 38.331 15.7.0 1278 1 F NR_newRAT-Core R2-1912893

⇒ **agreed**

DISCUSSION
- Huawei support in general, but think the text in the 304 CR need enhancements.
- Nokia wonders if this is changing UE behaviour. If not maybe cat D should be used.

Offline 36, perfect the wording, revision of the 304 CR in R2-1916510 (QC)

R2-1914630 CR to 38.304 on dedicated cell reselection priorities Ericsson CR Rel-15 38.304 15.5.0 0141 - F NR_newRAT-Core
- LG Oppo think this is not needed.
- Nokia think this is already clear form RRC.
- Catt think this is not correct.
- Samsung think that nothing is broken in current TS.
- Samsung think that if we do this then we need to update 36.304. Nokia will bring a 36.304 CR next meeting.

⇒ **Merge with previous 304 CR, make that one a rapporteur CR.**

5.4.5.2 Idle/inactive paging

R2-1914891 NR Paging Frame Calculation when SearchSpaceId is Zero MediaTek Inc. discussion R2-1913928
- QC think this is not needed
- Samsung think the configuration shall be consistent and the Paging Frame calculation can be applied. The case decribed in the paper shall not occur

⇒ **The case described should never occur, the configuration shall be consistent and the paging frame calculation applies.**

⇒ **Noted**

R2-1915047 Clarification on PO calculation Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1281 1 F NR_newRAT-Core R2-1912986
- QC think this is obvious. MTK think this is correct.
- Ericsson think this is obvious.

⇒ **Not pursued**

5.5 Late Drop

Corrections that only impact the late drop architecture options (NE-DC, NGEN-DC and NR-DC) should be submitted to 5.5.x. If a correction also impacts EN-DC and/or SA then it should be submitted to an earlier AI.

5.5.0 In-principle agreed CRs

R2-1915506 Clarifying the alignment of capability filtering across LTE and NR in MR-DC Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1283 2 F NR_newRAT-Core R2-1914219

⇒ **agreed**

R2-1915559 Reconfiguration failure in NE-DC Google Inc. CR Rel-15 36.331 15.7.0 4115 1 F NR_newRAT-Core R2-1913270

⇒ **agreed**

R2-1915353 (IPA) Handling of AS-Config in HandoverPreparationInformation Ericsson CR Rel-15 38.331 15.7.0 1300 1 F NR_newRAT-Core R2-1913297

⇒ **revision to update title in R2-1916513, agreed unseen**

R2-1915361 (IPA) Correction of SRB3 handling at full configuration (Alt2) Ericsson CR Rel-15 38.331 15.7.0 1308 2 F NR_newRAT-Core R2-1914172

- Ericsson indicate that NE-DC is removed acc to agreement,

⇒ **revision to update title in R2-1916514, agreed unseen**

5.5.1 Stage 2 CRs

5.5.2 UE capabilities and capability coordination

Including outcome of the email discussion [107bis#38][NR R15] NE-DC dynamic power sharing capability (QC)
Including outcome of the email discussion [107bis#37][NR R15] Clarifying the interpretation behind the encapsulation of the filter extensions (Nokia)

R2-1916142 NE-DC dynamic power sharing capability Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1421 - F NR_newRAT-Core

⇒ **agreed**

R2-1916143 NE-DC dynamic power sharing capability Qualcomm Incorporated CR Rel-15 38.306 15.7.0 0216 - F NR_newRAT-Core

- Oppo wonder if R1 TS need to be changed as it only talks about EN-DC (not NGEN-DC). Nokia think in R1 everything is common for EN-DC and NGEN-DC
- Ericsson think that for UL time alignment cap it is only for EN-DC

Offline 39, finish the details (QC)
=> Revised in R2-1916545

R2-1916545 NE-DC dynamic power sharing capability Qualcomm Incorporated CR Rel-15 38.306 15.7.0 0216 1 F NR_newRAT-Core

⇒ **agreed**

R2-1915510 Clarifying the interpretation behind the encapsulation of the filter extensions (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core
P2

- Intel do not understand the need for this proposal, the full filter should be echoed. Ericsson think this was different in LTE.

- Samsung think there is no exception.

⇒ **R2 confirms to retain the current principle that the UE echoes the *ue-CapabilityEnquiryExt* IE and understands that acc to current TS the UE shall echo all the configured filters (and not just echo the parts that it used)**

R2-1915253 Clarification regarding conditions of setting omitEN-DC for mrdc-Request Samsung CR Rel-15 38.331 15.7.0 1365 - F NR_newRAT-Core

- Nokia think the intended behaviour is ok, but this is already clear from procedure.
- Huawei also agree the behaviour but think the clarification is not needed. Ericsson agrees.
- Intel support this.
- MTK think there is another case as well to capture in the CR, if we capture anything at all.
- Chair: there seems to be no strong support to clarify this.

⇒ **Not pursued.**

R2-1915585 Clarification on the (NG)EN-DC capabilities Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4156 - F NR_newRAT-Core

- ZTE think the intention is correct but think the definition of EN-DC already covers this.
- Oppo think this is not needed, the capability is not dependent on Bearer type.
- Ericsson think there is no risk for confusion.

⇒ **Not pursued**

R2-1915586 Clarification on the en-DC and ng-EN-DC capabilities Huawei, HiSilicon CR Rel-15 36.306 15.6.0 1720 - F NR_newRAT-Core

- Nokia think we can add a stage-2 reference

R2-1915587 Clarification on ne-DC capability Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0200 - F NR_newRAT-Core

R2-1916594_Clarification on the en-DC and ng-EN-DC capabilities Huawei, HiSilicon CR Rel-15 36.306 15.6.0 1720 - F NR_newRAT-Core

⇒ **agreed**

R2-1916593_Clarification on ne-DC capability Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0200 - F NR_newRAT-Core

⇒ **agreed**

Offline 48, for the 2 docs above, figure out if this is needed (or something slightly different) (Huawei)

R2-1915682 Correction to Feature Set Combination and Band combination list for NR-DC (38.331) Ericsson CR Rel-15 38.331 15.7.0 1402 - F NR_newRAT-Core

- Samsung think that for the 2nd change “or EN-DC” should be “or NE-DC”

Offline 49, polish the wording, revision in R2-1916523 (Ericsson)

R2-1916523 Correction to Feature Set Combination and Band combination list for NR-DC (38.331) Ericsson CR Rel-15 38.331 15.7.0 1402 1 F NR_newRAT-Core

⇒ **agreed**

R2-1915905 Corrections on PDCCH blind decoding in NR-DC Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0191 1 F NR_newRAT-Core R2-1913688

- Samsung wonder if this is covered in R1 TS. Huawei think this is not covered and they asked R2 to cover.

⇒ **agreed**

5.5.3 Measurements and measurement coordination

R2-1914905 Measurement coordination on maxMeasIdentitiesSCG in MR-DC ZTE Corporation, Sanechips, Ericsson, NEC, CATT discussion Rel-15 NR_newRAT-Core R2-1912765

⇒ **noted**

R2-1915509 On the capability coordination of measurement reporting criteria for MR-DC Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

DISCUSSION

- Nokia think we should send an LS to R4 to confirm understanding on EN-DC.
- Ericsson think R4 has already made agreement and they will update TS this meeting.
- Samsung wonder what Nokia think is really broken. Nokia think the requirement of coordination for EN-DC is new. Chair think it is difficult to challenge R4 agreements from R2 point of view. It is better to bring objections directly to R4.
- Nokia want to send an LS. Ericsson think this was discussed for 6 months in R4.

Offline 50, DRAFT LS to R4, IN R2-1916524, asking to verify the intentions for coordination for measurements for EN-DC, mentioning the previous R2 understanding (Nokia)

R2-1916524 [DRAFT] LS on measurement reporting criteria for EN-DC Nokia LS out Rel-15 NR_newRAT-Core To:RAN4

⇒ **Approved in R2-1916595**

R2-1914906 Corrections on maxMeasIdentitiesSCG in MR-DC ZTE Corporation, Sanechips, Ericsson, NEC, CATT CR Rel-15 38.331 15.7.0 1272 1 F NR_newRAT-Core R2-1912766

R2-1915363 Correction on MCG measurements in SCGFailureInformation Ericsson CR Rel-15 38.331 15.7.0 1305 1 F NR_newRAT-Core R2-1913302

- Huawei think this is ok, but one sentence should be added.
- Samsung think the cover page, should be improved (conseq is not approved)

Offline 51, revision in R2-1916525, fix the details (ercisson)

R2-1916525 Correction on MCG measurements in SCGFailureInformation Ericsson CR Rel-15 38.331 15.7.0 1305 2 F NR_newRAT-Core

⇒ **agreed**

R2-1915364 Correction on SCGFailureInformation Ericsson CR Rel-15 38.331 15.7.0 1306 1 F NR_newRAT-Core R2-1913303

- Huawei think acc to procedure text this is clear. LG agrees. Noka agrees.

⇒ **Not pursued.**

5.5.4 Other

6 Rel-16 NR Work Items

R2-1915665 Rel-16 RRC planning Ericsson discussion Rel-16

- QC think L1 parameters are not complete and think we may need to wait for more updates from R1.
- Ericsson think we need to start with what we have, and WI email discussions need to produce results Jan 24. Intel wonder why Jan 24. Ericsson think it depends on holidays and the time available to next meeting. Intel think Jan 23 is a better date.
- QC think that three will be a burden to have the whole TS for the running CRs. Intel think Word sometimes crashes. IDT think we can work on non-full-TS-CRs.

- ZTE think there are WIs that will finish in Dec.
- Samsung think the main focus on this effort is the merge and to in the end update the CRs to be mergable. Ericsson agrees and think that the merge is just a temporary acticity.

⇒ **The plan is endorsed. Running CRs can also use non-full-TS. Deadline (hard) for WI running RRC CRs is Jan 23.**

⇒ **R2 will not agree Rel-16 CRs at this meeting, they will be agreed in Feb.**

R2-1914581 Work plan for Rel-16 UE Capability feature list Intel Corporation discussion Rel-16 NR_newRAT-Core Revised

R2-1916192 Work plan for Rel-16 UE Capability feature list Intel Corporation discussion Rel-16 NR_newRAT-Core R2-1914581

P1

- Proposal refer to November meeting. Intel confirms this is a typo should be Feb. Huawei wonder what R2 endorsement would mean for other group parameters.

P2

- Huawei are ok with the spirit of this proposal, but there may be some exception.
- Samsung agree with the proposal, but should then be discussed at RP. Samsung think we can assume that we don't have mandatory features without capability signalling.
- Chair: P2 capture general understanding that would apply in most (or maybe even all) cases.

⇒ **Plan in P1 is endorsed (in R2)**

6.1 Integrated Access and Backhaul for NR

(NR_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: RP-192188)
Time budget: 3 TU
Tdoc Limitation: 12 tdocs

6.1.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc
Including outcome of the email discussion [107bis#39][IAB] 38321 (Samsung)

LS in

R2-1914306 LS on NR IAB case-1 timing (R1-1911548; contact: ZTE) RAN1 LS in Rel-16 NR_IAB-Core To:RAN2 Cc:RAN4

- LG think that from R2 point of view MAC CE is less reliable than RRC message, and RRC message may be better.
- QC respectfully disagrees as RRC is between CU and DU not between IAB Nodes. Nokia agrees.

⇒ **Noted**

R2-1914331 LS on IP assignment in IAB network (R3-196284; contact: Samsung) RAN3 LS in Rel-16 NR_IAB To:RAN2

- QC indicate that we expect more R3 updates on this. We should wait.

⇒ **Noted**

R2-1914344 Reply LS on LS on the IAB-indication to core network (S2-1910281; contact: Qualcomm) SA2 LS in Rel-16 IABARC To:RAN3 Cc:RAN2, SA3, SA5

⇒ **Noted**

R2-1914345 LS on IAB terminology update (S2-1910349; contact: Nokia) SA2 LS in Rel-16 IABARC To:RAN2, RAN3 Cc:RAN, SA

- LG think we can explain IAB-MT in the definitions. Huawei also prefer IAB-MT.
- Chair: there is still strong support in R2 to continue to use the term IAB-MT.

⇒ **Noted**

Work plan

R2-1914806 IAB workplan update Qualcomm Incorporated (Rapporteur) Work Plan Rel-16 NR_IAB, NR_IAB-Core, NR_IAB-Perf R2-1912797

⇒ **Noted**

R2-1916297 IAB remaining issues Qualcomm Incorporated (Rapporteur) discussion

⇒ **noted**

R2-1916504 Upper layer parameters to support IAB physical layer operation Qualcomm (Rapporteur) discussion

No email discussion for 38.321
Can consider next meeting impact to 37.340, 38.304, 36.304, if any
Next meeting need to determine UE capabilities.

✉ **[108#10][IAB] Running CR 38.300 (QC)**
Intended outcome:
Deadline: 2019-12-13
=> Endorsed in R2-1916641

✉ **[108#31][IAB] Running CR 38.331 36.331 (Ericsson)**
Intended outcome:
Deadline: 2020-01-23

✉ **[108#51][IAB] Running CR 38.340 (Huawei)**
Intended outcome: Capture agreements this meeting, address FFSes, identify FFSes (and instert appropriate editors notes), agree final details of functional view. Agree and Capture baseline definitions of Control PDUs for flow control and RLF notification. Agreeable Draft CR.
Deadline: 2020-01-30

✉ **[108#46][IAB] Feature List (Ericsson)**
Intended outcome:
Deadline: 2020-01-30

CR and TS

Endorsements from R2 107bis can be found in R2-1913998 (38.300), R2-1914008 (38.340), R2-1914027 (38.331)

R2-1915256 Running CR to 38.321 on Integrated Access and Backhaul for NR Samsung Electronics GmbH CR Rel-16 38.321 15.7.0 0677 - B NR_IAB

- LG are ok with this CR, and think the FFSes can be easily handled.
- Intel think we can quickly agree on N.

⇒ **Endorsed**

Offline 60, revision in R2-1916539, Can address FFSes, Face-to-Face THU afternoon (Samsung)

R2-1916539 Running CR to 38.321 on Integrated Access and Backhaul for NR Samsung Electronics GmbH CR Rel-16 38.321 15.7.0 0677 1 B NR_IAB

- Huawei wonder about MAC CE.
- Chair think we need to coordinate for MAC CEs next meeting, all WIs need to coordinate somehow.

⇒ **Endorsed as baseline (agreements from this meeting still to be captured)**

withdrawn

R2-1915391 Draft TS 38.340 (BAP) Huawei draft TSRel-16 38.340 0.1.0 NR_IAB-Core Withdrawn

6.1.2 Stage-2 and general

Including principles and higher level aspects e.g. that involve both user plane and control plane, multi-connectivity etc.

F1AP transport in EN-DC

R2-1916506 F1AP signalling over LTE leg way forward

DISCUSSION

P1

- Huawei think that SRB2 in LTE link is not so good, and SRB1 shall be possible as well. Huawei think that F1-AP carries RRC SRB1 messages as well. Nokia think that SRB1 messages for IAB-MT are more important than SRB1 messages for UEs.

P2

- Huawei think we need a new message, as this can carry NAS message as well.
- AT&T think we can reuse these messages.

P3

- Huawei wonder about SCTP etc, is this option 1b.

General

- FW asks if this shall also be applied for NR-DC. AT&T think there is value to do that. FW think that is ok.

TP

- FW think the IEs for UL and DL are different, is this intentional

⇒ **SRB2 is used for transport of all F1AP messages in EN-DC.**

⇒ **Extend LTE DL Information Transfer and UL Information Transfer RRC procedures for F1AP transport since they already use SRB2.**

⇒ **Container that carries F1AP message is carried directly in LTE RRC, i.e. there is no additional NR RRC container, assumes protocol stack of "option 1b".**

Offline 61, agreeable TP 36.331, based on the TP in the document (Nokia)

R2-1916554 Text Proposal for TS 36.331 for support of F1AP signalling over LTE leg Nokia, Nokia Shanghai Bell draftCR Rel-16 36.331 NR_IAB-Core

- QC think we should refer to F1-C instead of F1-AP, and it should be clear that this do not apply to ordinary UEs. Nokia think F1-C is misleading as it could be interpreted that IPsec is included, which is not the intention. Huawei think we might need to say F1-AP and/or SCTP/IP, if the establishment of F1-C to some extent need to be supported.
- KDDI point out that we should conform to the agreed protocol stack.

⇒ **Terminology and wording F1-C, F1-AP etc is FFS**

⇒ **Should capture that this is not applicable to normal UEs or just to IAB-MT**

⇒ **Endorsed (with these comments)**

R2-1915745 Remaining details of F1AP over LTE AT&T, KDDI, LG, ZTE, Verizon, KT discussion

R2-1915703 RAN2 aspects of F1AP over LTE signalling Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-1915462 Discussion on F1AP over LTE in NSA Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-1915746 CR to 36.331 for F1AP over LTE AT&T, KDDI, LG, ZTE, Verizon, KT discussion

R2-1915747 CR to 38.331 for F1AP over LTE AT&T, KDDI, LG, ZTE, Verizon, KT discussion

R2-1915463 Running CR to 36.331 on Integrated Access and Backhaul for NR of NSA Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-1915704 [DRAFT] LS on F1AP over LTE leg signalling for IAB out Rel-16 NR_IAB-Core To:RAN3 Nokia, Nokia Shanghai Bell LS
Updated DRAFT LS in R2-1916540 (Nokia)

R2-1916540 [DRAFT] LS on F1AP over LTE leg signalling for IAB out Rel-16 NR_IAB-Core To:RAN3 Nokia, Nokia Shanghai Bell LS
- Huawei wonder if we need to point out the FFS above. QC think the shown protocol stack is sufficient.

⇒ **Approved in R2-1916577**

Load Reporting

R2-1914830 IAB load reporting to IAB-donor CU-CP Qualcomm Incorporated discussion Rel-16
DISCUSSION
- AT&T support this
- ZTE think load report is important for routing but not for flow control.
- LG think this is R3 scope.
- FW support but think this should be in F1-AP
- Samsung agrees, and wonder if there is impact to e2e FC.
- KDDI wonder about load reporting, what it means?
- Huawei think there is already some info but the proposal here is to add something for IAB.
- Ericsson think load info reporting is already there

⇒ **R2 cannot decide on any of this – is R3 scope**

MR-DC multi-connectivity

R2-1916055 EN-DC support in IAB Samsung R&D Institute UK discussion R2-1912535

R2-1916056 NR-DC support in IAB (signaling perspective) Samsung R&D Institute UK discussion R2-1912536

Configuration Security

R2-1915481 Security for inter-IAB node Signalling Ericsson discussion Rel-16

R2-1915750 Consideration of IAB features that may potentially require security enhancements AT&T discussion

Support for UE split and duplicated bearers

R2-1915467 Support of UE PDCP duplication Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-1914734 Multi-route support in IAB Intel Corporation discussion Rel-16 NR_IAB-Core

Parent Selection

R2-1914733 Parent Selection at IAB nodes during Initial Setup Intel Corporation discussion Rel-16 NR_IAB-Core

R2-1914747 Parent Selection at UEs during Initial Setup Intel Corporation discussion Rel-16 NR_IAB-Core

Multiple MTs

R2-1915471 On Multi-connectivity for IAB Ericsson discussion Rel-16 NR_IAB-Core

Other

R2-1916237 Support for LTE deployment at IAB node sites Sequans Communications discussion Rel-16 NR_IAB-Core R2-1913629

6.1.3 BAP functionality

General

R2-1916164 Draft TS 38.340 (BAP) Huawei draft TS Rel-16 38.340 0.1.1 NR_IAB-Core

R2-1914809 TP to running NR_IAB CR to 38340 on BAP functional view Qualcomm Incorporated pCR Rel-16 38.340 0.1.0 NR_IAB-Core

⇒ **Include in the email discussion for next meeting**

6.1.3.1 Routing

Upstream Routing ID

R2-1916298 WF on UL BAP routing ID Qualcomm Incorporated (Rapporteur) discussion
- FW think an alternative is to have this configurable and keep 2B size.
- AT&T think we don't need to discuss.

⇒ **For both UL and DL, The BAP header for Data PDU has a length of 3B, which hold 1 D/C bit, 3 R bits, 10 bits for BAP address, and 10bits for BAP path ID (this overrides earlier agreement).**

R2-1914808 IAB BAP upstream routing Qualcomm Incorporated discussion Rel-16

R2-1915278 Upstream routing ID Samsung Electronics GmbH discussion

R2-1915705 Routing ID design for uplink Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core Late

R2-1915748 UL BAP address and BAP path ID lengths AT&T discussion

R2-1916140 Consideration on BAP Routing ID for UL LG Electronics Inc. discussion Rel-16 NR_IAB-Core

Local Routing

R2-1914490 Considerations on IAB multi connectivity KDDI Corporation discussion R2-1913004
DISCUSSION
- QC indicate that P1 is already agreed.
- FQ wonder if the intention of P1 is to clarify configuration of ALTERNATIVE path
- P2 Nokia think this is a network impl issue.

⇒ **Noted**

R2-1915113 Discussion on re-routing in IAB network ZTE, Sanechips discussion
DISCUSSION
P3
- LG support
- QC think this is supported already

P1
- Intel think this is not needed. QC too. Samsung agree as well.
- LG think that if we don't do this we need to specify other things.
- Ericsson think that both changing and not changing the path id can work. Ericsson support to change. LG as well.
- Nokia think that if path ID is changed we need to specify how this is done.
- CATT think that path ID can be used for other purpose, e.g. in the future, so it shouldn't be changed.
- ZTE think that if path ID is wrong or missing the packet shall be discarded.
- Huawei think that it becomes more difficult to manage path ID to avoid collisions if it is not changed.

⇒ **If there is a packet with a path ID with no matching entry in the routing table, routing is done based on destination address.**

⇒ **Packet re-routing when there is a matching path ID in the routing table is only supported in egress-link-not-available (RLF) scenario.**

⇒ **We do not introduce support for path ID modification not even for re-routing (modification is not strictly forbidden but no support)**

R2-1915226 Local route selection in IAB Sony discussion Rel-16 NR_IAB-Core

R2-1915699 Route priority and local routing Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-1916133 Consideration on local re-routing after BH RLF LG Electronics Inc. discussion Rel-16 NR_IAB-Core

General

R2-1914385 On Remaining Open Issues of IAB Routing CATT discussion Rel-16 NR_IAB-Core
R2-1914514 Remaining Issues for IAB Routing Futurewei Technologies discussion R2-1913538
R2-1915112 Consideration on routing in IAB ZTE, Sanechips discussion
R2-1915456 Remaining issues for routing Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

6.1.3.2 Bearer Mapping

R2-1915457 Remaining issues for bearer mapping Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-1915111 Further consideration on bearer mapping ZTE, Sanechips discussion
R2-1916138 Way forward for CP bearer mapping LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1913822
R2-1916101 UL mapping configuration Samsung discussion Rel-16

Remapping intermediate nodes

R2-1915196 BAP mapping support for routing CMCC discussion Rel-16 R2-1912935

6.1.3.3 Flow Control

BAP based flow control

Source Information

R2-1914831 IAB flow control feedback info Qualcomm Incorporated discussion Rel-16
=> Revised in R2-1916492
R2-1916492 IAB flow control feedback info Qualcomm Incorporated discussion Rel-16
- O1 is proposed

R2-1916132 Consideration on the postponed decision on DL hop-by-hop flow control LG Electronics, AT&T, Ericsson, Huawei, Verizon discussion Rel-16 NR_IAB-Core
R2-1915321 Details of hop-by-hop flow control Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
- O3 is proposed

DISCUSSION on the 3 documents above
- Ericsson think that for access link we have e2e FC
- Chair think O3 is ruled out as we agreed to not have UE bearer ID in the BAP header.
- QC for 1-to-1 mapping QC think O2 gives no additional benefit, and this can be achieved by configuration. LG think the main mode of operation of 1-to-n mapping and traffic for many destinations will be mixed on a BH RLC channel.
- Intel support O2. Samsung as well.
- KDDI wonder if re-routing is considered, Chair think no
- FW support O2 but would not like to mix O2 and O1
- ZTE think O1 is enough and think O2 brings more work.
- Huawei think O2 can be optional.

⇒ **We support O1 and O2, Which one to use is configurable.**

R2-1914976 Flow control in IAB NEC discussion

Triggering

R2-1915114 Further consideration on flow control in IAB ZTE, Sanechips discussion

R2-1916136	Remaining issues for DL flow control NR_IAB-Core	LG Electronics Inc.	discussion	Rel-16
R2-1914384	On Hop-by-Hop Flow control for IAB BH	CATT	discussion	Rel-16 NR_IAB-Core
R2-1915267	Downlink hop-by-hop flow control	Samsung Electronics GmbH	discussion	

DISCUSSION on the 4 tdocs above
- Leave to impl
- Specified criterion, possibly configured
- Polling

- Huawei think polling is reasonable
- FW think the CATT proposal is reasonable
- Samsung think we cannot leave this to implementation, e.g. overhead is a concern
- Nokia think it would be ok to leave to implementation.
- On the LG proposal, Huawei think we can also have the option that no threshold is configured = leave to implementation.
- Nokia think the main problem with LG proposal is to define and configure this, suggest to specify polling and allow implementation specific triggers, for e.g. overload. Ericsson agrees. KDDI agrees. Samsung would be ok with this.
- FW can agree polling

⇒ **R2 assumes that e.g. when the buffer load exceeds the certain level, the DL hop-by-hop flow control feedback should be triggered, the details of this trigger is left for implementation (in this Rel)**

⇒ **We support Polling, Assume that polling trigger is not specified**

Buffering Information

R2-1914735	Flow control in IAB - remaining issues NR_IAB-Core	Intel Corporation	discussion	Rel-16

- Already covered

⇒ **noted**

R2-1915723	Hop-by-Hop Flow control for IAB	Futurewei Technologies	discussion	R2-1913920
R2-1915458	Flow control for IAB networks	Huawei, HiSilicon	discussion	Rel-16 NR_IAB-Core

DISCUSSION on the two documents above
- Desired Buffer size, Desired Data Rate
- QC think no information is needed, an indication should just indicate overload. Possibly report available buffer. Ericsson agrees. ZTE think available buffer is not good.
- Samsung think the proposals above are ok.
- ZTE think we agrees to report buffer load already. Intel think we don't need to specify exactly what this is.
- Sequans support the proposals above.
- LG think actual buffer occupancy e.g. in % would be ok, or just to report congestion problem or not. KDDI support this together with Buffer capability.
- FW think QC proposal is exactly as DDDS, and think desired buffer size is the same as available buffer size.
- Huawei think the data rate is important.
- Nokia think available buffer size is not always relevant, as an IAB node could indicate due to congestion problems on the next hops.
- LG think b and c are the same. FW think we should go with c
- Samsung think c and d
- Ericsson think desired data rate is redundant. LG agrees. Intel agrees.
- FW think if d is there, the reporting can be less often. CATT think this is useful. Samsung think that c and d can be independent and think

Chair: there is significant support but no consensus for desired data rate

Buffer load

a) void
b) Actual buffer occupancy %
c) Available or desired buffer size (absolute e.g. MB kB)

Additional
d) Desired Data rate

⇒ **We use Available or desired buffer size (absolute e.g. MB kB)**

R2-1916141 Discussion on the flow control ITL discussion R2-1913871

General

R2-1915474 Remaining Issues Related to Flow Control Ericsson discussion Rel-16 NR_IAB-Core

6.1.3.4 Other

General

R2-1916139 Need of BAP buffer LG Electronics Inc. discussion Rel-16 NR_IAB-Core

Control Message

R2-1915473 Further Discussion on BAP Layer Signaling Ericsson discussion Rel-16 NR_IAB-Core

R2-1914827 IAB BAP layer control messages Qualcomm Incorporated discussion Rel-16

PDU format

R2-1915466 Discussion on the BAP PDU format Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-1915472 Backhaul Adaptation Protocol (BAP) Header for IAB Networks Ericsson discussion Rel-16 NR_IAB-Core

6.1.4 User plane aspects

User plane aspects not covered by BAP.

6.1.4.1 Scheduling and QoS

Preemptive BSR

R2-1915258 Way forward on pre-emptive BSR Samsung, Lenovo, Nokia, Nokia Shanghai Bell, Huawei, Futurewei, LG, Sequans Communications, Intel, Kyocera discussion Revised

R2-1915538 Way forward on pre-emptive BSR Samsung, Lenovo, Nokia, Nokia Shanghai Bell, Huawei, Futurewei, LG, Sequans Communications, Intel, Kyocera, Qualcomm discussion R2-1915258

R2-1915475 Way forward on pre-emptive BSR in IAB networks Ericsson discussion Rel-16 NR_IAB-Core

DISCUSSION on the two documents above

- CATT wonder if 2a is a new BSR. Ericsson clarifies that 2a is just a change in triggering for IAB-MT, no new BSR. LG think this is a new BSR, and think the calculation need to be captured. LG think it is important to differentiate between new BSR and legacy BSRs from UEs. Ericsson think that anyway BSR calculation need to be somewhat impl specific.
- Intel think 2a is ok if intra-vendor
- ZTE think that separate BSR is better.
- LG think E:P3 is ok.
- Huawei think that for 2a we need some additional restriction.
- Futurewei think 2a is implementation and we don’t need to write it in the TS.

- Nokia think that for 2a you will not know what is the data that is reported, e,g, what is actually taken into account for the child.
- Futurewei think 2a could possibly be captured as a NOTE, otherwise there might be a lot of work to figure out all details. Ericsson think the same problem is there for the new BSR. Futurewei think that it becomes easier when we separate the pre-data to leave e.g. triggering to impl.
- Huawei wonder about p3.
- Samsung think the proposals are contradicting.
- Futurewei has concerns that E 2b will generate lots of updates.
- QC think there are problems with the E 2a

⇒ **We specify a new BSR (with a new format), for pre-emptive BSR.**

⇒ **For the new BSR**
- differentiate in BSR available data (as today) and expected data.
- Associating a LCH with pre-emptive BSR is left to implementation, unless issues are identified requiring normative solutions.
- FFS if SR and BSR generated by a MAC entity need or can only be reported to the parent node where the peer of that MAC entity resides.
- On Triggering of pre-emptive BSR, can capture some text similar to the current agreements, in stage-3/2.
- Exact timing etc is up to implementation.

R2-1914736 Uplink latency reduction Intel Corporation discussion Rel-16 NR_IAB-Core

Preemptive BSR more details

R2-1915749 Control of pre-emptive SR/BSR functionality for low-latency scheduling AT&T discussion

⇒ **The network can configure whether the pre-emptive BSR is used at an IAB node (by MAC configuration in RRC)**

R2-1915459 Way forward and TP for the pre-BSR 15.7.0 B NR_IAB-Core Huawei, HiSilicon draftCR Rel-16 38.321

Offline 57, agreeable TP, revision in R2-1916537 (Huawei)

R2-1916537 Way forward and TP for the pre-BSR 15.7.0 B NR_IAB-Core Huawei, HiSilicon draftCR Rel-16 38.321

- Nokia think that the format should be FFS and need more discussion. Samsung agrees, and thought it would just be short/long BSR with a bit indicating this is pre-emptive.

⇒ **Except for the format which is FFS, endorsed as baseline.**

R2-1916134 BSR MAC CE format for pre-BSR R2-1913818 LG Electronics Inc. discussion Rel-16 NR_IAB-Core

R2-1915126 Consideration on UL low-latency scheduling Rel-16 R2-1913085 Lenovo, Motorola Mobility discussion

R2-1915127 Pre-emptive BSR in multiple connection scenario Rel-16 R2-1913086 Lenovo, Motorola Mobility discussion

R2-1915116 Discussion on low latency scheduling in IAB ZTE, Sanechips discussion

R2-1915596 Consideration of preemptive BSR in IAB Kyocera discussion

R2-1915564 Details of pre-emptive BSR design Samsung Electronics GmbH discussion

R2-1914768 Enhancements for low-latency IAB Uplink scheduling R2-1913539 Futurewei Technologies discussion

R2-1915068 Trigger Conditions for low-latency IAB Uplink Scheduling R2-1913065 ITRI discussion NR_IAB-Core

Scheduling

R2-1914738 Handling of Fairness in IAB Intel Corporation discussion Rel-16 NR_IAB-Core

R2-1915325 Signalling for radio aware scheduling Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-1915269 On the need for bearer ID in the BAP header Samsung Electronics GmbH discussion
DISCUSSION on the 3 tdocs above
- QC think this is not valuable. QC think 1-to-1 bearer mapping can be used if this is important. Ericsson agrees. KDDI agrees. LG agrees as well, and think QoS classes can anyway be maintained.
- ZTE think Bearer ID is not enough.
- Huawei think there is some value in this, and support

Chair: limited support and some opposition

⇒ **We don't put the bearer ID in the BAP header (in this rel)**

R2-1915744 Benefits of inter-IAB node metric exchange for IAB scheduling AT&T discussion
- LG wonder what is wanted.
- QC think this about radio aware scheduling and control PDU can be used for this.
- AT&T think that the metric would be up to implementation and it is for intra-vendor
- Samsung wonder how we can specify now anything.
- AT&T think the main point is that this is extendable.
- Chair think UP can be extended in several ways.

⇒ **Noted**

R2-1914828 IAB scheduling support Qualcomm Incorporated discussion Rel-16
DISCUSSION
- QC think P2 is the more important one and the no of bearers configuration would reflect some kind of avg number to avoid frequent reconfiguration.
- LG wonder about P1, how this could work.
- Futurewei wonder how this would be used.
- QC think Telstra is requesting this.
- KDDI think we postpone this topic to next release and in this release we just rely on good configuration.

⇒ **noted**

R2-1915322 Buffer status reporting for IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-1916040 Discussion on traditional uplink traffic and IAB uplink traffic regarding to pre-emptive BSR ASUSTeK discussion Rel-16 NR_IAB-Core

R2-1914829 draft LS on IAB scheduling support Qualcomm Incorporated LS out Rel-16 NR_IAB-Core To:RAN3

6.1.4.2 LCID extension

R2-1916135 Consideration on remaining FFS of LCID extension LG Electronics Inc. discussion Rel-16 NR_IAB-Core

R2-1915343 Remaining issues with extending LCID space on the backhaul Samsung Electronics GmbH discussion

R2-1915323 eLCID space and handling of IAB specific MAC Ces Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-1915118 Consideration on the Extended LCID in IAB ZTE, Sanechips discussion

6.1.4.3 Other

Other MAC RLC PDCP impacts if any, F1 based flow control etc

Timing Signalling

R2-1915465 T_delta of IAB DL transmission timing alignment Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-1915324 Signalling for IAB timing Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-1915117 Discussion on case-1 OTA timing alignment ZTE, Sanechips discussion

DISCUSSION
- Huawei think we wait for R1 on Nokia P2
- On HW P3 FFS, ZTE think we don't need SCS as this can be inferred anyway

⇒ **MAC CE is defined for this**

⇒ **Assume we don't include The number of guard symbols now (wait for R1)**

Offline 58, Agreeable TP in R2-1916538, can take very latest R1 progress into account (ZTE)

R2-1916538 TP for Timing Delta MAC CE ZTE draftCR Rel-16 38.321 15.7.0 NR_IAB-Core
- FW wonder if this is related to TA, QC think no.

⇒ **endorsed**

IAB specific RACH Configuration
R2-1915460 RACH related issues for IAB Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

Flow Control and Congestion handling
R2-1916238 F1-U Flow Control and Reordering Issues Sequans Communications discussion Rel-16 NR_IAB-Core R2-1913630
R2-1916239 Packet Marking for E2E Flow Control Sequans Communications discussion Rel-16 NR_IAB-Core R2-1913631 Late

Scheduling Further enhancements
R2-1916137 LCG based UL grant LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1913817

Over tdoc limitation
R2-1916058 Delivering T_delta for IAB node Samsung R&D Institute UK discussion

6.1.5 Control plane aspects

6.1.5.1 RLF handling

R2-1916169 Resolving open issues on BH RLF LG Electronics France discussion NR_IAB-Core
R2-1915461 Backhaul RLF Recovery Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-1914383 On Remaining Open Issues of IAB BH RLF CATT discussion Rel-16 NR_IAB-Core
R2-1914737 Further discussion on Backhaul RLF handling Intel Corporation discussion Rel-16 NR_IAB-Core
R2-1914920 Discussion on IAB BH RLF report mechanism vivo discussion
R2-1914975 IAB backhaul RLF handling NEC discussion
R2-1915115 Discussion on BAP control PDU ZTE, Sanechips discussion
R2-1915119 Discussion on IAB BH RLF handling ZTE, Sanechips discussion
R2-1915129 RLF notification to downstream IAB node Lenovo, Motorola Mobility discussion Rel-16
R2-1915598 Possible issues on Backhaul RLF handling Kyocera discussion
R2-1915700 BH link failure handling Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-1915783 Further details on Backhaul link RLF Notification Types to Downstream Node(s) Ericsson discussion Rel-16
R2-1916057 Remaining issues on IAB RLF Samsung R&D Institute UK discussion

R2-1916168 BH RLF Notification Terminaton Layer LG Electronics France discussion NR_IAB-Core

Cell selection, reestablishment

R2-1916061 Cell Selection for Backhaul RLF Recovery Futurewei Technologies discussion R2-1913544

R2-1915128 Cell selection for IAB RLF recovery Lenovo, Motorola Mobility discussion Rel-16 R2-1913087

R2-1915766 Issue of loop topology after RLF SHARP Corporation discussion Rel-16

Security

R2-1914918 Remaining issues on BH RLF notification vivo discussion

R2-1914919 [Draft] LS on BH RLF notification verification vivo LS out To:SA3

withdrawn

R2-1915477 Further details on Backhaul link RLF Notification Types to Downstream Node(s) Ericsson, Song discussion Rel-16 NR_IAB-Core Withdrawn

6.1.5.2 Configuration

General

R2-1915468 Draft CR to 36.331 on Integrated Access and Backhaul for (NG)EN-DC Ericsson draftCR Rel-16 36.331 15.7.0 NR_IAB-Core

R2-1915469 Running CR to TS 38.331 on IAB for NR Ericsson draftCR Rel-16 38.331 15.7.0 NR_IAB-Core

R2-1915470 Draft CR to TS 38.331 on IAB for TDD UL DL Change of Configuration Ericsson draftCR Rel-16 38.331 15.7.0 NR_IAB-Core

R2-1915120 Discussion on BH RLC channel configuration in IAB network ZTE, Sanechips discussion

R2-1916506 F1AP signalling over LTE leg way forward Nokia, Nokia Shanghai Bell, AT&T, KDDI discussion Rel-16 NR_IAB-Core

BAP

R2-1916250 Way forward on BAP Configuration Futurewei discussion

R2-1915701 Remaining issues of routing and bearer mapping configuration in IAB nodes for UP traffic Nokia, Nokia Shanghai Bell, Ericsson, KDDI discussion Rel-16 NR_IAB-Core

DISCUSSION

- Nokia think Futurewei's proposal brings more impact.
- AT&T support Nokia, and think it is too late to come up with a new protocol.
- Futurewei indicate that their proposal is to define an IE that can be carried by both RRC and F1-AP, not a complete new protocol.
- Huawei think that some default RRC parameters are anyway needed for bootstrap.
- Samsung support Huawei proposal and think it is natural to use RRC for UL configuration.
- CATT think it is complicated to serve UP and CP traffic differently and RRC works for UL configuration and is supported by majority. Nokia think that configuration solution for UP and CP is the same.
- intel think the Futurewei proposal is interesting, but wonders if this is a new TS. Futurewei think this may be a new TS. ZTE think RRC signalling is preferred.
- Ericsson wonder if the IE is the same for RRC and F1-AP.
- LG think Nokia proposal is preferable.
- Samsung also think the bearer mapping is different for UL and DL.
- KDDI think b cannot address observation 8. Samsung think this is just internal node implementation, and there is no such issue. ZTE agrees. KDDI then think MT configuration need to be transferred to DU.
- Nokia think the UL BAP mapping functionality can be considered to belong to DU.
- Samsung think that for the access IAB node there is only the MT part, and thus the only choice would be RRC layer.
- Samsung wonder how to organize the configuration
- Nokia proposes to capture configuration parameters in BAP, and that is it.

Options:
a Generic Configuration IE, reused for both UL(MT) and DL(DU), in RRC and F1-AP.
b For the UL, configure by RRC
c For the UL, configure by F1-AP (still require some bootstrap config by RRC)

Chair: no option seems unacceptable

A	4	x
B	8	9
C	7	11

⇒ **Rule out A**

⇒ **For the UL (for both UP and CP), configure by F1-AP (still require some bootstrap configuration by RRC)**

R2-1915702 Remaining issues of routing and bearer mapping configuration in IAB nodes for CP traffic Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
- Nokia indicates that the proposal is to use default configuration for bootstrapping
- Samsung wonder if this is to transfer non-UE-specific F1-AP messages. Nokia confirms, and also any messaging needed to establish F1-AP transport, e.g. for SCTP.

Offline 34, identify the “bootstrap” configuration, report in R2-1916511 (QC)

R2-1916511 Offline 34, IAB bootstrap configuration Qualcomm Incorporated (Rapporteur) discussion Rel-16 NR_IAB-Core
DISCUSSION
- Huawei think that a routing table is needed, as there may be multiple connections (DC)
- QC think we don’t need to have multiple BH RLC channels
- LG think there is no multi-connectivity during bootstrapping.

P2
- FW suggest to not have the FFS.

⇒ **The IAB-node is configured via RRC with a destination BAP routing ID, which it uses for UL traffic during bootstrapping.**

⇒ **The IAB-node is configured via RRC with an UL BH RLC channel, which it uses for UL traffic during bootstrapping.**

⇒ **The RRC configuration for bootstrapping is not expected to support configuration of a routing table**

R2-1915110 Discussion on BAP configuration ZTE, Sanechips discussion

IP Address

R2-1915476 IP Address Assignment for IAB Nodes Ericsson discussion Rel-16 NR_IAB-Core

R2-1916099 IP address configuration for IAB Samsung discussion Rel-16

6.1.5.3 Other

Including outcome of the email discussion [107bis#40][IAB] SI Broadast, barring, Initial access, Connection setup (Ericsson)

R2-1915478 Summary for Email Discussion [107bis#40] [IAB] SI Broadast, barring, Initial access, Connection setup (Ericsson) Ericsson discussion Rel-16 NR_IAB-Core Late
DISCUSSION
P1
- Huawei think we need to support a case that IAB is supported but access is barred for IAB nodes. Huawei think this is needed for overload.
- Ericsson think that if this is present then still the access barring can be used.

- Samsung think that some Bcast information is stored and see some benefits to have two indications.
- Sony agrees with Huawei.
- Sharp think two indications is sent separately, and think loop topology is a problem for cell selection at RLF. Sharp think that a separate indication should be used together with dedicated RLF indication.
- LG think there are no reasons for multiple bits.

P2
- ZTE wonder why we need this
- Huawei think this is for network sharing.
- Intel think this is not needed for IAB.
- Ericsson indicate that 10(15) want this per PLMN.
  KDDI wonder if this is also for non_IAB systems. Chair think this just applied to the new IE, which is IAB-specific.

P3/4
- CATT think that the intention is to not impact UE behaviours. Not sure if further agreements are needed.
- Intel think that the MIB bit doesn't need to apply to IAB nodes, as they can anyway be barred using the IE in P1.
- LG think it should apply.
- Nokia think that if we have EN-DC UEs in the network we may want to use the MIB bit to barr UEs but not IAB nodes.
- Samsung think the cellBarred is used when there are critical problems in the network.
- Ericsson think that other barring mechanisms than MiB barring can be used for normal UEs.
- LG think cell reservation fields can be used to barr normal UEs. IAB node should be allowed to access when cell reservations is active.

P5
- Nokia think this doesn't make sense. Ericsson agrees, intel agrees as well. Sony think UAC is not so applicable to IAB nodes.
- Huawei think we should support UAC for IAB nodes,

⇒ **Both support of IAB node(s) and the cell status for IAB node(s) is combined in a single IE, i.e. if the IE is present, the cell supports IABs and the cell is also considered as a candidate for IABs; if the IE is absent, the cell does not support IAB and/or the cell is barred for IAB.**

⇒ **This IE can be provided per PLMN.**

⇒ **The case that UEs are barred but IAB nodes are allowed to access shall be supported. FFS if this is supported by MIB: CellBarred (i.e. IAB MT ignores the MIB cellBarred when set) or SIB1: CellReservations (i.e. IAB MT ignores SIB cell reservations, or has an access identity that allow access)**

⇒ **No new Establishment Cause values in RRC Connection Setup are defined.**

⇒ **No new Re-establishment Cause values are defined.**

R2-1915464	TP for TS 38.304 and 36.304 on the impacts of idle procedure draftCR Rel-16 38.304 15.5.0 B NR_IAB-Core	Huawei, HiSilicon		
R2-1915479	Cell reservations, UAC, and initial access aspects in IAB networks Rel-16 NR_IAB-Core	Ericsson	discussion	
R2-1915165	(De)Prioritizing the Access for IAB Setup	Samsung	discussion	NR_IAB-Core
R2-1915074	Discussion on the information for parent node selection	ITRI	discussion	NR_IAB-Core
R2-1915121	Discussion on IAB node connection setup	ZTE, Sanechips	discussion	
R2-1915227	IAB System information handling	Sony	discussion	Rel-16 NR_IAB-Core
R2-1915480	RRC Connection Re-establishment cause values for IAB nodes Rel-16 NR_IAB-Core	Ericsson	discussion	
R2-1916167	Access control in IAB networks	LG Electronics France	discussion	NR_IAB-Core

6.2 NR-based Access to Unlicensed Spectrum

(NR_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: RP-191575; Further prioritization guidance in RP-191581). Documents in this agenda item will be handled in a break out session.
Time budget: 3 TU
Tdoc Limitation: 9 tdocs

6.2.1 General

Including incoming LSs, rapporteur inputs, etc.
Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

R2-1914316 Reply LS on additional PDCCH monitoring occasions for paging for NR-U (R1-1911705; contact: ZTE) RAN1 LS in Rel-16 NR_unlic-Core To:RAN2
=> Noted

R2-1914520 Running Stage-2 CR for NR-U NR_unlic-Core Qualcomm Incorporated draftCR Rel-15 38.300 15.7.0
=> Add SRB3 in 5.x.2
=> The CR is endorsed

R2-1914521 Running RRC CR for NR-U NR_unlic-Core Qualcomm Incorporated draftCR Rel-15 38.331 15.7.0
- Ericsson would like to use “UE operating in shared spectrum” like RAN1 instead of NR-U.
- Ericsson thinks that we can wait for the UE capabilities. Qualcomm explains the intention is to start capturing something.

=> The CR is endorsed with the understanding that terminology may change and UE capabilities will be updated according to agreements made

R2-1914550 Running Idle/Inactive CR for NR-U NR_unlic-Core Qualcomm Incorporated draftCR Rel-15 38.304 15.5.0
- Ericsson thinks a sentence is too long. Qualcomm will work offline to simplify

=> Update “The UE shall consider only the white listed cells, if configured, as candidate for cell reselection.
=> The CR is endorsed

R2-1915873 Running MAC CR for NR-U NR_unlic-Core Ericsson draftCR Rel-16 38.321 15.7.0 B
=> The CR is endorsed

R2-1915874 Rapporteur input on Running MAC CR for NR-U NR_unlic-Core Ericsson discussion Rel-16
=> Noted

R2-1914398 Text proposal for NR-U impacts on TS 37.340 NR_unlic-Core Late OPPO draftCR Rel-16 37.340 15.7.0 B
=> moved from 6.2.2.8

✉ **[108#38][NR-U] Running 38.331 (Qualcomm)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 23/01/2020
Phase 2 :
Capture open issues from contribution from RAN2#108 and from CR implementation phase

Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#74][NR-U] Running 38.300 (Qualcomm)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#75][NR-U] Running 38.321 (Ericsson)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture critical open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#76][NR-U] Running 38.304 (Qualcomm)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#77][NR-U] Running 37.340 (Oppo)**
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 23/01/2020

6.2.2 User plane

6.2.2.1 4-step RACH

Aspects of 4 step RACH procedure specific to unlicensed operation; including supporting extended RAR window, and LBT impact.

R2-1915140 Remaining issues on 4-step RACH for NR-U Huawei, HiSilicon discussion NR_unlic-Core
Proposal 3: RAN2 consider msg3 repetition is beneficial for increasing the transmission opportunity of Msg3.
=> msg3 repetitions will not be supported in this release
Proposal 4: NR-U should support 2-step triggered scheduling mechanism to reduce transmission latency of Msg3 in 4-step RACH.
=> Leave these for RAN1 discussion
=> Noted

R2-1915871 RACH enhancements for NR-U Ericsson discussion Rel-16 NR_unlic-Core

Proposal 1 *For RA triggered at the UE, RAN2 considers channel occupancy aware RACH procedure as one of the key solutions for NR-U RACH enhancements to overcome the LBT failures*
- LG supports this and see benefits. ZTE thinks this can be left up to UE to UE implementation

=> Nothing will be specified for this

Proposal 2 *For RA triggered at the UE, the UE is allowed to select any serving cell configured with PRACH resources to transmit a Msg1 (or MsgA in 2-step RACH) (both CBRA and CFRA).*
- Interdigital thinks that we don't send the RAR in SCell. Lenovo agrees. Ericsson clarifies that we only agreed to not send RAR but we should be able to transmit preamble on SCell.
- Qualcomm thinks that we should allow msg1 for CBRA.

=> The proposal is not agreed

Proposal 4 *For a RA triggered for initial system access, further enhancement on how to provide more opportunities for Msg1 can be left for future releases.*

=> For a RA triggered for initial system access, further enhancement on how to provide more opportunities for Msg1 can be left for future releases

Proposal 5 *For a UE in RRC Connected or RRC Inactive, introduce an additional offset between two consecutive ROs in the frequency domain. The new offset is configured in the RACH-ConfigGeneric.*
- LG thinks this is a RAN1 issue. Ericsson clarifies that this is related to a configuration that is RAN2 related.

=> Not support

Proposal 6 *If LSBs of SFN cannot be included in DCI, adopt the subheader for the NR-U RAR as shown in Figure 1.*
- Vivo clarifies that 2bit LSB in DCI was agreed.

Proposal 9 For a Msg3 not sharing COT with msg2 and containing not only CP data, the UE chooses LBT type and/or CAPC for Msg3 according to the priority associated with the data.

=> Noted

R2-1914426 Remaining Issues for Extending RAR Window Samsung Electronics Co., Ltd discussion Rel-16 NR_unlic-Core

Proposal 2: UE does not check the Lsbs of SFN included in DCI during CFRA.
- Qualcomm explains that the UE needs to check the MIB for SFN and this can be a corner cases. Samsung explains that a periodicity of 10ms is quite a common configuration.

=> Noted

Agreements
1 sl60 and sl160 are added to configuration of ra-ResponseWindow

R2-1914428 Signaling Multiple UL grants for Msg3 Transmission in NR-U Samsung Electronics Co., Ltd discussion Rel-16 NR_unlic-Core

=> Noted

Not treated

R2-1914365 Remaining Issues on RACH Procedure in NR-U vivo discussion

R2-1914366 Issues on the Autonomous BWP Switching in NR-U vivo discussion R2-1912178

R2-1914370 Further Consideration on RAR reception in NR-U vivo discussion

R2-1914399 LBT aware UL BWP selection for RACH in NR-U OPPO discussion Rel-16 NR_unlic-Core

R2-1914429 Draft RRC CR_Supporting RAR Window Size larger than 10ms in NR-U Samsung Electronics Co., Ltd draftCR Rel-16 38.331 15.7.0 NR_unlic-Core

R2-1914792 Multiple Msg1 transmission opportunities ZTE Corporation, Sanechips discussion

R2-1914793 RAR MAC PDU design for NR-U ZTE Corporation, Sanechips discussion

R2-1915070 Msg1 transmission opportunities ITRI discussion NR_unlic-Core R2-1913062

R2-1915545 Indicating SFN LSB in the payload of Msg2 or MsgB MediaTek Inc. discussion Rel-16 NR_unlic-Core R2-1913261

R2-1915920 Additional opportunity for Msg1 in 4-step RACH LG Electronics Inc. discussion NR_unlic-Core R2-1913129 Late

6.2.2.2 Handling UL LBT failures

Including detection, recovery, and reporting a consistent UL LBT failure

R2-1915885 UL LBT failure detection Nokia, Nokia Shanghai Bell, InterDigital, MediaTek, OPPO discussion Rel-16 NR_unlic-Core

Proposal 1: on top of the agreed baseline detection mechanism, introduce a new timer, e.g. lbt-FailureProhibitTimer, to prevent counting too close failures, i.e. the counter is only increased when the new timer is not running.

- Convida asks what is the importance of declaring LBT faster. Nokia explains that its not the intention, they are trying to prevent too early declaration. Convida thinks that can be avoided by extending the counter values.
- Google thinks that we have discussed this in the past and couldn't conclude. If we want to solve it there are better proposals.
- Ericsson also thinks that we can leave it for future enhancements.
- Interdigital explains that we agreed to BFD and this is trying to address premature declaration. Otherwise the feature is useless.
- Qualcomm thinks that we should declare early if we use PUSCH.
- Huawei also thinks this timer is needed and the granularity is needed. LG would also like to solve this problem.
- Charter thinks this is simple and very helpful. Panasonic also thinks we should solve the problem.
- Nokia explains that this is not an optimization. Samsung thinks that UL LBT itself is an optimization and this is even further.

=> no consensus

=> Noted

R2-1914400 Remaining issues on consistent uplink LBT failure for NR-U OPPO discussion Rel-16 NR_unlic-Core

Proposal 2 Similar as BFR MAC CE, UE can trigger SR if there is no available UL resources for sending the MAC CE for SCell UL LBT problem.

- Convida thinks that we have to check the specs first as it may get complicated.
- Vivo agrees with the proposal
- Ericsson doesn't think this is a time critical thing so we don't need to trigger an SR. Mediatek also agrees. Interdigital explains that in the case of hidden node problem the delay can be quite large. Nokia also thinks that we should trigger the SR similar to the BFR framework. Qualcomm agrees as well.

Proposal 3 No need to have the limitation that the MAC CE should be transmitted on a different serving cell other than the SCell which has the UL LBT problem

- Vivo thinks that the UE should not transmit on the failed BWP as this can cause blockage.
- Nokia and Lenovo don't think it makes sense to transmit something on a scell that has failed.

Proposal 4 No need to re-trigger the MAC CE if there is already MAC CE triggered for consistent UL LBT failure for a SCell.

Proposal 5 The MAC CE format should support multiple entries to indicate all the SCells which have already declared consistent UL LBT failure.

- Ericsson thinks that we should only report a single MAC CE with a single SCell. Interdigital thinks we should report multiple. Qualcomm agrees.

Proposal 7 When consistent UL LBT failure is declared on SpCell, UE does not trigger MAC CE.

- Huawei thinks that we should trigger MAC CE to speed up the reporting. Oppo thinks that for PCell RLF will be triggered anyways for the cell.
- Nokia thinks this is important as we can have multiple different reasons why the BWP switching has happened. ZTE consdieres that it may be simpler for the MAC to generate it all the time.

- Ericsson thinks MAC CE should be sent. Mediatek would like to understand what the network will do with this information. Nokia explains that the network needs to distinguish.
- ZTE explains that BPW ID is not needed as the network should know which one was the active BWP.

=> Noted

Agreements:

1. UE can trigger SR if there is no available UL resources for sending the MAC CE for SCell UL LBT problem, using the same framework as BFR.
2. MAC CE for UL LBT problem has higher priority than data but lower priority than the BFR MAC CE.
3. The MAC CE should be transmitted on a different serving cell other than the SCell which has the UL LBT problem
4. The MAC CE can report multiple failed Cells. The MAC CE format should support multiple entries to indicate all the Cells which have already declared consistent UL LBT failure. UL LBT MAC CE includes Cell index(s) where UL LBT failure occurs.
5. As a baseline, the format of the LBT failure MAC CE is a bitmap to indicate if corresponding serving cell has declared consistent LBT failure.
6. Cancel the consistent LTB failure for a serving cell (or BWP(s)) (i.e. do not consider Cell as having LBT failure) upon UE successfully transmit a LBT failure MAC CE indicating the serving cell. FFS what successfully transmission means (i.e. ideally align with BFR unless there are some issues).
7. When consistent UL LBT failure is declared on SpCell, UE triggers MAC CE to indicate where failure happened. The MAC CE is sent on the BWP that the UE switched to during RA procedure.
8. FFS When UE switches to another BWP and initiate RACH upon declaration of consistent LBT failure on SpCell, ONLY RACH is initiated.
9. A new failure type for PSCell consistent UL LBT failure is added in the SCGFailureInformation.
10. No new re-establishment cause is introduced in the RRC re-establishment message. “Other” failure will be used

R2-1916382 Summary of UL LBT offline discussion Oppo

=> Noted

R2-1915765 Remaining details of UL LBT failure mechanism Qualcomm Incorporated discussion

Proposal 1: The UE should not be required to try all BWPs with RACH resources before declaring RLF.

Proposal 2: The number of BWP switches before declaring RLF is left to UE implementation.

- Samsung asks what happens in case of SUL. Oppo thinks that SUL should even be used for NR-U.

=> Noted

Discussion:

Can we make the N configurable?

- Qualcomm explains that there is no point to switch BWP if they overlap. Interdigital thinks that the understanding is that the UE doesn’t go back and it is up to UE implementation.
- Ericsson thinks this is a corner case
- Qualcomm wants to know if N=5, do I need to try all 5 BWP or can I go back and forth.

=> The UE will only try on BWP(s) that it has not yet already tried

R2-1914864 Draft LS on Uplink LBT failure indication Qualcomm Incorporated LS out To:RAN1

=> The LS is revised in R2-1916371

R2-1916371 Draft LS on Uplink LBT failure indication Qualcomm Incorporated LS out To:RAN1

=> Delete “RAN2 has not decided if the above indication from the physical layer to the MAC layer should be specified or left to the UE implementation”

=> The LS is approved in R2-1916380 with the changes above

Not treated

R2-1915015 LBT Failures Handling in Non-Connected State Spreadtrum Communications, Huawei, HiSilicon discussion

R2-1914367 Remaining Issues of UL LBT Failure vivo discussion

R2-1914572 Handling of UL LBT failures Intel Corporation discussion Rel-16 NR_unlic-Core

R2-1914791 LBT failure report on SCell ZTE Corporation, Sanechips discussion

R2-1914882 Handling UL LBT Failures InterDigital discussion Rel-16 NR_unlic-Core

R2-1915016 Inconsecutive UL LBT Failures Handling Spreadtrum Communications discussion

R2-1915105 UE behavior upon consistent LBT failure Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core

R2-1915141 Handling of UL LBT failure Huawei, HiSilicon discussion NR_unlic-Core

R2-1915177 Remaining issue on detecting UL LBT Failures PANASONIC R&D Center Germany discussion

R2-1915197 Details on determining consistent LBT failure of a BWP CMCC discussion Rel-16

R2-1915544 Remaining issues on consistent LBT failures MediaTek Inc. discussion Rel-16 NR_unlic-Core R2-1913260

R2-1915802 Adapting the BFD mechanism for consistent LBT failure detection Google Inc. discussion Rel-16

R2-1915870 Handling consistent UL LBT failures Ericsson discussion Rel-16 NR_unlic-Core

R2-1915886 UL LBT failure report Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core

R2-1916094 Remaining Issues on Consistent LBT Failure Detection in NRU Charter Communications, Inc discussion

R2-1916118 Handling LBT failures for support of wideband operations ETRI discussion Rel-16 NR_unlic-Core

R2-1916200 Cell (re)selection after consecutive UL LBT failures LG Electronics Inc discussion Rel-16 NR_unlic-Core

6.2.2.3 2-step RACH

Aspects of 2 step RACH procedure specific to unlicensed operation, e.g. considering LBT impact. Generic discussion of 2 step RACH will take place under the 2 step RACH WI.

R2-1914769 NR-U specific aspects for 2-step RACH Qualcomm Incorporated, ZTE discussion

Proposal 1: From MAC perspective, if LBT fails for the preamble, the UE should also cancel PUSCH transmission.

- Vivo thinks that this if there is a one to one mapping the gNB still knows the preamble index. Qualcomm thinks that this is possible but they want to prevent discussing further optimization.
-

Proposal 2: The PREAMBLE_TRANSMISSION_COUNTER is not increased if the preamble is not transmitted due to failure of the LBT for the preamble.

Proposal 3: If msgA is not transmitted due to LBT failure, msgA PUSCH power is suspended.

- Nokia thinks is up to RAN1 discussing whether they maintain separate or together counter

Proposal 4: If preamble is transmitted but LBT for msgA PUSCH fails, the UE monitors downlink PDCCH for fallback RAR.

- Nokia thinks it makes sense but no MAC specifications are needed.
- ZTE thinks that we can check if this can be transparent in the MAC but we still need to make an agreement.
- Huawei thinks that we don't need to specify what we are monitoring. Qualcomm explains that we need to know RNTI we are monitoring. Nokia thinks that we don't need to say anything and UE implementation can handle this.

Proposal 5: The 2 LSBs for the SFN corresponding to msgA transmission time is included in msgB DCI. RAN1 should confirm the feasibility of using reserved bits for this purpose.
=> Noted

Agreements:
1 From MAC perspective, if LBT fails for the preamble, the UE also cancel PUSCH transmission
2 The PREAMBLE_TRANSMISSION_COUNTER is not increased if the preamble is not transmitted due to failure of the LBT for the preamble
3 If preamble is transmitted but LBT for msgA PUSCH fails, the UE monitors downlink PDCCH for fallback RAR. FFS how and whether to deal with the C-RNTI case for connected mode
4 The 2 LSBs for the SFN corresponding to msgA transmission time is included in msgB DCI, as for licenced case (pending RAN1)

Not treated

R2-1915142 Enhancement on two-step Random Access for NR-U Huawei, HiSilicon discussion NR_unlic-Core
R2-1914368 LBT Impacts on 2-step RACH vivo discussion R2-1912179
R2-1914401 2-step RACH for NR-U OPPO discussion Rel-16 NR_unlic-Core
R2-1914790 LBT aspects of 2-step RACH MSGA ZTE Corporation, Sanechips discussion
R2-1914844 LBT impact on MsgA Intel Corporation discussion Rel-16 NR_unlic-Core
R2-1915872 2-step Random Access for NR-U Ericsson discussion Rel-16 NR_unlic-Core

6.2.2.4 DRX

Including impact of non-numeric K1 value on DRX, active time extension, impact on DRX cycle etc.

R2-1914772 DRX Active Time for NR-U Qualcomm Incorporated discussion
=> This is not supported for Rel-16

Not treated

R2-1915869 DRX enhancement for NR-U Ericsson discussion Rel-16 NR_unlic-Core
R2-1915945 DRX enhancement for NR-U Xiaomi Communications discussion Rel-16 R2-1912396
R2-1914402 DRX procedure enhancements due to LBT impacts OPPO discussion Rel-16 NR_unlic-Core

6.2.2.5 Configured grant operation

Including HARQ aspects, configuration aspects, multiple active configured grants, and conflicts between dynamic and configured grants (NR-U specific).

R2-1915887 Multiple configured grants for NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
Proposal 1: the multiple configured grants of a BWP shares a common pool of HARQ processes.
- LG and Oppo agrees. Meidatek is concerned as it is not clear how the UE behaves if there are multiple timers. What timers does the UE start? Nokia explains that there is still only one timer and the handling the same as the single configured grant.
- Ericsson has a similar concern with the timer.
- Samsungs prefers to have some commonality with IIoT. Qualcomm thinks that this can be up to gNB implementation, it can configure the pool of HARQ processes. Ericsson would prefer that we just share.
- Every time we get a dynamic grant the UE behaviour is not clear. Nokia explains that the dynamic grant is associated to a HARQ process and not to a configured grant. Ericsson thinks this is a corner case and it is unlikely that we will have different timers for different CG. Interdigital thinks that the timer value will be the same for CGs.

Proposal 2: for each CG occasion, the UE selects a process from the HARQ process pool based on the ConfiguredGrantTimer and CG retransmission timer status.
Proposal 3: the processes with TB pending for retransmission shall be prioritized over the processes for new transmissions as already agreed for single CG case.

Proposal 4: retransmissions can be done on different CG resources as long as they are with the same TBS.
- LG likes the intention but it should be only for the same HARQ processes.

=> Noted

R2-1915221 Support of dynamic HARQ process ID sharing in NR-U Samsung discussion Rel-16 NR_unlic-Core

Proposal 1: The dynamic HARQ process ID sharing should not be used if the configured UL grant is configured with cg-RetransmissionTimer.
- LG doesn't support the proposal as we agreed already last meeting to not have special handling.
- InterDigital thinks that the network can figure this out and whether to use the same HARQ process ID. Nokia agrees. Lenovo explains that the network doesn't know what HARQ process the CG used.

Proposal 2: To capture the following sentence to the running CR:
If the configured uplink grants are configured with cg-RetransmissionTimer for a Serving Cell, the network does not use the HARQ Process ID(s) configured for the configured uplink grant to the dynamic uplink grant in the Serving Cell

=> Noted

R2-1915867 Remaining issues on Configured Grant Ericsson discussion Rel-16 NR_unlic-Core

Proposal 2 For a HARQ process which is configured by the gNB with cg-RetransmissionTimer, the UE skips processing UL dynamic grants which are valid for transmission during a time interval T after any transmission on CG resources for that HARQ process.
- Qualcomm remembers that this was discussed in LAA and it may be late to do this.
- Lenovo clarifies that the CG timer is per CG configuration and not per HARQ process

=> No support

Proposal 3 Autonomous uplink is configured/de-configured for a UE by the gNB via signaling the ConfiguredGrantConfig IE in the RRC message with the field cg-RetransmissionTimer present/absent.
- LG asks if we can configure cg-retx timer without CG timer. Nokia thinks that we should be able to allow a configured grant without the timer and we may need to change something in the MAC to deal with this case. Oppo thinks the network always has to configure the cg-timer. Nokia explains that if the network doesn't configure this just means that re-tx are not supported
- Samsung thinks this should always be configured.
- Nokia explains that the UE doesn't do a retransmission but treats the TB as a new transmission. The network can configure a CG without a cg-Retransmission timer. In that case the UE is not allowed to perform autonomous retransmission. HARQ process ID selection is not impacted and it is up to UE implementation.

Proposal 11 The CGT timer is started in section 5.4.1 for new transmission on CG, before a grant is delivered to the HARQ entity and regardless of what happens in section 5.4.2.1.
- LG thinks this reverts the agreement.

=> Not agreed

=> Noted

Agreements of CG:
1 The multiple configured grants of a BWP can be explicitly configured to share a common pool of HARQ processes. If HARQ processes are shared the same CG timer value has to be configured.
2 The processes with TB pending for retransmission shall be prioritized over the processes for new transmissions as already agreed for single CG case.
3 Retransmissions can be done on different CG resources as long as they are with the same TBS with the same HARQ process
4 cg-RetransmissionTimer is always configured for NR-U

5 For a HARQ process, the associated CGT timer is only started when the TB using this HARQ process is initially transmitted, and set to the timer value according to the CG configuration used.
6 The cg-RetransmissionTimer for the HARQ process is started and restarted for every transmission attempt of the TB when LBT succeeds, using the timer value according to the CG configuration which is used for the transmission.

R2-1914403 Remaining issues on NR-U configured grant OPPO discussion Rel-16 NR_unlic-Core
Proposal 4 NR-U can support simultaneously activated 8 SPS configurations per BWP as agreed in IIoT.
=> Noted

Not treated

R2-1914574 Multiple Active Configured Grants for NR-u Intel Corporation discussion Rel-16 NR_unlic-Core
R2-1914794 Multiple configured grants ZTE Corporation, Sanechips discussion
R2-1915104 Multiple active Configured Grants Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core
R2-1915143 Discussion on PDU overwriting between CG and DG Huawei, HiSilicon discussion NR_unlic-Core
R2-1915144 Support of multiple active CGs for NRU Huawei, HiSilicon discussion NR_unlic-Core
R2-1916160 Discussion and TP on MAC PDU overwriting in CG resource LG Electronics Polska draftCR Rel-16 38.321 15.7.0 B NR_unlic-Core

6.2.2.6 CAPC

Including CAPC selection, impact on TB construction etc

R2-1915888 LCP restriction for SRBs Nokia, Nokia Shanghai Bell, Futurewei, Interdigital, Huawei, HiSilicon, MediaTek, Lenovo discussion Rel-16 NR_unlic-Core
Proposal 1: the UE shall not multiplex data with CAPC lower than the CAPC of SRBs multiplexed into a TB transmitted on a configured grant.
Proposal 2: agree the TP from section 2.
=> Noted

R2-1914404 CAPC for CG when SRB is multiplexed OPPO discussion Rel-16 NR_unlic-Core
By using the LCH restriction for multiple CG configuration in IIoT, RAN2 confirms CG multiplexed with SRB can always have the highest CAPC.
=> Noted

R2-1914427 CAPC Aspects for Scheduling SRB in Configured Grant Samsung Electronics Co., Ltd discussion Rel-16 NR_unlic-Core
For UL CG, if DCCH SDU is included in MAC PDU, UE select the CAPC index of DCCH. Otherwise, UE select the highest CAPC index (lowest priority) of LCHs multiplexed in MAC PDU.
=> Noted

Discussion

- Qualcomm thinks that it should be simple and we should avoid impacting LCP. LG doesn't thinks Nokia's proposal is simple and it would be better to use IIoT solution. Interdigital explains that it results in overhead and the UE can't use the grant and it will lose the opportunity to send data. ZTE thinks that even for licenced we never using padding if there is more data and it is not acceptable. Lenovo explains that even today the UE can send padding rather than data.
- Lenovo thinks the Samsung way is against the fairness rules. Qualcomm thinks it is ok as we are sending padding bits anyways.

- Google thinks that we agreed to not multiplexed SRBs with low priority data. SRB data is quite rare anyways and a simple solution like Nokia is good.
- Ericsson has some sympathy for the Samsung proposal and we can just no extend the COT. Intel supports Oppo's proposal and would like to avoid violating the fairness rule.
- LG thinks IIoT solution is simplest. Nokia explains that the multiple CG is not required.
- Intel would like to spend some more time. QC indicates that we are not violating anything at all as in the DL the UE can do anything.
- Google thinks that Nokia proposal is more fair.

=> For UL CG, if DCCH SDU is included in MAC PDU, UE select the CAPC index of DCCH. Otherwise, UE select the highest CAPC index (lowest priority) of LCHs multiplexed in MAC PDU.

R2-1914582 CAPC for RACH and PUCCH in NR-U MediaTek Inc. discussion R2-1912455
=> Not treated

R2-1916088 Open Issues on NR-U Uplink Transmission Qualcomm Incorporated discussion
=> moved from 6.2.2.6

Agreements:
1 The UE uses CAPC 4 for the MAC CE for Recommended bit rate query.
2 It is up to UE implementation how to prioritize among retransmissions on CGs

Not treated

R2-1914369 CAPC Restriction to SRB Multiplexing Using Configured Grant vivo discussion R2-1912181

R2-1914573 Channel Access Priority selection and multiplexing for Configured Grant Intel Corporation discussion Rel-16 NR_unlic-Core

R2-1914583 On Restrictions in Multiplexing of High and Low Priority LCH in CG MediaTek Inc. discussion R2-1912457

R2-1914786 Discussion on multiplexing of data Huawei, HiSilicon discussion NR_unlic-Core

R2-1915519 CAPAC for UL configured grant with SRB data ZTE Corporation, Sanechips discussion

R2-1915803 CAPC for configured grants in NR-U Google Inc. discussion Rel-16 NR_unlic-Core R2-1913480

R2-1915868 Channel access priority for Configured Grant Ericsson discussion Rel-16 NR_unlic-Core

6.2.2.7 Other

Includes wideband operation aspects, HARQ, SR and PHR

R2-1914371 Support of Multiple Active SPS vivo discussion

Proposal 1: Multiple active SPS configurations are allowed for NR-U.
Proposal 2: The network can signal the periodic DL traffic pattern to the UE.
Proposal 3: If the periodic DL packet is received by the UE via one SPS resource, the UE skips the subsequent DL SPS resources of the same SPS period.

- Nokia doesn't think this is needed for DL as the network is aware of the situation. Mediatek agrees. Huawei also doesn't think this is needed.
- LG agrees with proposal 1
- Mediatek thinks that there is nothing NR-U specific.

=> Nothing specific related to NR-U needs to be discussed.
=> Noted

R2-1914773 MAC Scheduling Aspects of Multi-TTI Grant Qualcomm Incorporated discussion

- Nokia and Ericsson think this is not needed. Vivo explains that skipping is configurable for NR for dynamic grant.

=> Noted

R2-1915103 LBT impact to Multi-PUSCH scheduling Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core R2-1912662
- MEdiatek is concerned that the PHR content may not be accurate.

=> Noted

Agreements
1 For multi-TTI UL grant, UE is allowed to map generated TB(s) internally to different HARQ processes in case of LBT failure(s), i.e. UE may transmit a TB pending for transmission in a HARQ process due to a failed LBT in a different HARQ process being associated with a PUSCH for which LBT was successful. FFS how it is captured in the spec

R2-1914405 Discussion RAN1 LS on supporting multiple frequency domain monitoring locations for a searchspace OPPO discussion Rel-16 NR_unlic-Core
- Qualcomm indicates that RAN1 hasn't concluded yet.

=> Wait for RAN1
=> Noted

R2-1914659 Multiple Frequency Domain Monitoring Occasions Fraunhofer HHI discussion

R2-1915057 Wideband operation in NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core

R2-1915145 Impacts of Cross-COT HARQ feedback to BWP and Scell Huawei, HiSilicon discussion NR_unlic-Core
- Nokia explains that we don't need to do anything as it is just a DCI

=> Nothing is needed
=> Noted

R2-1915866 Enhancements to PUCCH-UCI and PHR Ericsson discussion Rel-16 NR_unlic-Core
On PHR
- Mediatek explains that if we do nothing then the network cannot rely on PHR reports at all.

=> Noted

Agreements
1 Increased number of PUCCH Cell Groups and increased number of PUCCH SCells are not supported in Rel-16.

R2-1914601 Split Threshold for DC and NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core R2-1906041
No support
=> Noted

R2-1915222 Applicability of NR-U features to licensed carrier Samsung discussion Rel-16 NR_unlic-Core

R2-1915921 Dynamic DL opportunity enhancement based on channel busy level in NR-U LG Electronics Inc. discussion NR_unlic-Core R2-1913131 Late

R2-1915956 Consideration on SR transmission colliding with PUSCH transmission Xiaomi Communications discussion Rel-16 R2-1912398

R2-1916153 MAC impacts of multiple CCAs in wide band operation LG Electronics Polska discussion Rel-16 NR_unlic-Core R2-1913878

6.2.3 Control plane

6.2.3.1 Paging

Including configuration of additional PDCCH monitoring occasions for paging and termination of monitoring

R2-1915058 Paging in NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
Proposal 1: *Do not consider any new stopping conditions in release 16 NR-U WI i.e. only reception of P-RNTI allows UE to stop monitoring additional occasions*
Proposal 2: *Add an indication in the paging message. Based on detection of such indication, the UE can stop monitoring P-RNTI until the next DRX cycle.*
- Qualcomm asks if the network would send this message in the first occasion.

=> Noted

R2-1915011 Paging monitoring in NR-U Qualcomm Incorporated discussion
=> Noted

R2-1914881 Paging Procedure in NR-U InterDigital discussion Rel-16 NR_unlic-Core
=> Noted

Discussion
- Oppo thinks that RAN1 didn't have consensus. Qualcomm explains that RAN2 is the responsible group.
- Panasonic thinks that RAN2 already agreed that we need additional stopping criteria.
- Ericsson doesn't think we need to specify anything more.
- Qualcomm thinks that if we have a reliable mechanism from gNB to indicate whether the UE should continue. Panasonic agrees with Qualcomm and we shouldn't increase monitoring time in the UE.
- Mediatek agrees that we should look at other mechanisms other than P-RNTI

The UE can determine whether it should monitor additional PDCCH monitoring occasions within a PO if it detects a PDCCH addressed to an RNTI other than P-RNTI.

How to indicate:
Option 1: additional indication per UE in the paging message on whether to continue monitoring
Option 2: additional indication in the DCI whether to continue monitoring on PDCCH. GC-PDCCH or using existing short paging message
Option 3: using existing signalling (e.g. GC-PDCCH – COT SI)
Option 4: gNB configures the minimum number of occasions the UE should monitor

-InterDigital and Qualcomm understand that we can have multiple options

Agreement
1 The UE can determine whether it should monitor additional PDCCH monitoring occasions using a mechanism other than just P-RNTI. We will use existing signalling/mechansims to indicate (e.g. in the paging message itself, short message in the DCI)

R2-1916372 Summary of offline discussion Qualcomm
=> Revised in R2-1916381

R2-1916381 Summary of offline discussion Qualcomm
=> Noted

Agreements
1 As an additional stopping condition, short message for signalling of paging stopping indication is used. The existing RRC short message is used.
2 The paging stopping indication is addressed to all the UEs which monitor a given PO, i.e. there is no per UE group indication
3 The indication would be for all the UEs to stop paging monitoring in this PO. If the short message is sent the bit is always set to '1'

Not treated

R2-1914406 Stopping criteria for paging monitoring OPPO discussion Rel-16 NR_unlic-Core

R2-1914647 Remaining issues on Paging Ericsson discussion NR_unlic-Core

R2-1914726 Stop monitoring the paging in NR-U PANASONIC R&D Center Germany discussion

R2-1914795 Remaining issues of paging for NR-U ZTE Corporation, Sanechips discussion

R2-1915072 Discussion on the paging opportunities overlapping for the NR-U ITRI discussion NR_unlic-Core R2-1913061

R2-1916114 On Stopping of Paging Monitoring for UE Energy Savings MediaTek Inc. discussion

R2-1916203 Stopping condition for monitoring additional paging occasions in NR-U LG Electronics Inc discussion Rel-16 NR_unlic-Core

6.2.3.2 Mobility and RRM

Including camping and cell (re)-selection. Focus should be on idle and inactive mode mobility. For connected mode mobility solutions to be covered by the NR Mobility Enh WI are not to be discussed.
Note RP-191581: RRM Measurements beyond currently agreed ones have lower priority.

R2-1914372 Further Discussion on the Whitelist in NR-U vivo discussion R2-1912184

Proposal 3: The whitelist is configured per PLMN

- Nokia asks why do we need new functionality for NR

Proposal 4: Enhance LTE to provide NR whitelist, which will improve the performance of cell re-selection from LTE to NR-U.

=> The maximum number of whitelisted cells on each frequency is 16

=> Noted

R2-1915146 Handling MIB_SIB1 Acquisition Failure Huawei, HiSilicon discussion NR_unlic-Core

Proposal 1: The cell is treated as barred if the UE is unable to acquire the MIB/SIB1 due to consistent LBT failure. UE excludes this cell as a candidate for cell selection/reselection for up to 300 seconds.

- LG thinks this is current behaviour. Qualcomm doesn't know DL LBT.

Proposal 2: RAN2 to specify a mechanism for UE to consider consistent LBT failure for MIB/SIB1 reception.

=> no support

=> Noted

R2-1915389 Discussion on PLMN and Cell selection enhancements for NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core

=> Noted

Agreements:

1 In case of NR-U carriers, the UE may read the system information of the non-strongest cells and report the found PLMNs to NAS.

2 On NR-U frequencies the UE may search for additional cells to find suitable cells during cell selection

R2-1915174 Considering valid PLMN being equivalent to the RPLMN in IDLE operations Samsung discussion NR_unlic-Core

- Qualcomm explains that this is captured in cell selection section and doesn't need to be repeated for ranking.

=> Noted

Not treated

R2-1914648 RRM in NR-U Ericsson discussion NR_unlic-Core

=> Moved from 6.2.3.3

R2-1914657 RRM Measurements for Mobility in NR-U Fraunhofer HHI, Fraunhofer IIS discussion R2-1912649

R2-1914584 Including RSSI and Channel Occupancy in NR-U UE Capabilities MediaTek Inc. draftCR Rel-15 38.306 15.7.0 NR_newRAT-Core

R2-1914658 Implicit Indication of LBT Failures in RRM Measurements Fraunhofer HHI discussion

R2-1915600 Recovery due to LBT failures Kyocera discussion

R2-1916202 SSI and channel occupancy measurements for serving frequency LG Electronics Inc discussion Rel-16 NR_unlic-Core R2-1913753

R2-1916204 Support of conditional handover for NR-U LG Electronics Inc discussion Rel-16 NR_unlic-Core

6.2.3.3 RLM/RLF

Depending RAN1 and RAN4 agreements

Not treated

R2-1915390 RLM/RLF measurement on NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core R2-1912659

R2-1916201 RLM/RLF enhancements in NR-U LG Electronics Inc discussion Rel-16 NR_unlic-Core R2-1913752

R2-1914787 Discussion on DL LBT failure impact on RLF triggering Huawei, HiSilicon discussion NR_unlic-Core

R2-1914883 RLM and RLF for NR-U InterDigital discussion Rel-16 NR_unlic-Core R2-1912892

R2-1915172 On indicating LBT failure for NR-U Samsung discussion NR_unlic-Core

R2-1915185 RLM for NR-U Samsung discussion NR_unlic-Core

6.2.3.5 Other

Other control plane stage-3 aspects including system information. Note RP-191581: Enhancements for System Information has lower priority

R2-1914579 Signaling Support for Frame Based Equipment for NR-u Intel Corporation discussion Rel-16 NR_unlic-Core
=> wait for RAN1 to conclude this discussion
=> Noted

R2-1914954 UE Capability for NR-U Support vivo draftCR Rel-16 38.306 15.7.0 NR_unlic
=> Not treated

R2-1916092 On NR-U Operation in DFS Channels Charter Communications, Inc discussion Rel-16
=> Existing mechanisms can be used to solve this issues for standalone NR-U and no mechanisms need to be discussed in this release.
=> Noted

6.4 NR V2X

(5G_V2X_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191723). Documents in this agenda item will be handled in a break out session
Time budget: 3 TU
Tdoc Limitation: 14 tdocs

6.4.1 General

Including incoming LSs, rapporteur inputs, running CRs, etc.
Including outcome of the email discussion [107bis#91][V2X] 38.331 running CR (Huawei)
Including outcome of the email discussion [107bis#92][V2X] 36.331 running CR (Huawei)
Including outcome of the email discussion [107bis#93][V2X] 38.321 running CR (LG)
Including outcome of the email discussion [107bis#94][V2X] 36.321 running CR (LG)
Including outcome of the email discussion [107bis#95][V2X] 38.304 and 36.304 running CRs (ZTE)

R2-1914314 LS on signalling of sidelink RSRP and CSI between UEs (R1-1911698; contact: LGE) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2

⇨ [Offline#801]: Draft respons LS to RAN1 to inform RAN2 agreements (R2-1916441, LG)

⇨ Noted.

R2-1916441 [Draft] Reply LS on signalling of sidelink RSRP and CSI (response to R1-1911698) LG

⇨ Approved in R2-1916457

R2-1914315 Reply LS on SL RLM/RLF (R1-1911699; contact: InterDigital) RAN1 LS in Rel-16 5G_V2X_NRSL To:RAN2

[ITL]: What does NOTE mean? [Interdigital]: Whether to have RLM/RLF is open for TX UE point of view in RAN1. [Ericsson]: Is it based on HARQ A/N? If so, there would be no RAN2 discussion. [LG]: RAN2 can still continue the discussion how to support RLM/RLF in RX UE point of view, e.g. not based on IS/OOS. [ZTE, OPPO, Intel]: Since RAN1 does not agree the feasibility of IS/OOS, we should revert back previous RAN2 decision. [Ericsson]: We already have max retransmission-based RLM/RLF in TX UE side, why we need additional mechanism RLM/RLF based on HARQ A/N? [OPPO]: Considering HARQ A/N enabled/disabled is dynamically changed, RLM/RLF based on HARQ A/N doesn't make a sense. [Interdigital, Convida, Ericsson]: We should wait for further RAN1 progress for TX UE based RLM/RLF. [Intel]: Also we should consider we will not have any recovery mechanism. [OPPO]: We need also to send LS to SA2 to inform our updated decision, e.g. to reconsider keep alive message in PC5-S.

⇨ RAN2 will not introduce SL RLM/RLF from RX UE.

⇨ [Offline#802] Draft response LS to RAN1 to inform the above RAN2 agreement (R2-1916442, Interdigital)

R2-1916536: Reply LS on SL RLM/RLF (R1-1913464; contact: InterDigital) RAN1 LS in Rel-16 5G_V2X_NRSL-Core

[LG]: Supports TX UE-sided RLM/RLF based on HARQ A/N. [Huawei]: Supports DTX. [Ericsson, Intel, OPPO, Apple]: We can rely on keep alive message in the upper layer. [Interdigital]: With HARQ A/N, we still can reuse the current Uu RLM/RLF as much as possible. [Intel]: Note we already have max RLC retransmission based TX-sided RLF. Do we need more on top of it?

⇨ [Email#802]: To discuss if HARQ feedback (HARQ A/N and/or HARQ DTX) based TX-side RLF/RLF is required and if so, how to support in RAN2 specification (Interdigital)

⇨ RAN2 will inform the updated RX-side and TX-side RLM/RLF discussion/decision to SA2.

R2-1916442 [DRAFT] Response LS on SL RLM/RLF Interdigital LS out Rel-16 5G_V2X_NRSL-Core To:RAN1, SA2

[Apple, Intel]: "RAN2 to discuss if HARQ feedback (HARQ A/N and/or HARQ DTX) based TX-side RLF is required and if so, how to support it in RAN2 specifications." is email scope, which is too detailed to RAN1/SA2.

⇨ 1. Overall description will be modified to "RAN2 would like to thank RAN1 for the LSs related to sidelink RLM/RLF (R1-1911699, R1-1913464). Based on RAN1 guidance in these LSs, RAN2 has decided that RAN2 will not introduce SL RLM/RLF from RX UE. RAN2 will further discuss if HARQ feedback (HARQ A/N and/or HARQ DTX) based TX-side RLF is required and if so, how to support it in RAN2 specifications."

⇨ LS was approved in R2-1916464 with the above change.

⇨[MCC]: Remove "Draft" from the title and add RAN2 to the source.

⇨Revised in R2-1916621

R2-1916621 Response LS on SL RLM/RLF RAN2 LS out Rel-16 5G_V2X_NRSL-Core To:RAN1, SA2

⇨Approved

R2-1914317 LS on NR V2X synchronization procedures (R1-1911718; contact: CATT) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2 Cc:RAN4

⇨ 38.331 rapporteur will take it into account in the running CR.

⇨ Noted.

R2-1914318 Reply LS on UL-SL prioritization (R1-1911720; contact: OPPO) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2, RAN4

⇨ Noted

R2-1914322 LS on additional high layer information for sidelink physical layer operations (R1-1911746; contact: LGE) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2

⇨ [Offline#803] Draft response LS to RAN1 to inform RAN2 agreement (R2-1916443, LG)

⇨ Noted.

R2-1916443 [DRAFT] Response LS on additional high layer information for sidelink physical layer LG

⇨ Approved in R2-1916458.

R2-1914330 LS on resource coordination between NG-RAN nodes for NR V2X sidelink communication (R3-196280; contact: Ericsson) RAN3 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2

⇨ Noted.

R2-1915376 Draft Reply LS on resource coordination between NG-RAN nodes for NR V2X sidelink communication Ericsson LS out Rel-16 5G_V2X_NRSL-Core To:RAN3

[OPPO]: Is there any impact on RAN2 specification if RAN3 introduces resource coordination between NG RAN nodes? [Ericsson]: Assume no RAN2 real impact. [Huawei, Nokia, ZTE]: Interference issue is more RAN1 scope, why we need to respond RAN3?

⇨ [Offline#804]: RAN2 will respond that RAN2 is not appropriate WG to confirm interference issue, and also inform there is no related RAN2 work in Rel-16 (R2-1916444, Ericsson)

R2-1916444 [DRAFT] Reply LS on resource coordination between NG-RAN nodes for NR V2X sidelink communication Ericsson

⇨ Approved in R2-1916459

R2-1914340 LS on sidelink synchronization under multiple synchronization sources with different timing (R4-1912826; contact: Qualcomm) RAN4 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2 Cc:RAN1

⇨ [Offline#805]: Draft response LS to inform RAN2 agreements (Qualcomm, R2-1916445)

⇨ Noted.

R2-1916445 [DRAFT] Reply LS LS on sidelink synchronization under multiple synchronization sources with different timing Qualcomm

⇨ Approved in R2-1916465.

R2-1914341 LS reply on NR V2X cross-RAT configuration (R4-1912874; contact: Huawei) RAN4 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2 Cc:RAN1

[OPPO]: For case1, RAN1 and RAN4 inputs are different.

⇨ RAN2 will not work on case 1 (based on RAN1 input).

⇨ Noted.

R2-1914342 LS on sync raster for NR V2X (R4-1913063; contact: Vivo, CATT) RAN4 LS in Rel-16 5G_V2X_NRSL-Core To:RAN1, RAN2

⇨ Noted.

R2-1914343 Reply LS on mapping between LTE V2X PPPP and NR V2X priority (S2-1909987; contact: Qualcomm) SA2 LS in Rel-16 eV2XARC To:RAN1 Cc:RAN2

[Intel]: How to define NR priority in SCI? [LG]: RAN2 needs to discuss it, e.g. based on LCH priority, how to align the number of bits in the case, etc.

⇨ Noted.

R2-1914350 Reply LS on Sidelink HARQ Feedback for Groupcast (S2-1910771; contact: LGE) SA2 LS in Rel-16 eV2XARC, 5G_V2X_NRSL-Core To:RAN1, RAN2

[Ericsson]: What should be RAN2 specification impact from this LS? Ericsson assumes AS layer will just forward the information to L1. [Intel]: No real RAN2 specification impact is assumed. [LG, OPPO]: At least AS-level should define how to select whch option.

⇨ Noted.

R2-1914357 LS on PC5S and PC5 RRC unicast message protection (S3-193802; contact: Qualcomm) SA3 LS in Rel-16 FS_eV2X_Sec To:RAN2, SA2, CT1

⇨ RAN2 confirms assumption1.

⇨ [Offline#806]: Draft response LS to inform RAN2 agreements (R2-1916446, Qualcomm)

⇨ Noted.

R2-1916446 [DRAFT] Reply LS on PC5S and PC5 RRC unicast message protection Qualcomm

⇨ Approved in R2-1916461

R2-1916275 Reply LS on NR V2X Security for user plane data and PDCP SN size (S3-193854; contact: LGE) SA3 LS in Rel-16 5G_V2X_NRSL-Core, FS_eV2X_Sec To:RAN2

⇨ Noted.

R2-1915982 Summary of email discussion [107bis#91][V2X] - Miscellaneous RRC issues for 5G V2X with NR Sidelink Huawei (Rapporteur) discussion Late

Proposal 1: The Sidelink UE information is used to report PC5 QoS profile(s).

⇨ Agreed.

Proposal 2: Sidelink UE information in NR reuses the information as in LTE, including the interested carrier frequency(ies) to receive NR sidelink communication, the interested carrier frequency(ies) to transmit NR sidelink communication per Destination, and the synchronization type used by the UE per carrier frequency.

⇨ Agreed.

Proposal 3: The initiation conditions of sidelink UE information for LTE V2X sidelink communication transmission and reception in 36.331 are reused in NR.

⇨ Agreed.

Proposal 4: RAN2 decides whether to use the SL-LCID or the QoS flow ID to indicate the PC5 QoS information associated with a traffic pattern reported in UAI, after the conclusion of RLC AM mismatch issue.

Proposal 5: UE assistance information reporting for the NR configured sidelink grant is triggered based on UE implementation.

⇨ Agreed.

Proposal 6: UE assistance information reporting for the NR configured sidelink grant in NR is configurable by the NW.

⇨ Agreed.

Proposal 7: The conditions for LTE V2X sidelink communication operation is reused as the baseline for conditions of NR sidelink communication operation. Some necessary updates can be made pending on further SA2/CT1 progress in the running CR.

⇨ Agreed.

Proposal 8: The CBR measurement reporting mechanism in LTE V2X sidelink communication is reused (pending on RAN1 progress).

[Huawei]: Intention is to agree general principle and detaileds will be provided in the next running CR. [LG]: First we should mimic what is specified in 36.331.

⇨ Agreed.

Proposal 9: NR sidelink related configurations (e.g. SLRB configurations, resource pool configurations) in connected mode is NOT stored as UE Inactive AS context, when UE enters INACTVE state.

⇨ Agreed.

Proposal 10: In TS 38.331, RAN2 decides LTE UE Assistance Information is defined either as new RRC message or as new IE in existing UEAssistanceInformation message (using container).

Proposal 11: The questions in section 2.9 can be discussed offline.

⇨ [Offline#807]: Discuss proposal10 and 11 (R2-1916447, Huawei).

Agreements on RRC issues:
1: The Sidelink UE information is used to report PC5 QoS profile(s).
2: Sidelink UE information in NR reuses the information as in LTE, including the interested carrier frequency(ies) to receive NR sidelink communication, the interested carrier frequency(ies) to transmit NR sidelink communication per Destination, and the synchronization type used by the UE per carrier frequency.
3: The initiation conditions of sidelink UE information for LTE V2X sidelink communication transmission and reception in 36.331 are reused in NR.
4: UE assistance information reporting for the NR configured sidelink grant is triggered based on UE implementation.
5: UE assistance information reporting for the NR configured sidelink grant in NR is configurable by the NW.
6: The conditions for LTE V2X sidelink communication operation is reused as the baseline for conditions of NR sidelink communication operation. Some necessary updates can be made pending on further SA2/CT1 progress in the running CR
7: The CBR measurement reporting mechanism in LTE V2X sidelink communication is reused (pending on RAN1 progress).
8: NR sidelink related configurations (e.g. SLRB configurations, resource pool configurations) in connected mode is NOT stored as UE Inactive AS context, when UE enters INACTVE state.

R2-1916447 Offline discussion on open issues of V2X 38.331 running CR Huawei

Proposal 1: In TS 38.331, for LTE UE Assistance Information:

Option 1: Define new RRC message including a container to transmit the LTE UAI

Option 2: Define new IE as a container to transmit the LTE UAI in the existing UEAssistanceInformation.

⇨ Option1 is agreed.

Proposal 2: The wording “SIBX is broadcast” is changed as “SIB X is provided” to address the on-demand case in TS 38.331.

⇨ Agreed.

Proposal 3: Need to capture the condition and operation to configure lower layers to use the type1 configured sidelink grant in section 5.X.8 of TS 38.331. FFS on the details.

⇨ Agreed.

Proposal 4: In TS 38.331:

Option 2: UECapabilityInformationSidelink message is included as one optional container in UECapabilityEnquirySidelink message

Option 3: UECapabilityInformationSidelink message and UECapabilityEnquirySidelink message are separated messages, but can be transmitted in one MAC PDU.

⇨ Option2 is agreed.

R2-1915983 Running CR to TS 38.331 for 5G V2X with NR sidelink Huawei, HiSilicon draftCR Rel-15 38.331 15.7.0 5G_V2X_NRSL-Core Late

⇨ Endorsed.

R2-1915979 Running CR to 36.331 for NR V2X Huawei, HiSilicon draftCR Rel-15 36.331 15.7.0 5G_V2X_NRSL-Core Late

⇨ Endorsed.

R2-1916121 Report of 107bis#93 open issues on 38.321 on NR Sidelink LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core Late

Proposal 1: A new Sidelink Configured Grant Confirmation MAC CE is introduced.

⇨ Agreed.

Proposal 2: The UE shall discard the MAC PDU subheaders containing reserved values and the corresponding MAC SDUs for SL-SCH reception, at least for broadcast and groupcast, as in LTE. FFS for unicast.

⇨ Agreed.

Proposal 3: SL BWP is specified in a new sub-section under clause 5.15 of 38.321.

⇨ Agreed.

Proposal 4: CBR information such as defaultTxConfigIndex can be acquired from NG-RAN for NR sidelink in order for the MAC entity to use it for resource (re-)selection, if CBR measurement results are not available, as in LTE.

⇨ Agreed.

Proposal 5: It is proposed to consider use of the counter such as SL_RESOURCE_RESELECTION_COUNTER as specified in 36.321 as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.

⇨ Agreed.

Proposal 6: Resource reselection based on probResourceKeep as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.

⇨ Agreed.

Proposal 7: Resource reselection based on no (re-)transmissions occurring during a certain time as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.

⇨ Agreed.

Proposal 8: Resource reselection based on sl-ReselectAfter as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.
⇨ Agreed

[Intel]: Proposal5 is set as working assumption, which means propsal6 to 8 should be also set as working assumption since we follow LTE principles.

Proposal 9: a UE can trigger resource reselection due to no segmentation of a RLC SDU for NR sidelink, as in LTE. Whether to do segmentation or trigger resource reselection is up to UE.
⇨ Agreed.

Proposal 10: UE can trigger resource reselection due to the latency requirement for NR sidelink, as in LTE.
[Intel]: We may need further discussion whether how to determine if the latency requirement is met or not, e.g. up to UE implementation or not.
⇨ Agreed.

Proposal 11: UE can trigger resource reselection due to (re-)configuration of a resource pool by UE RRC for NR sidelink, as in LTE.
[Vivo]: Can we ask RAN1 if multiple TX resource pools are selected? [LG]: It is independent issue.
[Interdigital]: We already asked that to RAN1 before.
⇨ Agreed.

Proposal 12: UE can trigger resource reselection due to no configured sidelink grant for NR sidelink, as in LTE.
⇨ Agreed.

Proposal 13: The number of transmitting sidelink processes configured for transmissions of multiple MAC PDUs is limited to a smaller value than the maximum number of transmitting Sidelink processes, as in LTE. FFS for the exact number.
⇨ Agreed.

Proposal 14: How TX UE determine HARQ process ID for SCI and related PSSCH transmission is left to UE implementation for NR sidelink. FFS on mode1.
[Ericsson, OPPO]: RAN1 has not decided whether NW will indicate HARQ process id for mode1.
⇨ Agreed.
⇨ Mode1 case will be discussed offline.

Proposal 15: The logicalChannelSR-Mask is not supported for sidelink logical channel.
⇨ Agreed.

Proposal 16: A transparent MAC, i.e. MAC PDU without a MAC header, is applied to SL-BCH in NR sidelink, as in LTE sidelink.
⇨ Agreed.

Proposal 17: SL MAC subPDU(s) with MAC SDU(s) is placed after the SL-SCH subheader, as in LTE.
⇨ Agreed.

Proposal 18: The same term ‘SL Semi-Persistent Scheduling V-RNTI’ is specified with a new NR RNTI value for NR controlling LTE SL SPS in 38.321.

⇨ Agreed.

Proposal 19: The term ‘SL-RNTI’ is used for dynamically scheduled sidelink transmission.

⇨ Agreed.

Proposal 20: The term ‘SLCS-RNTI’ is used for configured scheduled sidelink transmission.

⇨ Agreed.

Proposal 21: It is proposed to send a LS to RAN1: RAN2 informs RAN1 about our agreements on TX resource reselection triggering conditions and the names of RNTIs, and RAN2 requests RAN1 to provide their views and/or potential agreements on some of the TX resource reselection triggering conditions for completion of NR MAC specification.

⇨ [Offline#808]: Draft LS to RAN1 (R2-1916448, LG)

Agreements on MAC issues:

1: A new Sidelink Configured Grant Confirmation MAC CE is introduced.
2: The UE shall discard the MAC PDU subheaders containing reserved values and the corresponding MAC SDUs for SL-SCH reception, at least for broadcast and groupcast, as in LTE. FFS for unicast.
3: SL BWP is specified in a new sub-section under clause 5.15 of 38.321.
4: CBR information such as defaultTxConfigIndex can be acquired from NG-RAN for NR sidelink in order for the MAC entity to use it for resource (re-)selection, if CBR measurement results are not available, as in LTE.
5: It is proposed to consider use of the counter such as SL_RESOURCE_RESELECTION_COUNTER as specified in 36.321 as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.
6: Resource reselection based on probResourceKeep as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.
7: Resource reselection based on no (re-)transmissions occurring during a certain time as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.
8: Resource reselection based on sl-ReselectAfter as a working assumption in the running CR to 38.321 and ask RAN1 if there is any concern on this working assumption.
9: UE can trigger resource reselection due to no segmentation of a RLC SDU for NR sidelink, as in LTE. Whether to do segmentation or trigger resource reselection is up to UE.
10: UE can trigger resource reselection due to the latency requirement for NR sidelink, as in LTE.
11: UE can trigger resource reselection due to (re-)configuration of a resource pool by UE RRC for NR sidelink, as in LTE.
12: UE can trigger resource reselection due to no configured sidelink grant for NR sidelink, as in LTE.
13: The number of transmitting sidelink processes configured for transmissions of multiple MAC PDUs is limited to a smaller value than the maximum number of transmitting Sidelink processes, as in LTE. FFS for the exact number.
14: How TX UE determine HARQ process ID for SCI and related PSSCH transmission is left to UE implementation for NR sidelink. FFS on mode1.
15: The logicalChannelSR-Mask is not supported for sidelink logical channel.
16: A transparent MAC, i.e. MAC PDU without a MAC header, is applied to SL-BCH in NR sidelink, as in LTE sidelink.
17: SL MAC subPDU(s) with MAC SDU(s) is placed after the SL-SCH subheader, as in LTE.
18: The same term ‘SL Semi-Persistent Scheduling V-RNTI’ is specified with a new NR RNTI value for NR controlling LTE SL SPS in 38.321.
19: The term ‘SL-RNTI’ is used for dynamically scheduled sidelink transmission.
20: The term ‘SLCS-RNTI’ is used for configured scheduled sidelink transmission.

R2-1916448 [DRAFT] Response LS on TX resource (re-)selection and MAC related agreements. LG

⇨ Approved in R2-1916460

R2-1916120 Running CR to 38.321 on 5G V2X with NR sidelink LG Electronics Inc. draftCR Rel-16 38.321 15.7.0 B 5G_V2X_NRSL-Core Late

⇨ Endorsed.

R2-1916119 Running CR to 36.321 on 5G V2X with NR sidelink LG Electronics Inc. draftCR Rel-16 36.321 15.7.0 B 5G_V2X_NRSL-Core Late

⇨ Endorsed.

R2-1916122 Proposed LS on TX resource (re-)reselection LG Electronics Inc. LS out Rel-16 5G_V2X_NRSL-Core To:RAN1 Late

R2-1914562 (running)38.304CR on cell selection(reselection) for NR V2X UE ZTE Corporation, Sanechips draftCR Rel-15 38.304 15.5.0 5G_V2X_NRSL-Core Late

⇨ Endorsed.

R2-1914561 (running)36.304CR on cell selection(reselection) for NR V2X UE ZTE Corporation, Sanechips draftCR Rel-15 36.304 15.4.0 B 5G_V2X_NRSL-Core Late

⇨ Endorsed.

R2-1914921 Running CR to 37324 for 5G_V2X_NRSL vivo (Rapporteur) draftCR Rel-16 37.324 15.1.0 5G_V2X_NRSL-Core

[Vivo]: It is same version as already endorsed version after RAN2#107bis.

⇨ Noted.

R2-1916030 Running CR to 38.300 on 5G V2X with NR sidelink LG Electronics Inc. draftCR Rel-16 38.300 15.7.0 B 5G_V2X_NRSL-Core Late

✉ **[108#27][V2X] 38.300 Running CR (LG)**
To update and endorse 38.300 running CR capturing this meeting agreements
Intended outcome: Endorsed CR
Deadline: 2019-12-13

=> Endorsed in R2-1916638

R2-1916031 Running CR to 36.300 on 5G V2X with NR sidelink LG Electronics Inc. draftCR Rel-16 36.300 15.7.0 B 5G_V2X_NRSL-Core Late

[LG]: It would be same version as already endorsed version after RAN2#107bis, but it has not been submitted yet.

⇨ Withdrawn

R2-1915380 Running CR for 38.322 for NR V2X Ericsson draftCR Rel-16 38.322 15.5.0 B 5G_V2X_NRSL-Core

⇨ [Offline#809]: To update and endorse running CR capturing this meeting agreements (R2-1916449 for the updated running CR, R2-1916456 for discussion, Ericsson)

R2-1916456 Open issues on V2X 38.322 running CR Ericsson

Proposal 1 SCCH configured with UM RLC entity is only used to transmit/receive broadcast PC5-S signalling message (i.e. Direct Communication Request).

⇨ Agreed.

Proposal 2 AM RLC entity is configured for SCCH to transmit/receive all unicast PC5-RRC and PC5-S signalling message.

⇨ Agreed.

Agreements on RLC:
1: SCCH configured with UM RLC entity is only used to transmit/receive broadcast PC5-S signalling message (i.e. Direct Communication Request).
2: AM RLC entity is configured for SCCH to transmit/receive all unicast PC5-RRC and PC5-S signalling message.

R2-1916449 Running CR for 38.322 for NR V2X 5G_V2X_NRSL-Core Ericsson draftCRRel-16 38.322 15.5.0 B

⇨ Endorsed.

R2-1915980 TP on NR-V2X for TR 37.985 - RAN2 parts 37.985 0.2.0 5G_V2X_NRSL-Core Huawei, HiSilicon pCR Rel-16

⇨ Endorsed.

6.4.2 L2/3 protocols common to mode 1 and mode 2 resource allocation

Including L2/L3 functionalities and procedures that are applied to both mode-1 and mode-2 or independent of resource allocation modes. Note that functionalities specific to QoS support are discussed in 6.4.6.
Including outcome of the email discussion [107bis#96][V2X] RLC AM mismatch (Huawei)

R2-1915981 Summary of email discussion [107bis#96][V2X] RLC AM mismatch discussion Late Huawei (Rapporteur)

Proposal 1: When the peer UE in RRC_CONNECTED receives an SLRB configuration with RLC AM/UM from the initiating UE via PC5 RRC and if the LCH has not been configured in the peer UE, it reports at least RLC mode by the initiating UE via PC5 RRC to its gNB. PC5 QoS profile is optional to be reported. FFS on the case if the LCH has been configured with the different RLC mode in the peer UE.

[ZTE, Apple, CATT]: Why RX UE needs to report QoS profile to gNB? [Huawei]: In order to send RLC SR, LCH configuration according to the corresponding QoS is needed from NW. [OPPO]: is it the case only when the peer UE does not have corresponding SLRB? Also is it only for RLC AM? [Huawei]: Yes, it is only for RLC AM. [Intel, Ericsson]: Agrees with OPPO. We should distinguish two cases. [Huawei]: If peer UE has only RX parameters, the UE needs to be configured with TX parameters for RLC SR transmission. [Apple]: Just for RLC SR transmission, the peer UE does not need to have the same SLRB configurations as TX UE. [Ericsson]: For bi-directional data transmission, the peer UE needs the same SLRB configuration as TX UE. [OPPO]: We can set QoS profile as optional as compromise. [Ericsson]: If peer UE intends only RLC SR transmission, QoS profile may not be needed but if the UE intends to transmit also data, QoS profile should be reported. [Huawei]: How does the peer UE determine whether the UE does not have the corresponding SLRB configuration or not?

⇨ Agreed.

⇨ [Offline#810]: To discuss the FFS from this discussion (R2-1916450, OPPO)

Proposal 2: When the peer UE in RRC_CONNECTED receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, RAN2 to make down-selection between the following two ways (for avoidance of LCID/RLC mode collision):

• Way 1: The peer UE autonomously determines to follow the usage of this LCID by the initiating UE, and assigns this LCID to a dedicated SLRB configuration with RLC AM requested from its gNB (as in Q1);

• Way 2: The serving gNB of the peer UE decides whether to configure a dedicated SLRB configuration with RLC AM for this LCID to the peer UE, in case reporting of LCID by the peer UE can be agreed (as in Q1).

[Apple, Huawei, Futurewei, Nokia]: Prefers way 1. [Ericsson]: Even with Way 1, the UE needs to report LCID to gNB. Prefer way 2 [Huawei]: Clarified for way 1, the UE does not need to report LCID to gNB. [ZTE, Intel, Interdigital]: Prefer way 2. [Intel]: From proposal1, we expect NW will resolve the mismatch issue. Why we should handle LCID in separate? [OPPO]: It is acceptable to compromise in that for connected UE, NW handle the issue and for idle/inactive UE, UE handle it. [Ericsson]: Why LCID has different approach compared to RLC mode? [Huawei]: Because RLC mode is dependent on QoS profile, but LCID is just id/index.

- Supporting compaines on way1 [12]
- Supporting companies on way2 [7]

⇨ Working assumption: Way 1 is agreed.

Proposal 2a: Based on the conclusion for Proposal 2, RAN2 try to conclude whether the LCID for NR sidelink communication is assigned by the UE itself or is assigned by the gNB for an RRC_CONNECTED UE.

⇨ LCID for NR sidelink communication is assigned by the UE.

Proposal 3: When the peer UE in RRC_IDLE/INACTIVE receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, RAN2 to make down-selection between the following two ways (for avoidance of LCID/RLC mode collision):

• Way 1: The peer UE configures an SLRB with RLC AM by UE implementation, and autonomously assigns this LCID value to the configured SLRB;

• Way 2: The peer UE configures an SLRB with RLC AM following SLRB configurations in SIB (that include no LCID field), and autonomously assigns this LCID value to the configured SLRB. FFS how UE determines the SLRB configuration to use per SIB (if this way is agreed).

⇨ When the peer UE in RRC_IDLE/INACTIVE receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, the peer UE autonomously assigns this LCID value to the configured SLRB. FFS on how to configure SRLB with the corresponding RLC mode, i.e. option1: up to UE implementation, option2: follow SIB.

Proposal 3a: For RRC_IDLE/INACTIVE UEs, the LCID for NR sidelink communication is assigned autonomously by the UE.

Proposal 4: When the peer UE out of coverage receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, RAN2 to make down-selection between the following two ways (for avoidance of LCID/RLC mode collision):

• Way 1: The peer UE configures an SLRB with RLC AM by UE implementation, and autonomously assigns this LCID value to the configured SLRB;

• Way 2: The peer UE configures an SLRB with RLC AM following SLRB pre-configurations (that include no LCID field), and autonomously assigns this LCID value to the configured SLRB. FFS how UE determines the SLRB configuration to use per pre-configuration (if this way is agreed).

⇨ When the peer UE in OOC receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, the peer UE autonomously assigns this LCID value to the configured SLRB. FFS on how to configure SRLB with the corresponding RLC mode, i.e. option1: up to UE implementation, option2: follow preconfiguration.

Proposal 4a: For out-of-coverage UEs, the LCID for NR sidelink communication is assigned autonomously by the UE.

R2-1916450 Offline-810 OPPO

[Huawei]: Any RRC specification impact from the first change.

⇨ All proposals are agreed.

⇨ RRC spec. will capture the agreements “Up to UE implementation to configure SRLB with the corresponding RLC mode by selecting existing SLRB configurations in SIB” and “Up to UE implementation to configure SRLB with the corresponding RLC mode by selecting existing SLRB configurations in Preconfiguration” as NOTEs.

⇨ “if the LCH has been configured with the different RLC mode in the peer UE, UE handle that as AS-layer configuration failure.” will be in the separate bullet.

Agreements on RLC mode and LCID mismatch:

1: When the peer UE in RRC_CONNECTED receives an SLRB configuration with RLC AM/UM from the initiating UE via PC5 RRC and if the LCH has not been configured in the peer UE, it reports at least RLC mode by the initiating UE via PC5 RRC to its gNB. PC5 QoS profile is optional to be reported.

2: When the peer UE in RRC_CONNECTED receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, the peer UE autonomously determines to follow the usage of this LCID by the initiating UE, and assigns this LCID to a dedicated SLRB configuration with RLC AM requested from its gNB. (working assumption)

3: When the peer UE in RRC_IDLE/INACTIVE receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, the peer UE autonomously assigns this LCID value to the configured SLRB. Up to UE implementation to configure SRLB with the corresponding RLC mode by selecting existing SLRB configurations in SIB.

4: When the peer UE in OOC receives an SLRB configuration with RLC AM/UM for a specific LCID via PC5 RRC from the initiating UE and if the LCH has not been configured in the peer UE, the peer UE autonomously assigns this LCID value to the configured SLRB. Up to UE implementation to configure SRLB with the corresponding RLC mode by selecting existing SLRB configurations in preconfiguration.

5: LCID for NR sidelink communication is assigned by the UE.

6: If the LCH has been configured with the different RLC mode in the peer UE, UE handles that as AS-layer configuration failure.

7: TS38.331 will capture the agreements “Up to UE implementation to configure SRLB with the corresponding RLC mode by selecting existing SLRB configurations in SIB” in 3) and “Up to UE implementation to configure SRLB with the corresponding RLC mode by selecting existing SLRB configurations in Preconfiguration” in 4) as NOTE.

R2-1916123 Remaining MAC issues and response to RAN1 LS LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: If two UEs perform unicast sidelink transmission for a PC5-RRC connection, each of two UEs allocates its own values of Layer-1 Source ID and Layer-1 Destination ID and signal them to the peer UE via a PC5-RRC message. After this allocation, the UE indicates the Layer-1 Source ID and Layer-1 Destination ID in SCI transmissions sent to the peer UE.

Proposal 2: If the UE does not signal Layer-1 IDs to the peer UE via a PC5-RRC message for the PC5-RRC connection, or if the UE performs sidelink transmission for broadcast or groupcast, the Layer-1 Destination ID corresponds to the 16 bit LSB of the Destination Layer-2 ID, and the Layer-1 Source ID corresponds to the 8 bit LSB of the Source Layer-2 ID.

Proposal 3: After a UE allocates its own Layer-1 IDs to a peer UE via a PC5-RRC message, the UE includes the full length of Source Layer-2 ID in the SRC field and the full length of Destination Layer-2 ID in the DST field of the SL-SCH subheader of a MAC PDU to be transmitted to the peer UE.

- How to assign L1 id for unicast?
- Option1: Follow LTE principle (i.e. L1 id is part of L2 id)

- Option2: Two UEs negotiate to separate L1 id via PC5-RRC

[Samsung, Ericsson, Apple, ZTE, CATT]: Option1 is preferred. [ZTE]: Collision can be handled by upper layer. With option2, more signaling overhead will be brought and upper layer cannot solve the issue because L1 id is transparent to the upper layer.

⇨ For all cast-types, Layer-1 Destination ID corresponds to the 16 bit LSB of the Destination Layer-2 ID, and the Layer-1 Source ID corresponds to the 8 bit LSB of the Source Layer-2 ID.

Proposal 4: The DST field includes 8 bit MSB of the Destination Layer-2 ID and the SRC field includes 16 bit MSB of the Source Layer-2 ID for the SL-SCH subheader of a MAC PDU to be transmitted to the peer UE.

⇨ Agreed

Proposal 5: It is specified in 38.321 that the MAC entity determines the zone ID based on the formulae specified in 36.331 as UE's location information and indicates the determined zone ID to the physical layer as part of QoS information associated to transmission of a MAC PDU.

[Huawei, Vivo]: Zone id is used for HARQ A/N since the purpose is different compared to LTE V2X, so it may need new mechanism to determine zone id. [ZTE, Apple, Intel]: Of course purpose is different, but the formula itself is ok to follow LTE principle. It is more RAN2 scope. [Intel]: With RAN2 decision, we can ask RAN1 if any problem. [Apple]: Zone id is used for HARQ A/N so may be formulae also can be specified in MAC.

⇨ Zone ID determination is based on the formulae specified in 36.331 as UE's location information. And we will ask to RAN1 if any problem with this way.

⇨ Formulae is specified in 38.331 and 38.321 specification refers 38.331, and MAC will indicate zone id to L1.

Proposal 6: The priority indicated in a SCI is derived from the value of the highest priority of logical channels served by a MAC PDU to be transmitted on PSSCH scheduled by the SCI.

- How many V2X LCH priorities we will have?
- Option1: 4bits (like Uu)
- Option2: 3bits (same as L1 priorities)

[Huawei, LG, OPPO, CATT, Ericsson]: 3bits should be sufficient for NR V2X. It can also avoid additional specification efforts to define how to map more number of bits for LCH priorities to 3bits V2X priorities. With option2, prioritization between NR V2X and LTE V2X would be also simplified. [Intel, Interdigital]: Considering various QoS requirements, 3bits may not be enough for LCH configurations.

⇨ For V2X, the number of LCH priorities is 3bits.

⇨ Proposal 6 is agreed.

Proposal 7: Sends a response LS to RAN1 on additional high layer information for sidelink physical layer in order to inform RAN1 about RAN2's agreements on SCI parameters provided by MAC.

⇨ RAN2 agreements will be included into the LS to RAN1.

Proposal 8: If there is no unoccupied Sidelink process in the Sidelink HARQ entity, when a new TB arrives, RX UE allows a new TB with a higher priority to replace any other TB with a lower priority occupying a Sidelink process.

[Intel]: Do we need to first discuss what would be the total number SL processes? [OPPO]: It is related to RX buffer management and in LTE V2X, if it is beyond the max number of SL processes, it was up to UE implementation how to handle it. [Ericsson, Apple, Nokia, Intel]: Why not using same way as LTE V2X? Any problem? [Interdigital, Vivo, ZTE, Convida]: Compared to LTE V2X, now NR V2X is with HARQ A/N and considering number of unicast links, the problem scenario can happen often. [Apple]: Priority is not the only criterion to handle this issue, e.g. based on number of HARQ RX retransmissions, so it should be up to UE implementation.

⇨ If there is no unoccupied Sidelink process in the Sidelink HARQ entity, when a new TB arrives, how to handle RX buffer management is up to UE implementation.

Proposal 9: For each new transmission, UE selects a Destination having the logical channel with the highest priority, among the logical channels having data available for transmission and having no mapping restrictions to a sidelink grant. Then, UE allocate the sidelink grant to the logical channels from the logical channel with the highest priority.

[Convida, OPPO]: Option2 is more aligned with LTE V2X.

⇨ Agreed.

Proposal 10: 'Whether HARQ feedback is enabled or disabled' is optionally configured for a SLRB. The logical channel having no configuration of the HARQ feedback can be multiplexed with any logical channel which is configured with either enabled or disabled for HARQ feedback.

[ZTE, Ericsson]: Scenario sounds unrealistic.

⇨ Noted.

Proposal 11: The logical channel with disabling the HARQ feedback cannot be multiplexed with a logical channel which enabling the HARQ feedback.

⇨ Agreed.

Proposal 12: For new SL grant not restricted to enabled HARQ feedback only, the firstly selected logical channel with the highest priority in LCP determines whether all the other logical channels multiplxed together should be configured with 'enbled' or 'disabled' for HARQ feedback.

⇨ Noted.

Proposal 13: Up to 8 configured grants (including both configured grant type1 and type2) in mode1 can be configured and active for NR sidelink communication.

[OPPO]: Whether 8 configured grants is in total or for each configured type is discussed under IIOT. [Huawei]: It seems early to make a decision. [Samsung]: In IIOT, it was already decided up to 12 configured grants.

⇨ Taken as working assumption and 38.321 specified something like "[8]".

Proposal 14: Configured grant Type 1 and Type 2 cannot be simultanesouly configured for a UE in NR sidelink communication.

[Vivo, Huawei, Interdigital, CATT]: In IIOT, mixed types configuration and activations are allowed. No additional RAN2 specification work is forseen on top of IIOT agreements for Uu. [Intel]: Is IIOT agreement based on multi-carrier operations? [OPPO, AsusTek]: It was based on single BWP.

⇨ Configured grant Type 1 and Type 2 can be simultanesouly configured for a UE in NR sidelink communication.

Proposal 15: configuredSLGrantType1Allowed can be configured only for all or some logical channel(s) belonging to a destination, i.e. not configured for all logical channels of all other destinations.

[ZTE, Apple]: It is NW configuration so we do not need this restriction in the specification.

⇨ Noted.

Proposal 16: The Sidelink Configured Grant Confirmation MAC CE is identified by a MAC subheader with a new LCID value.

⇨ Agreed.

Proposal 17: The Sidelink Configured Grant Confirmation MAC CE is one octet in size. Each of total 8 bits corresponds to a confirmation to activation or deactivation of a configured grant. Each bit will indicate each configured grant index.

⇨ Taken as working assumption and 38.321 specified something like “[8].

Agreements on MAC:
1: For all cast-types, Layer-1 Destination ID corresponds to the 16 bit LSB of the Destination Layer-2 ID, and the Layer-1 Source ID corresponds to the 8 bit LSB of the Source Layer-2 ID.
2: The DST field includes 8 bit MSB of the Destination Layer-2 ID and the SRC field includes 16 bit MSB of the Source Layer-2 ID for the SL-SCH subheader of a MAC PDU to be transmitted to the peer UE.
3a: Zone ID determination is based on the formulae specified in 36.331 as UE’s location information. And we will ask to RAN1 if any problem with this way.
3b: Formulae is specified in 38.331 and 38.321 specification refers 38.331, and MAC will indicate zone id to L1.
4a: For V2X, the number of LCH priorities is 3bits.
4b: The priority indicated in a SCI is derived from the value of the highest priority of logical channels served by a MAC PDU to be transmitted on PSSCH scheduled by the SCI.
5: If there is no unoccupied Sidelink process in the Sidelink HARQ entity, when a new TB arrives, how to handle RX buffer management is up to UE implementation.
6: For each new transmission, UE selects a Destination having the logical channel with the highest priority, among the logical channels having data available for transmission and having no mapping restrictions to a sidelink grant. Then, UE allocate the sidelink grant to the logical channels from the logical channel with the highest priority.
7: The logical channel with disabling the HARQ feedback cannot be multiplexed with a logical channel which enabling the HARQ feedback.
8: Up to 8 configured grants (including both configured grant type1 and type2) in mode1 can be configured and active for NR sidelink communication (working assumption). Running 38.321 will specify something like “[8]”
9: Configured grant Type 1 and Type 2 can be simultanesouly configured for a UE in NR sidelink communication.
10: The Sidelink Configured Grant Confirmation MAC CE is identified by a MAC subheader with a new LCID value.
11: The Sidelink Configured Grant Confirmation MAC CE is one octet in size. Each of total 8 bits corresponds to a confirmation to activation or deactivation of a configured grant. Each bit will indicate each configured grant index (working assumption). Running 38.321 will specify something like “[8]”

R2-1915968 Discussion on HARQ support for NR sidelink Huawei, HiSilicon discussion

Proposal 1: For NR-V2X unicast/groupcast, a timer is introduced for the Rx UE to release the HARQ process. The duration of timer is indicated by the Tx UE via SCI and starts at the first time received the SCI.

[LG]: If RX UE cannot decode SCI, how to start a timer? [ZTE, Apple]: It can be up to UE implementation and it is aligned with RAN2 agreement on how to handle RX buffer management.

⇨ Noted (no consensus on the need of timer).

Proposal 2: The Rx UE can flush the buffer of the HARQ process and consider it as available when at least one of following events happens:

- A new transmission SCI is received for this HARQ process (for the existing source, destination ids, cast type and HARQ process id);

[OPPO]: In the current MAC specification, only second case (a new transmission SCI is received for this HARQ process) is specified. [Huawei]: Majority companies do not want to specify all conditions when to flush the buffer. However the question is whether we need to define what is unoccupired SL process? [Apple]: We need to define when NDI is set from TX UE point of view. [OPPO]: RAN1 agreed number of HARQ retransmission based on CBR, so we need to also consider that aspect.

⇨ Agreed.

Proposal 3: For NR-V2X unicast/groupcast, a timer is defined for the Tx UE to release the HARQ process. The duration of timer is configured by the network. FFS on the details.

Proposal 4: The Tx UE can flush the buffer of the HARQ process and consider it as available when at least one of following events happens:

- The timer expires;
- ACK is received, or NACK is not received (for groupcast);
- A new transmission is scheduled by the network using this HARQ process;
- The maximum number of (re)transmission is reached.

Agreements on HARQ:
1: The Rx UE can flush the buffer of the HARQ process and consider it as available when a new transmission SCI is received for this HARQ process (for the existing source, destination ids, cast type and HARQ process id).

R2-1914461 Left issues on HARQ for NR-V2X OPPO discussion

Proposal 1 Rx UE keep the HARQ buffer at least till the latest reserved re-transmission resource indicated by PSCCH. FFS whether / how for Rx UE to further keep the HARQ buffer afterwards, pending RAN1 progress.

[Lenovo, LG]: HARQ resources (in the figure) can be also used for transmission (not only for retransmission). It is up to UE implementation then proposal1 is not correct. [Huawei]: Is the proposal only for mode2? [OPPO]: It is common for both mode1 and mode2.

⇨ Noted (need more RAN1 progress).

Proposal 2 RAN2 to further discuss the HARQ handling buffer after UE decides not keep the current HARQ buffer, for both cases where there is and there is no new data transmission to receive.

Proposal 3 For RRC_CONNECTED UE, UE reports group size information to RAN for group-cast traffic. And up to RAN to configure HARQ option-1/2 per group, i.e., destination address.

[LG, Qualcomm]: The need of reporting that information is not clear. Why not UE decide HARQ option1/2 autonomously? [OPPO]: For mode1, OPPO thinks HARQ option should be commanded by NW. For mode2, there may be chance the UE can select HARQ option by itself. [ZTE, Intel]: UE capabilities may need to be also considered. If some members support option2 and some others do not support option2, how HARQ option2 works? It may be good to send LS to RAN1. [Apple, LG, Ericsson]: Do not see the need to send LS to RAN1. RAN1 will discuss and decide the related UE capability aspect all together later. [Lenovo]: It is still under RAN1 discussion. No RAN1 agreement is made now.

⇨ Noted (need more RAN1 progress).

Proposal 4 For RRC_IDLE/INACTIVE UE and out-of-coverage UE, RAN2 discuss to either always select HARQ option-2 or up to SIB/Pre-configuration to configure HARQ option-1 or HARQ option-2 when upper layer provides group size information

R2-1914443 Remaining Issues on SL HARQ CATT discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: For unicast/groupcast communication, each corresponding TB at the Rx UE should be associated with cast-type, Source ID, Destination ID and HARQ process ID.

[OPPO]: Why not for broadcast? [CATT]: Just followed last meeting's agreement. [OPPO]: Broadcast should be also included. [LG]: In LTE V2X, HARQ process is associated with SCI of interest and interest is determined by contents of SCI. HARQ process does not need to be

associate with specific single pair of unicast. [Ericsson, Intel, Convida]: Why RX UE should know cast-type? [Huawei]: Intention is correct regardless of how to implement in MAC specification.

⇨ Noted.

Proposal 2: Send LS to RAN1 to inform RAN1 that cast-type needs to be carried by SCI, unless RAN1 find other critical issues.

Proposal 3: Send LS to RAN1 to check what the maximum number of HARQ processes is supported by Rx UE.

⇨ Noted (need more RAN1 progress on SL UE capabilities)

Proposal 4: Suggest RAN2 to discuss the receiving HARQ process exhausted issue and down-select the two alternatives as following:

- Alt 1: The Rx UE can selectively receive the TBs transmitted from Tx UEs based on the state of receiving HARQ process;
- Alt 2: The Tx UEs can selectively transmit the TBs to the Rx UE based on the state of receiving HARQ process informed by the Rx UE.

R2-1914462 Left issues on CSI report for NR-V2X OPPO discussion 5G_V2X_NRSL-Core

Proposal 1 Report SL CSI as MAC CE, and RAN2 discuss the MAC CE format for CSI report of 1) either including 1-bit RI and a single 4-bit CQI, 2) or including two 4-bit CQI.

[OPPO]: RAN1 decides wideband CQI is only supported so based on Uu mechanism, option1) is preferred. [Samsung]: Agrees with OPPO. [Huawei]: We should wait for RAN1. [LG, Qualcomm, Ericsson]: We can ask RAN1 to confirm RAN2 view.

⇨ Reporting SL CSI via MAC CE (with one OCTET) identified by new LCID.

⇨ RAN2 assumes 1-bit RI and a single 4-bits for CQI based on Uu and will ask RAN1 if ok.

Proposal 2 CSI reporting MAC CE report is triggered by indication from lower layer.

⇨ Agreed.

Proposal 3 CSI report shall be generated according to the latest CSI-RS measurement result.

[LG]: It should be discussed in RAN1.

⇨ Noted (need of more RAN1 progress)

Proposal 4 CSI report event shall be cancelled if the CSI report has been transmitted.

[ZTE]: How to handle CSI report retransmission if HARQ A/N is applied to CSI report? [OPPO]: Cancellation does not mean HARQ retransmission is not allowed. [Ericsson, ITL]: Agree with the intention, but no need to specify it in MAC specification.

⇨ Agreed. CSI report is one-shot transmisison.

Proposal 5 RAN2 further discuss the need of a timer to cancel the CSI report, which is started by receiving CSI-RS or SCI carrying CSI report trigger, and stopped by CSI report transmission.

[LG]: If data is also included into MAC PDU, it is not correct to cancel the CSI report. [OPPO]: The intention is to handle the case when the UE fails to reserve the resource in time. [Interdigital]: It is one option, and the other option is to find out how to make CSI report in time (e.g. preemption). [OPPO]: This timer can be configured via PC5-RRC. [Ericsson, ZTE]: Not sure if timer based solution really works well w/o any other 2nd problem. Also there was no such RAN1 request in the LS. [LG, ITL]: Even with the delayed CSI reporting if the latest measured result is reflected, it may not be problem.

⇨ RAN2 will not introduce any mechanism to handle this issue.

Agreements on CSI report:
1: Reporting SL CSI via MAC CE (with one OCTET) identified by new LCID.
2: RAN2 assumes 1-bit RI and a single 4-bits for CQI based on Uu and will ask RAN1 if ok.
3: CSI reporting MAC CE report is triggered by indication from lower layer.
4: CSI report event shall be cancelled if the CSI report has been transmitted. CSI report is one-shot transmission.

R2-1914537 Discussion on SL CSI and RSRP report ZTE Corporation, Sanechips discussion

Proposal 1: SL MAC CE shall be introduced for CQI/RI reporting.

Proposal 2: A new specified LCID shall be defined for CQI/RI reporting SL MAC CE.

Proposal 3: The CQI/RI reporting SL MAC CE shall at least consists of CSI report and RI report.

Proposal 4: A sidelink Buffer Status Report (BSR) may be triggered when the SL CQI/RI reporting MAC CE becomes available for transmission.

[OPPO]: In the current MAC specification, triggering condition for BSR from MAC CE is not specified. [Huawei]: In NR-U w/o BSR, SR associated with this MAC CE can be sent to NW. [Apple]: It is not clear whether CSI report is configured per resource pool or not.

⇨ Noted (rely on proposal5).

Proposal 5: For mode1 if there is no configured SL-resource, a SL CQI/RI reporting MAC CE may trigger SR and be mapped to zero or one SR configuration. For mode2 if there is no configured SL-resource, the UE will perform resource selection for SL CQI/RI reporting.

⇨ Taken as working assumption.

Proposal 6: It is suggested to consider following two options for comparing the priority between the SL MAC CE and data from SL Logical Channel:

- Option1: Configurable priority of SL MAC CE;
- Option2: Fixed priority for SL MAC CE.

[Interdigital, OPPO, CATT, LG, Intel, Huawei]: Like Uu, option2 is preferred. [Ericsson, Spredtrum]: RX UE can use the priority in SCI. [OPPO, CATT]: CSI report is sent later than data transmisison so priority in SCI cannot be used. Priority is associated with data (not associated with CSI report). [Huawei]: Fixed priority means fixed value?

⇨ Option2 is agreed.

Proposal 7: It is suggested that NW configures the priority value of the SL MAC CE which can be used for UL/SL prioritization.

[OPPO, Samsung]: It is good to handle this issue together with UL MAC CE. [Apple, Interdigital, LG, Intel]: Priority is fixed to option2 in proposal2, so the prioritization rule for data can be reused.

⇨ With option2, prioritization rule for data can be reused for this SL MAC CE.

Proposal 8: It is suggested that TX UE provides SL measurement configuration via PC5-RRC signalling to Rx UE.

[LG]: What is SL measurement configuration? LG assumes only measurement reporting configuration would be configured.

⇨ Agreed.

Proposal 9: Rx UE should be able to report the SL-RSRP to Tx UE via PC5-RRC signalling. It is not necessary to notify the gNB of the SL-RSRP measurement result.

[MediaTek]: It would be dynamic reporting since it is used for PC. [Huawei, Ericsson, LG, Intel, Samsung]: Do not agree on the need of dynamic reporting and PC5-RRC based MR is preferred.

⇨ Agreed.

Proposal 10: Both event triggered and periodical sidelink RSRP measurement report could be supported.

⇨ Agreed.

Proposal 11: For the event triggered report, at least the Event A1 (SL-RSRP exceeds a threshold) or the Event A2 (SL-RSRP is lower than a threshold) shall be supported.

⇨ Agreed.

⇨ The above agreements will be included in the response LS to RAN1.

Agreements on CSI report:
1: For mode1 if there is no configured SL-resource, a SL CQI/RI reporting MAC CE may trigger SR and be mapped to zero or one SR configuration. For mode2 if there is no configured SL-resource, the UE will perform resource selection for SL CQI/RI reporting. (Working assumption)
2a: Fixed priority for SL MAC CE.
2b: Prioritization rule for data can be reused for this SL MAC CE.
3: TX UE provides SL measurement configuration via PC5-RRC signalling to Rx UE.
4: Rx UE should be able to report the SL-RSRP to Tx UE via PC5-RRC signalling. It is not necessary to notify the gNB of the SL-RSRP measurement result.
5: Both event triggered and periodical sidelink RSRP measurement report could be supported.
6: For the event triggered report, at least the Event A1 (SL-RSRP exceeds a threshold) or the Event A2 (SL-RSRP is lower than a threshold) shall be supported.

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R2-1916004 Sidelink RSRP reporting MediaTek Inc. discussion Rel-16

Proposal 1: MAC layer to report sidelink RSRP.

R2-1914870 RAN2 Aspects of CSI Reporting InterDigital discussion Rel-16 5G_V2X_NRSL-Core

Proposal 5: CQI/RI report MAC CE can only be multiplexed with transmissions for the same unicast link (e.g. having same source and destination L2 IDs)

⇨ Agreed.

Proposal 6: As in Uu, a relative priority order used by LCP is defined for a SL MAC CE.

Proposal 7: CQI/RI report MAC CE is prioritized over all SL LCHs in SL LCP. FFS on its relative priority with PC5-RRC signalling.

[OPPO, Intel, Ericsson]: CSI report MAC CE should be deprioritized than all SL LCH. [LG]: Agree with the proposal and CSI report MAC CE should be deprioritized than PC5-RRC/S.

- Option1: CSI report MAC CE is prioritized between PC5-RRC/S and SL data LCHs in SL LCP (10)
- Option2: CSI report MAC CE is always deprioritized over all SL LCHs in SL LCP (3)

⇨ CSI report MAC CE is prioritized between PC5-RRC/S and SL data LCHs in SL LCP.

⇨ The above agreement will be informed RAN1 to take it into account for their work.

Proposal 8: A UE operating in Mode 2 triggers resource (re)selection when it has a CSI report MAC CE to be transmitted and does not have a SL grant that meets the required latency of the CQI/RI report. FFS (based on RAN1 input) on how to define the required latency of the report.

⇨ Noted.

Proposal 9: A UE operating in Mode 1 triggers a SL BSR when it has a CSI report MAC CE to be transmitted and does not have a SL grant that meets the required latency of the CSI report.

Proposal 10: Send LS to RAN1 to inform them of RAN2 agreements

Agreements on CSI report:
1: CSI report MAC CE can only be multiplexed with transmissions for the same unicast link (e.g. having same source and destination L2 IDs)
2: CSI report MAC CE is prioritized between PC5-RRC/S and SL data LCHs in SL LCP.

R2-1914848 Left issues on NR SL MAC design Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core

Proposal 7 MAC multiplexing and TB generation is done transparently to MCR and for a given destination, highest corresponding MCR is indicated to L1.

⇨ Agreed.

R2-1914867 Need for LCP Restriction on MCR InterDigital, Apple, OPPO, Ericsson, Mediatek, CATT, Convida Wireless, Spreadtrum, Fraunhaufer HHI, Fraunhaufer IIS discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: A UE's SLRB configuration may optionally contain a range of MCR which defines the transmission range to SLRB mapping.

Proposal 2: LCP multiplexes only logical channels that have similar range of MCR in SLRB configuration (10).

Proposal 3: A UE multiplexes LCHs with MCR that have similar MCR as the MCR associated with the first LCH selected by LCP. FFS how the UE determines similar MCR.

- Option1: No consideration of MCR in MAC multiplexing (8)
- Option2: Introduction of MCR consideration in MAC multiplexing (10)

[MediaTek,Interdigital, Qualcomm, Nokia, Ericsson, Apple]: Maybe from RAN1, there is problem. [Huawei, Futurewei, Intel, Samsung]: If problem is there, RAN1 can send LS to RAN2 [Session chair]: Option2 would be new feature in MAC LCP/Multiplexing and seems no clear majority to introduce new one.

Agreements on MAC multiplexing:
1: MAC multiplexing and TB generation is done transparently to MCR and for a given destination, highest corresponding MCR is indicated to L1.

R2-1914463 Left issues on UL-SL prioritization for NR-V2X OPPO discussion 5G_V2X_NRSL-Core

Proposal 1 For the UL LCH priority threshold used for UL/SL prioritization, RAN2 discuss whether it is applied to MAC CEs of UL BSR, configured grant confirmation, PHR, and Recommended bit rate query.

Proposal 2 For prioritization between SL-TX and SL-triggered UL-TX, it is based on direct comparison between associated LCH priority. RAN2 further discuss which UL-TX (e.g., SR, BSR, configured grant confirmation) needs to considered for prioritization between SL-TX and SL-triggered UL-TX.

Proposal 3 For LTE-UL/NR-SL and NR-UL/LTE-SL, if the two RATs cannot exchange prioritization-related information prior to time of transmission subject to processing time restriction, it is up to UE implementation to decide whether UL or SL to prioritize.

Proposal 4 If the two RATs can exchange prioritization-related information prior to time of transmission subject to processing time restriction, rely on LTE solution for LTE-UL/NR-SL prioritization, and RAN2 discuss whether to apply the LTE solution or NR solution, based on understanding of feasibility of TX chain sharing between LTE-SL, NR-SL and NR-UL.

Proposal 5 RAN2 discuss whether rely on RAN1 or RAN2 specification to handle the inter-RAT collision case.

Proposal 6 No need for RAN2 to handle the collision for inter-CG scenario.

Proposal 7 RAN2 send LS to RAN1 to trigger the work on inter-CG UL/SL power budget sharing.

Proposal 8 RAN2 send further LS reply to RAN1 to clarify the RAN2 agreement on UL/SL prioritization, for intra-/inter-RAT, and intra-/inter-CG case.

⇨ [Offline#811]: To discuss remaining prioritization issues (R2-1916451, OPPO).

R2-1916451 Offline-811 OPPO

Proposal1: For prioritization between SL-TX and SL-triggered SR, it is based on direct comparison between associated LCH priority.

Proposal2: For prioritization between SL-TX and UL-TX (only for PUSCH), for UL MAC CE, rely on LTE solution, i.e., they are treated as if of priority lower than the UL-threshold, so down-prioritized if SL-TX is higher than SL-threshold, otherwise prioritized.

Proposal3: For LTE-UL/NR-SL and NR-UL/LTE-SL, if the two RATs cannot exchange prioritization-related information prior to time of transmission subject to processing time restriction, it is up to UE implementation to decide whether UL or SL to prioritize.

Proposal4: If the two RATs can exchange prioritization-related information prior to time of transmission subject to processing time restriction, rely on LTE solution for LTE-UL/NR-SL and NR-UL/LTE-SL prioritization.

Proposal5: RAN2 does not need to handle the MCG-SL/SCG-UL collision.

[LG]: It is still not clear how to handle PUCCH (rather than SR) in prioritization? [OPPO]: Besides SR, other physical channels should be handled in RAN1. [LG]: Then it is good to ask it to RAN1.

⇨ All proposals (proposal1 to 5) are agreed.

⇨ [Offline#820]: Draft LS to RAN1 to take RAN2 agreements on UL/SL prioritization (including previous agreements) into account and let them know RAN2 assume how to handle all other physical channels in UL/SL prioritizaiton is up to RAN1 (R2-1916462, OPPO)

Agreements on UL/SL prioritization:
1: For prioritization between SL-TX and SL-triggered SR, it is based on direct comparison between associated LCH priority.
2: For prioritization between SL-TX and UL-TX (only for PUSCH), for UL MAC CE, rely on LTE solution, i.e., they are treated as if of priority lower than the UL-threshold, so down-prioritized if SL-TX is higher than SL-threshold, otherwise prioritized.
3: For LTE-UL/NR-SL and NR-UL/LTE-SL, if the two RATs cannot exchange prioritization-related information prior to time of transmission subject to processing time restriction, it is up to UE implementation to decide whether UL or SL to prioritize.
4: If the two RATs can exchange prioritization-related information prior to time of transmission subject to processing time restriction, rely on LTE solution for LTE-UL/NR-SL and NR-UL/LTE-SL prioritization.
5: RAN2 does not need to handle the MCG-SL/SCG-UL collision.

R2-1916462 [Draft] Reply LS on UL-SL prioritization OPPO

⇨ Will be revised to R2-1916466 (to include all RAN2 agreements on UL/SL prioritization)

⇨ Approved in R2-1916468

R2-1914873 Implementing Starvation Avoidance for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: Starvation avoidance in SL-LCP is applied to a UE in all states/coverage scenarios (i.e. RRC_CONNECTED, RRC_INACTIVE/RRC_IDLE, and OOC).

[OPPO]: Starvation avoidance is for GBR, is it really possible to gurantee GBR for idle/inactive/OOC UEs? [Interdigital]: Range of GBR can be configured in SIB/preconfiguration. [OPPO]: W/o knowing UE's specific GBR requirements, it becomes difficult to set the appropriate configuration. Also idle/inactive/OOC UE uses only mode2 so in principle it will be difficult to apply GBR in exact. [Huawei, Ericsson, Convida]: Starvation avoidance is more for fairness regardless of GBR. Supports the proposal.

⇨ Agreed.

Proposal 2: A UE can be configured with starvation avoidance parameters in a SLRB configuration in dedicated RRC signalling, SIB, or preconfiguration (depending on the UE state/coverage).

⇨ Agreed.

Proposal 3: Each SL LCH is (pre)configured with a prioritized bit rate (PBR) and bucket size duration (BSD)

⇨ Agreed.

Proposal 4: For each SL LCH, a UE maintains a variable (e.g. Bj) representing the bucket level at each instance of the SL LCP procedure.

⇨ Agreed.

Proposal 5: A UE selects the destination L2 ID with highest priority LCH having Bj>0 among the LCHs having data available for transmission.

[OPPO]: Another option is the destinaion L2 id based on highest priority and then consider Bj aspect. [Intel, Samsung, Convida]: Highest priority should be considered first regardless of Bj. [Ericsson, Apple]: Supports the proposal. [Huawei]: Option2 is more aligned with Uu.

- Option1: Select the destination L2 id with highest priority LCH having Bj > 0 among the LCHs having data available for transmission (11)
- Option2: First select the destination L2 id based on the highest priority among data available for transmission, then consider Bj in LCP (6)

⇨ Agreed.

Proposal 6: If there are no LCHs with Bj>0, the UE selects the destination L2 ID having the LCH with highest priority among the LCHs having data available for transmission.

⇨ Agreed.

Proposal 7: In case of multiple destination L2 IDs having LCH with same priority and Bj>0, it is up to UE implementation to selects which destination L2 ID.

[OPPO, Intel, Vivo, Huawei, Ericsson]: It can be up to UE implementation.

⇨ Agreed.

Proposal 8: Following selection of a destination L2 ID, the UE follows Uu LCP procedure on the LCHs associated with that destination L2 ID.

Agreements on starvation avoidance:

1: Starvation avoidance in SL-LCP is applied to a UE in all states/coverage scenarios (i.e. RRC_CONNECTED, RRC_INACTIVE/RRC_IDLE, and OOC).
2: A UE can be configured with starvation avoidance parameters in a SLRB configuration in dedicated RRC signalling, SIB, or preconfiguration (depending on the UE state/coverage).
3: Each SL LCH is (pre)configured with a prioritized bit rate (PBR) and bucket size duration (BSD).
4: For each SL LCH, a UE maintains a variable (e.g. Bj) representing the bucket level at each instance of the SL LCP procedure.

5: A UE selects the destination L2 ID with highest priority LCH having Bj>0 among the LCHs having data available for transmission.
6: If there are no LCHs with Bj>0, the UE selects the destination L2 ID having the LCH with highest priority among the LCHs having data available for transmission.
7: In case of multiple destination L2 IDs having LCH with same priority and Bj>0, it is up to UE implementation to selects which destination L2 ID.

R2-1914444 Remaining Issues on PDCP CATT discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: For SL groupcast and broadcast, PDCP out-of-order delivery is not supported.

[ZTE]: Does not see any big issue to support PDCP out-of-order delivery. [OPPO, Samsung, Apple, Vivo]: OOO delivery is optional UE capability so how TX UE knows all members' capabilities. Peer UE should know which source UE which LCH is used for OOO delivery. If OOO delivery is supported HC is not supported, so TX UE should know RX UEs' status. Supports the proposal. [OPPO]: If TX UE transmits based on OOO delivery, RX UE who does not support OOO delivery will keep the packets in the buffer for in-order delivery.

⇨ Agreed.

Proposal 2: ARP SDU type is not supported in NR sidelink.

⇨ Agreed.

Proposal 3: PC5 Signaling protocol SDU type is not supported in NR sidelink.

⇨ Agreed.

Proposal 4: The length of SDU type is 2bits.

⇨ Agreed.

Proposal 5: For data PDU format, D/C field is not used for groupcast and broadcast.

[CATT]: No control PDU for groupcast/broadcast.

⇨ Agreed.

Proposal 6: The initial value of RX_DELIV in the receiving PDCP entity sets to 0 for unicast. The initial value of RX_DELIV in the receiving PDCP entity follows the LTE rule for groupcast and broadcast.

[Samsung]: The difference of NR Uu compared to LTE is to use counter (instead of SN). The spec rapporteur company should take it into account. [OPPO]: HFN part can be up to UE implementation. [Ericsson]: From email discussion, it was agreed to follow NR Uu. [OPPO]: Difference compared to NR Uu case is for V2X, HFN is not used. Only part of SN is used.

⇨ Agreed.

⇨ [Offline#812]: To discuss HFN aspect for NR V2X (R2-1916452, CATT)

Proposal 7: For SL unicast, the AS ciphering and integrity protection for SL data are needed and can be configured.

Proposal 8: For SL unicast, the AS ciphering and integrity protection for PC5-RRC signalling are needed and always present.

Proposal 9: For SL unicast, except for the first PC5 Signalling, i.e., Direct Communication Request, the AS ciphering and integrity protection for other PC5 Signallings are needed and always present.

Proposal 10: For SL unicast, for the first PC5 Signalling, i.e., Direct Communication Request, the AS ciphering and integrity protection are not needed.

Proposal 11: The SL-SRB carrying the first PC5 Signalling, i.e., Direct Communication Request, is separated from the SL-SRB carrying other PC5 Signallings.

[OPPO]: Whether we need PC5-RRC security command or not is clear.

⇨ PDCP should support AS ciphering and integrity protection for SL data and PC5-RRC.

Proposal 13: In the PDCP PDU format for SL unicast, the field of KD-sess ID has 16bits for AS ciphering and the field of MAC-I has 32bits for AS integrity protection.

Proposal 14: For SL DRB in SL unicast, the field of KD-sess ID and MAC-I is present only when the SL DRB is configured with AS ciphering and integrity protection.

Proposal 15: Except for the first PC5 Signalling, i.e., Direct Communication Request, the field of KD-sess ID and MAC-I are always present in the PDCP data PDU carrying SL SRB.

⇨ Noted for proposal13 to 15 (need of more SA3 progress).

Proposal 16: For SL groupcast and broadcast, only 18bits pdcp-SN-Size is used for the SL DRB. For SL unicast, 12bits and 18bits pdcp-SN-Size are used for the SL DRB.

[OPPO]: SA3 LS also indicates the possible drawback when use 12bits (i.e. more often wrap-around) [Ericsson, ZTE]: What is harm if we keep both 12bits and 18bits? [Intel]: With having both 12bits and 18bits, PDCN SN size should be also configured via PC5-RRC.

⇨ Agreed.

Proposal 17: For SL unicast, only 12bits pdcp-SN-Size is used for the SL SRB including SL SRBs which carrying PC5 Signalling and PC5 RRC message. FFS on how to handle initial PC5-S signaling for unicast link.

[OPPO]: For broadcast for the first PC5-S, how to handle it? With this proposal, 12bits SN is used? While it was agreed only 18bits is used for broadcast in the above proposal. [OPPO]: For the first PC5-S for unicast link setup, SA2 allows both transmission via broadcast and unicast.

⇨ Agreed.

Proposal 18: Send an LS to SA3, Cc: SA2 on RAN2 agreements to check whether there is any security issue or not.

⇨ [Offline#813]: Draft LS to SA3 to inform RAN2 agreement and to ask SA3 to provide the required AS fields/parameters asap (R2-1916453, CATT)

Agreements on PDCP:
1: For SL groupcast and broadcast, PDCP out-of-order delivery is not supported.
2: ARP SDU type is not supported in NR sidelink.
3: PC5 Signaling protocol SDU type is not supported in NR sidelink.
4: The length of SDU type is 2bits.
5: For data PDU format, D/C field is not used for groupcast and broadcast.
6: The initial value of RX_DELIV in the receiving PDCP entity sets to 0 for unicast. The initial value of RX_DELIV in the receiving PDCP entity follows the LTE rule for groupcast and broadcast.
7: PDCP should support AS ciphering and integrity protection for SL data and PC5-RRC.
8: For SL groupcast and broadcast, only 18bits pdcp-SN-Size is used for the SL DRB. For SL unicast, 12bits and 18bits pdcp-SN-Size are used for the SL DRB.
9: For SL unicast, only 12bits pdcp-SN-Size is used for the SL SRB including SL SRBs which carrying PC5 Signalling and PC5 RRC message. FFS on how to handle initial PC5-S signaling for unicast link.

R2-1916452 Summary of offline [Offline-812] on HFN part of RX_NEXT and RX_DELIV CATT

Proposal 1: Capture a NOTE in 38.323 as “The HFN part of RX_NEXT can be left into UE implementation, i.e., the initial value of the HFN part of RX_NEXT is larger than 0.”

[AsusTek]: Can the concerned scenario really happen if we follow LTE HFN calculation? [Samsung]: In NR, HFN calculation is different, e.g. not based on SN but based on counter. [Vivo]: If we leave it to UE implementation, setting it to “0” is not the only option.

⇨ Noted (can be discussed as part of PDCP email discussion)

Proposal 2: Don't need to capture the HFN part of RX_DELIV for NR V2X in 38.323.

⇨ Noted (can be discussed as part of PDCP email discussion)

R2-1916453 [DRAFT] LS on NR V2X Security issue and PDCP SN size CATT

⇨ Revised to R2-1916463

⇨ LS was approved in R2-1916467 with contents in R2-1916453.

R2-1914922 Left Issues on NR SL RLC and PDCP vivo discussion R2-1912253

Proposal 1: RLC re-establishment is not needed, at least in Rel-16.

[Vivo]: Proposal1 is for all cast types.

⇨ Agreed.

Agreements on RLC: 1: RLC re-establishment is not needed, at least in Rel-16.

R2-1915078 Left issues on SDAP Rx behaviour on remapping OPPO, Ericsson, Apple, Qualcomm Incorporated, Intel Corporation, ITL, InterDigital, MediaTek Inc., Samsung, Beijing Xiaomi Software Tech, Nokia, Nokia Shanghai Bell, ASUSTeK, Spreadtrum Communications, Convida Wireless, LG Electronics Inc., Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core

[Futurewei]: It needs to add "for insequence delivery" after "SDAP RX behavior upon remapping"

Proposal 1 SDAP Rx behaviour upon remapping is left to UE implementation for insequence delivery. However proposal1 will not be captured in the specification.

⇨ Agreed.

Agreements on SDAP: 1: SDAP Rx behaviour upon remapping is left to UE implementation for insequence delivery. And it will not be captured in the specification.

R2-1914995 Reception of End-Marker upon QoS Flow Remapping Futurewei discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: The behavior of receiving SDAP entity should be specified for the reception of end-marker control PDU.

R2-1915193 On NR V2X Sidelink transmissions during Handover or Uu PHY layer problems Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1913148

Proposal 1: RAN2 is kindly requested to decide that the configured SL grant type 1 provided by the target gNB in HO command, can be temporarily continued after a handover failure has occurred and while T311 is running.

Proposal 2: RAN2 is kindly requested to decide that the configured SL grant type 1 (from the source gNB) can be temporarily continued after RLF while T311 is running.

Proposal 3: RAN2 is kindly requested to decide that the configured SL grant type 1 is used at least till T311 expires and preferably even after UE enters the RRC_IDLE/INACTIVE state after T311 expires.

Proposal 4: RAN2 is kindly requested to decide if the time how long the configured SL grant type 1 is used (till T311 expires or brief continuation after T311 expires) needs to be controlled by a new SL timer.

Proposal 5: RAN2 is kindly requested to consider two new independent SL timers for UE within a handover process and a UE experiencing PHY layer problems.

Proposal 6: RAN2 is kindly requested to decide that a UE suffering PHY layer problems or being within a handover process should indicate its peer SL UE(s) about the limited time, a configured grant and the dedicated QoS can be guaranteed in compliance with the SL timer.

Proposal 7: Exceptional Tx pools for SL V2X are applicable only in case the UE was configured with SL dynamic grant. When CG Type 1 was provided, the UE continues using it for the period specified in the preceding proposals.

⇨ [Offline#814]: To discuss configured grant issues (R2-1916454, Nokia)

R2-1916454 Summary of offline [814] on sidelink transmissions during handover or Uu Phy layer problems Nokia

Proposal 1: Configured SL grant type 1 cannot be used at least while T311 is running.

⇨ Agreed

Proposal 2: Configured SL grant type 1 will be used while T310 is running.

⇨ Agreed.

Agreements on SL configured grant type1: 1: Configured SL grant type 1 cannot be used at least while T311 is running. 2: Configured SL grant type 1 will be used while T310 is running.

R2-1915443 SL Synchronization under Async gNB(s) Apple discussion Rel-16 FS_NR_V2X

Observation 1: In LTE V2X, UE synced to asynchronous eNB(s) is already supported by having the Rx UE maintain multiple Rx timing(s) for reception from multiple Tx UE(s).

Proposal 1: Suggest to leave the asynchronous gNB(s) issue to RAN1 to handle.

⇨ [Offline#815]: To discuss the question asked by RAN4 and prepare draft response LS (R2-1916455, Apple)

R2-1916455 Summary on Offline [815] SL Synchronization under Async eNB(s)/gNB(s) Apple

Proposal 1: Send an LS to both RAN4 and RAN1.

Proposal 2: Include the following in LS:

• RAN2 reply to RAN4 there is no requested signalling in RAN2 specification. RAN2 ask RAN1 to provide guidance on the async gNB(s) issue and whether/what RAN2 signalling is needed.

[Huawei]: Prefer Cc: RAN1 (instead of To: RAN1).

⇨ Proposal1 and 2 are agreed.

R2-1914437 RRC Connection Initiation Trigger for V2X Sidelink Communication Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-1914445 Resource allocation mode configuration CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914446 Leftover Issues on LCP CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914448 Remaining Issues for Prioritization CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914450 Open Issues for the Bi-directional SLRB CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914459 Discussion on SL capability signaling for Uu-RRC and PC5-RRC OPPO discussion 5G_V2X_NRSL-Core

R2-1914460 Discussion on SL-related Uu-RRC messages OPPO discussion 5G_V2X_NRSL-Core

R2-1914536 Discussion on UL and SL prioritisation ZTE Corporation, Sanechips discussion

R2-1914538 Consideration on NR V2X CBR ZTE Corporation, Sanechips discussion

R2-1914539 Left issues for MAC in NR V2X ZTE Corporation, Sanechips discussion

R2-1914540 Discussion on left issue in NR V2X UP ZTE Corporation, Sanechips discussion

R2-1914541 Discussion on NR V2X system information acquisition ZTE Corporation, Sanechips discussion

R2-1914543 Consideration on sidelink RLM management ZTE Corporation, Sanechips discussion

R2-1914544 Consideration on exceptional resource pool ZTE Corporation, Sanechips discussion
R2-1914547 Further discussion on RLC AM and UM for NR V2X unicast ZTE Corporation, Sanechips discussion
R2-1914548 Discussion on NR V2X groupcast feedback options ZTE Corporation, Sanechips discussion
R2-1914653 Remaining issues of SL Prioritization MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
=> Revised R2-1916263
R2-1916263 Remaining issues of SL Prioritization MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1914654 Remaining issues of SL LCP MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1913236
R2-1914850 On HARQ feedback support for NR SL Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1914866 RAN2 Aspects of HARQ for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core
R2-1914868 Remaining Aspects of UL/SL Prioritization InterDigital discussion Rel-16 5G_V2X_NRSL-Core
R2-1914923 Left issues for UL SL prioritization vivo discussion
R2-1914924 Remaining issues on HARQ support for NR Sidelink vivo discussion
R2-1914925 Left LCP issues vivo discussion
R2-1914926 CSI and RSRP reporting vivo discussion
R2-1915013 Remaining issues on priority handling in NR V2X Spreadtrum Communications discussion
R2-1915014 [Draft] LS on priority indicaition in SCI Spreadtrum Communications LS out Rel-16 5G_V2X_NRSL-Core To:RAN1
R2-1915027 Left issues on LCP procedure Spreadtrum Communications discussion
R2-1915030 TB construction during LCP procedure MediaTek Inc. discussion Rel-16
R2-1915106 SL HARQ protocol operation Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core R2-1912686
R2-1915108 SL LCP procedure considering the MCR requirements Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core
R2-1915131 Remaining issue for SL-BSR Lenovo, Motorola Mobility discussion Rel-16
R2-1915151 Transmitter UE behavior in Mode 1 and Mode 2 Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1915173 Resource Pool Configuration LG Electronics Inc. discussion Rel-16 R2-1913274
R2-1915180 [Draft] Response LS on additional high layer information for sidelink physical layer operations LG Electronics Inc. LS out Rel-16 To:RAN1 Withdrawn
R2-1915270 Discussion on NR SL lower layer procedures Ericsson discussion 5G_V2X_NRSL-Core
R2-1915271 Remaining issues on RLC AM and UM support in SL Ericsson discussion 5G_V2X_NRSL-Core
R2-1915272 Support of HARQ procedure over sidelink Ericsson discussion 5G_V2X_NRSL-Core
R2-1915276 Discussion on PDCP left issues Ericsson discussion 5G_V2X_NRSL-Core
R2-1915339 Initial Value of RX_DELIV Samsung discussion Rel-16 5G_V2X_NRSL-Core
R2-1915379 Discussion on SL information reporting over Uu Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1913324
R2-1915381 Discussion on SL AS configuration handling over NR Uu Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1913332
R2-1915383 Handling of SL in Uu RRC state transitions Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1913334
R2-1915392 Even further views on NR V2X System Information Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1913146

R2-1915442 UL-SL Prioritization under SL incapable RAN Apple discussion Rel-16 FS_NR_V2X
R2-1915513 Discussion on assistance information for resource allocation in NR SL LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1915516 Discussion on groupcast HARQ in NR SL LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1915517 Discussion on measurement and report in NR SL LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1915726 Remaining aspects for SL RLC Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1915728 Remaining aspects for SL PDCP Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core R2-1912790
R2-1915773 Discussion on RLC bi-directional bearer setup for SL unicast Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-1915774 Discussion on remaining issues on HARQ process Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-1915775 Discussion on HARQ feedback for Sidelink Groupcast Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-1915776 Draft Reply LS on Sidelink HARQ Feedback for Groupcast Apple LS out Rel-16 5G_V2X_NRSL-Core To:SA2 Cc:RAN1
R2-1915799 Validity areas based on cell lists MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1912820
R2-1915825 Left issue on LCP for NR V2X OPPO discussion Rel-16 5G_V2X_NRSL-Core
R2-1915826 Left issues on SR and BSR OPPO discussion Rel-16
R2-1915938 Sidelink and Uplink Prioritization in cross-RAT Samsung discussion Rel-16 5G_V2X_NRSL-Core
R2-1915939 Layer2 ID and cast type in SL MAC header Samsung discussion Rel-16 5G_V2X_NRSL-Core
R2-1915941 TX profile for selected sidelink RAT Samsung discussion Rel-16 5G_V2X_NRSL-Core
R2-1915969 Remaining issues on NR SL and NR UL prioritization Huawei, HiSilicon discussion
R2-1915971 Remaining issues on cell reselection Huawei, HiSilicon discussion
R2-1915973 Further details of Uu RRC procedures for NR sidelink Huawei, HiSilicon discussion
R2-1916129 Reply LS on signalling of sidelink RSRP and CSI LG Electronics Inc. LS out Rel-16 5G_V2X_NRSL-Core To:RAN1
R2-1916189 Sidelink CSI report MediaTek Inc. discussion Rel-16
R2-1916215 Remaining issues on reselection priority handlings for V2X Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-1916216 Interaction between RRC Connection Resume Condition and RNAU for NR V2X SL Communication Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1912444
R2-1916255 Discussion on resource allocation Beijing Xiaomi Software Tech discussion Late
R2-1914549 Discussion the missing of UE coverage status description in TS38.304 and TS 36.304 ZTE Corporation, Sanechips discussion
R2-1914563 CR on NR V2X UE coverage status description in TS 36.304 ZTE Corporation, Sanechips draftCR Rel-15 36.304 15.4.0 B 5G_V2X_NRSL-Core
R2-1914564 CR on NR V2X UE coverage status description in TS 38.304 ZTE Corporation, Sanechips draftCR Rel-15 38.304 15.5.0 B 5G_V2X_NRSL-Core
R2-1916108 PC5 groupcast handling Qualcomm Incorporated discussion Rel-16 R2-1913595
R2-1916124 Proposed Response LS on additional high layer information for sidelink physical layer operations LG Electronics Inc. LS out Rel-16 5G_V2X_NRSL-Core To:RAN1

6.4.3 L2/3 protocols for mode 1 resource allocation

Including control and user plane aspects in order to support mode 1 (e.g. RRC procedures, information to be sent to NW/UE, UE behaviours in CP and/or UP, etc.). Note cross-RAT mode 1 resource scheduling is discussed in 6.4.7.

R2-1914436 Impact of Mode 1 Resource Allocation on Uu BWP Operation Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-1914447 Leftover Issues for Sidelink Configured Grant CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914452 Left Issues of SL BSR/SR CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914454 Type 1 Sidelink Configured Grant Validity Time CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914535 Consideration on mode1 resource allocation ZTE Corporation, Sanechips discussion

R2-1914655 On SL configured grant MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1913237

R2-1914851 Remaining issues on sidelink configured grant design Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core

R2-1914869 Multiple SL Configured Grants and UE Assistance InterDigital discussion Rel-16 5G_V2X_NRSL-Core R2-1912872

R2-1914928 Discussion on SR and BSR vivo discussion R2-1912256

R2-1914929 Discussion on Truncated Sidelink BSR vivo discussion R2-1912257

R2-1914930 Remaining issues on sidelink configured grant vivo discussion R2-1912258

R2-1914998 Discussion on sidelink SR trigger Fujitsu discussion Rel-16 5G_V2X_NRSL-Core R2-1913164

R2-1915107 SR trigger for NR SL Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core R2-1912687

R2-1915273 Discussion on configured grant left issues Ericsson discussion 5G_V2X_NRSL-Core

R2-1915518 Discussion on remaining issues of mode1 operation LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core

R2-1915552 Resource Pool Sharing between Mode 1 and Mode 2 UEs Fraunhofer HHI, Fraunhofer IIS discussion R2-1912650

R2-1915816 Discussion on multiple configured grants OPPO discussion Rel-16 5G_V2X_NRSL-Core

R2-1915966 Discussion on Sidelink Configured Grant support Huawei, HiSilicon discussion

R2-1915967 Discussion on remaining issues of SR and BSR for SL Mode 1 Huawei, HiSilicon discussion

R2-1916039 Discussion on resource allocation for sidelink HARQ ACK/NACK report ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core

R2-1916130 Sidelink HARQ operation in mode 1 ITL discussion

R2-1916257 Discussion on BSR prioritization issue Beijing Xiaomi Software Tech discussion Late

6.4.4 L2/3 protocols for mode 2 resource allocation

Including control and user plane aspects in order to support mode 2 (e.g. RRC procedures, information to be sent to NW/UE, UE behaviours in CP and/or UP, etc.). Note cross-RAT mode 2 resource configuration is discussed in 6.4.7.

R2-1914442 Resource (Re-) selection function in NR V2X Sidelink CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914865 Considerations for Geographical Zone Design for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core R2-1912868

R2-1914927 Resource pool (re-)selection based on HARQ feedback vivo discussion

R2-1915132 Considerations on QoS based resource pool for NR V2X Lenovo, Motorola Mobility discussion Rel-16 R2-1912914

R2-1915175 NR V2X System Information Aspects LG Electronics Inc. discussion Rel-16 R2-1913275

R2-1915378 Discussion on SL Mode 2 left issues Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1913323

R2-1915555 Resource Allocation for Mode 2 NR V2X Fraunhofer HHI, Fraunhofer IIS discussion R2-1912651

R2-1915940 Discussion on V2X specific validity area Samsung discussion Rel-16 5G_V2X_NRSL-Core R2-1912630

6.4.5 PC5 RRC procedures and information

Identification of the required PC5 RRC procedures, information to be sent to peer UE, UE behaviours, relation with the PC5-S procedures, PC5 RRC security aspects, etc.

R2-1914464 Left issues on PC5-S impact on AS-layer OPPO discussion

Proposal 1 For broadcast L2 address, SCCH is used to carry PC5-S message (i.e., Direct_Communication_Request).

⇨ Noted (already covered by previous agreements)

Proposal 2 SCCH for broadcast L2 address relies on specified configuration in 38.331.

⇨ Agreed.

Proposal 3 RRC_CONNECTED UE reports established unicast link to network after Direct Communication Request / Accept, e.g., using SidelinkUEInformation.

[OPPO, ZTE]: Before the initial-S direct setup is done, the UE does not know L2 destion id.

Proposal 4 RRC_CONNECTED UE reports disconnected unicast link to network after Disconnect Request / Response, e.g., using SidelinkUEInformation.

Proposal 5 RRC_CONNECTED UE reports QoS parameter change to network after Link modification Request / Accept, e.g., using SidelinkUEInformation.

Proposal 6 RRC_CONNECTED UE reports modified L2 destination address to network if L2 destination id was changed, e.g., using SidelinkUEInformation.

⇨ Agree with the intention of proposal3 to 6.

⇨ TS38.300/38.331 specification rapporteur will take it into account.

Agreements on PC5-S impact on AS:
1: SCCH for broadcast L2 address relies on specified configuration in 38.331.
2: RRC_CONNECTED UE reports established unicast link to network after Direct Communication Request / Accept, e.g., using SidelinkUEInformation.
3: RRC_CONNECTED UE reports disconnected unicast link to network after Disconnect Request / Response, e.g., using SidelinkUEInformation.
4: RRC_CONNECTED UE reports QoS parameter change to network after Link modification Request / Accept, e.g., using SidelinkUEInformation.
5: RRC_CONNECTED UE reports modified L2 destination address to network if L2 destination id was changed, e.g., using SidelinkUEInformation.

R2-1915791 Support (or not) of PC5-RRC for groupcast MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1912813

Proposal 3: Do not specify PC5-RRC signalling for groupcast in Rel-16.

⇨ Agreed.

Agreements on PC5-RRC:
1: Do not specify PC5-RRC signalling for groupcast in Rel-16.

R2-1915514 Remaining issues on SL RLF reporting LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1. Upon PC5 RLF declaration, UE's AS layer should send a PC5 RLF indication including PC5 Link Identifier to upper layer (i.e., V2X layer) to indicate the PC5 unicast link whose RLF declaration was made and PC5-RRC connection was released.

[Vivo]: Supports the proposal. L2 source and destination id cannot distinguish unique unicast link.

⇨ Agreed.

Agreements on SL RLF reporting:
1: Upon PC5 RLF declaration, UE's AS layer should send a PC5 RLF indication including PC5 Link Identifier to upper layer (i.e., V2X layer) to indicate the PC5 unicast link whose RLF declaration was made and PC5-RRC connection was released.

R2-1914466 Left issues on failure case handling for NR V2X OPPO discussion

Proposal 1 Send LS to SA2 and RAN1 for reusing the Keep-Alive message solution, and up to RAN1 to decide whether to further purse TX-UE based indication.

⇨ Noted (already covered by previous agreement).

Proposal 2 The SUI report upon SL RLF includes explicit failure indication.

⇨ Agreed.

Proposal 3 Upon the PC5-RRC connection release, the UE performs the following actions: 1) Discard any associated SL UE context, if any; 2) Release all associated SLRBs configuration including release of the RLC entity and the associated PDCP entity and SDAP; and 3) Indicate the release of the PC5-RRC connection to upper layers (e.g. PC5-S entity) if PC5-RRC connection release is triggered by AS-layer. FFS on behaviour for MAC layer, security keys and relevant timers (if any).

[Lenovo]: If security keys are FFS, how to release all corresponding SLRBs? [OPPO]: Actually OPPO assumes security keys should be released, but just by consideration of current SA3 status. [Intel]: Supports the proposal. [Huawei]: Ok to assume to release PDCP.

⇨ Agreed.

Proposal 4 If the UE is able to comply with the received configuration in AS-layer configuration message, it initiates PC5-RRC based AS-layer Configuration Complete. Otherwise, it initiates PC5-RRC based AS-layer configuration failure. FFS whether to follow proposal3 or not at PC5-RRC-based AS-layer configuration fails.

⇨ Agreed.

Proposal 5 Receiving AS-layer configuration failure message, or if timer expires before receiving response from counterpart UE, TX-UE handles it as sidelink RLF.

⇨ Noted.

Proposal 6 RAN2 to discuss whether / how it is needed to handle the case where CONNECTED UE fails to get SLRB configuration from network for unicast SL.

[Apple, Ericsson, Samsung, Lenovo]: Do not think we need special handling for it. [Ericsson]: We may consider NW should always signal reject message if not intends to configure the corresponding SLRB.

⇨ RAN2 will not introduce any special handling for the case.

Agreements on failure case handling:
1: The SUI report upon SL RLF includes explicit failure indication.
2: Upon the PC5-RRC connection release, the UE performs the following actions: 1) Discard any associated SL UE context, if any; 2) Release all associated SLRBs configuration including release of the RLC entity and the associated PDCP entity and SDAP; and 3) Indicate the release of the PC5-RRC connection to upper layers (e.g. PC5-S entity) if PC5-

RRC connection release is triggered by AS-layer. FFS on behaviour for MAC layer, security keys and relevant timers (if any).
3: If the UE is able to comply with the received configuration in AS-layer configuration message, it initiates PC5-RRC based AS-layer Configuration Complete. Otherwise, it initiates PC5-RRC based AS-layer configuration failure. FFS whether to follow proposal3 or not at PC5-RRC-based AS-layer configuration fails.

R2-1914441 RLM / RLF procedure in NR V2X Sidelink CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-1914465 SL RSRP measurement report via PC5-RRC OPPO discussion
R2-1914849 Considerations on SL RLM/RLF procedure Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1914852 SL UE capability aspects Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1914871 RLM/RLF for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core
R2-1914931 Remaining issues on PC5-RRC message exchange vivo discussion
R2-1914932 Discussion on sideink radio link management without physical layer indications vivo discussion
R2-1915150 RLM Procedure and RLF Recovery handling Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1915274 Discussion on SL link management Ericsson discussion 5G_V2X_NRSL-Core
R2-1915382 Remaining issues on capability transfer in sidelink Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1913333
R2-1915440 Disucssion on PC5 RRC left issues Apple discussion Rel-16 FS_NR_V2X
R2-1915441 Draft LS on keep alive function Apple LS out Rel-16 5G_V2X_NRSL-Core To:SA2
R2-1915503 On what is still possible for SL RLF detection Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core
R2-1915512 [DRAFT] Response LS on SL RLM_RLF LG Electronics Inc. LS out Rel-16 5G_V2X_NRSL-Core To:RAN1
R2-1915515 Remaining issues on SL RLM LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1915554 PC5-RRC Procedures for NR V2X Fraunhofer HHI, Fraunhofer IIS discussion R2-1912652
R2-1915601 PC5 L2/L3 protocols for unicast and groupcast Kyocera discussion
R2-1915792 Capturing RLM for NR sidelink in stage 2 MediaTek Inc. discussion Rel-16
R2-1915793 RLM and state modelling based on PC5-S connection MediaTek Inc. discussion Rel-16
R2-1915798 Asynchronous synchronisation reference sources MediaTek Inc. discussion Rel-16
R2-1915977 Discussion on the NR sidelink failure cases Huawei, HiSilicon discussion
R2-1915984 Discussion on Sidelink L3 RSRP and CSI reporting in NR SL Huawei, HiSilicon discussion
R2-1916125 PC5-RRC connection establishment and release with PC5 unicast link LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1916126 PC5-RRC and Uu RRC procedures LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1910640
R2-1916149 PC5-RRC and PC5-S interactions and their security in NR V2X Qualcomm Incorporated discussion Rel-16 5G_V2X_NRSL-Core R2-1913510
R2-1916159 PDCP for PC5-S, PC5-RRC Qualcomm CDMA Technologies discussion
R2-1916162 PC5-S, PC5-RRC RLC mode Qualcomm CDMA Technologies discussion
R2-1916165 PC5-RRC support for Groupcast Qualcomm CDMA Technologies discussion
R2-1916213 AS-layer configuration failure case in SL unicast Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1912441
R2-1916214 MAC PDU handling for Sidelink UE capabilities and Sidelink RRC reconfiguration Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-1916217 Discussion on SL-RSRP reporting Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-1916254 Issue on ping pong state transition for sidelink UE Beijing Xiaomi Software Tech discussion Late

R2-1915975 On potential RAN2 impacts related to security design for NR SL Huawei, HiSilicon discussion

6.4.6 L2/3 protocols for QoS support

Identification of the required L2/3 procedures, information to be sent NW/UE or peer UE, UE behaviours, etc.

R2-1915972 SLRB configurations handling during UE state transition Huawei, HiSilicon discussion

Proposal 1: When the UE performs state transition, the SLRB configurations including the PDCP, RLC and LCH should follows the ones obtained from the new UE state.

⇨ Agreed.

Proposal 2: In case the UE performs the state transition, the UE should apply the SLRB configurations of the new UE state, as long as the UE enters the new state and obtains the new SLRB configurations.

⇨ Agreed.

Proposal 3: During the transient period where the UE has already been in the new UE state but has not obtained the SLRB configuration in the new state, the UE should continue using the SLRB configurations obtained in the old UE state.

[Apple]: Proposal3 is required only for the case from idle/inactive to connected. [LG]: At RRC connection release, the UE may camp the different cell than the serving cell.

⇨ Agreed.

Proposal 3a: Such a transient period as in Proposal 3 includes:

- From the moment that the UE detects a cell to camp for NR Sidelink communication until the UE obtains the SL specific SIB which including the SLRB configuration;

- From the moment that the UE detects a cell to camp for NR sidelink communication until the UE obtains the SL dedicated configuration via the RRC reconfiguration procedure;

- From the moment that the UE receives the RRC connection setup/resume message until the UE obtains the SL dedicated configuration via the RRC reconfiguration procedure.

Proposal 4: For the cell reselection case for NR SL communication:

- it is left to UE implementation to obtain the SLRB configurations of the new cell in advance when it was camping on the old cell, in the case that the new cell is broadcasting the SL specific SIB; or

- the UE should continue using the SLRB configurations of the old cell during the SI request for SL specific SIB in the new cell, if the SL specific SIB in the new cell is on demand.

[OPPO]: What is intention? How to specify proposal4? [Ericsson, Nokia, CATT]: Does not support the second proposal. [Intel]: If anyway we have the first option, do we need to specify the second option? [Ericsson]: In the second case, another option is to stop TX until the acquision of new configuration from the new cell. Anyway on-demand system information is configured by NW so if problem, NW may not configure on-demand system information.

⇨ It is up to UE implementation how to configure SLRB when the UE camps on the cell using on-demand system information.

Proposal 5: When a PC5 QoS flow is remapped from an old SLRB to another new SLRB, for the data of the QoS flow that has been delivered from the SDAP to the PDCP/RLC entity of the old SLRB but has not been transmitted or successfully transmitted over PC5, the UE should continue the transmission of such data via the old SLRB for service continuity purpose.

[Ericsson]: Other solution is just to flush the buffered data. [OPPO]: Sounds not reasonable to delay applying the new configuration by NW and to continue the old configuration. [Ericsson, Interdigital]: Sounds so fancy mechanism which shouldn't be considered due to lack of time. [CATT]: Supports the proposal for service continuity.

⇨ Noted (Not supported). The associated note will be removed from the running CR.

Proposal 6: For the case that all the QoS flows originally mapped to an SLRB are remapped to other SLRB(s) and no QoS flow is mapped to the old SLRB afterward (e.g. when the UE change the state from OOC/RRC_IDLE/RRC_INACTIVE to RRC_CONNECTED), RAN2 to discuss how the UE can continue the transmission of the data remaining in the old SLRB.

⇨ Noted.

Agreements on SLRB configurations during UE state transition:

1: When the UE performs state transition, the SLRB configurations including the PDCP, RLC and LCH should follows the ones obtained from the new UE state.
2: In case the UE performs the state transition, the UE should apply the SLRB configurations of the new UE state, as long as the UE enters the new state and obtains the new SLRB configurations.
3: During the transient period where the UE has already been in the new UE state but has not obtained the SLRB configuration in the new state, the UE should continue using the SLRB configurations obtained in the old UE state.
4: It is up to UE implementation how to configure SLRB when the UE camps on the cell using on-demand system information.
5: The note in TS38.331 running CR, which is associated with proposal5, will be removed.

R2-1915970 Further discussion on SLRB configuration via SIB Huawei, HiSilicon discussion

Proposal 1: A set of specified SLRB configurations (including PDCP-Config, RLC-Config and LCH-Config) can be defined. The SL-specific SIB only needs to include some indexes which refer to the specified SLRB configurations that function as the SLRB configurations actually configured in the SIB.

[Apple]: Supports the proposal. [OPPO, Ericsson]: Want to see the estimated difference in the number of bits.

Proposal 2: The specified SLRB configuration indexes are respectively configured for unicast, groupcast and broadcast in the SL-specific SIB (indicating the SLRB configurations used for different cast type respectively).

⇨ Will be discussed as part of email discussion on TS38.331 running CR.

R2-1914604 Notification for Alternative QoS profiles Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core

R2-1914605 LS on Notification for Alternative QoS profiles Nokia, Nokia Shanghai Bell LS out Rel-16 5G_V2X_NRSL-Core To:SA2 Cc:RAN3

R2-1914449 UE Behavior Clarification during UE States Transition CATT discussion Rel-16 5G_V2X_NRSL-Core
=> Revised in R2-1916264

R2-1916264 UE Behavior Clarification during UE States Transition CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914453 Congestion control for NR SL CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1914467 Left issues on SLRB configuration OPPO discussion 5G_V2X_NRSL-Core

R2-1914542 Discussion on remaining issues on SLRB parameters ZTE Corporation, Sanechips discussion

R2-1914546 Handling of SLRB when UE RRC states transition ZTE Corporation, Sanechips discussion

R2-1914618 QoS in NR V2X Fraunhofer IIS, Fraunhofer HHI discussion
R2-1914933 Signaling procedure for QoS and SLRB management vivo discussion
R2-1914934 Mode switch for QoS guarantee in NR V2X vivo discussion R2-1912266
R2-1914935 Signaling content for QoS and SLRB management vivo discussion
R2-1915134 SLRB configuration for NR V2X UE Lenovo, Motorola Mobility discussion Rel-16 R2-1912647
R2-1915135 Discussion on QoS management for NR V2X Lenovo, Motorola Mobility discussion Rel-16 R2-1912648
R2-1915149 HARQ feedback impact on RAN2 Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1915176 SLRB Configuration in NR V2X LG Electronics Inc. discussion Rel-16
R2-1915187 Mobility challenges for NR V2X platooning/groupcast Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1913160
R2-1915188 Network Based Monitoring and Reporting of QoS parameters for NR V2X Sidelink Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1913150
R2-1915194 Discussion on application of SLRB configuration during UE state transition Nokia, Nokia Shanghai Bell discussion 5G_V2X_NRSL-Core
R2-1915275 Discussion on NR SL QoS management Ericsson discussion 5G_V2X_NRSL-Core
R2-1915277 Discussion on priority configuration Ericsson discussion 5G_V2X_NRSL-Core
R2-1915439 Discussion on QoS flow in SLRB Apple discussion Rel-16 FS_NR_V2X
R2-1915724 SLRB configuration during UE state transition Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1915725 Support of non-standardized PQI in NR V2X Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1915779 Discussion on SLRB configuration during state transition Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-1916090 Remaining issue on Groupcast and Broadcast QoS Report ITRI discussion 5G_V2X_NRSL-Core
R2-1916218 Remaining Issues on Handling of SLRB configuration handling Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-1916220 SLRB Reconfiguration Handling Samsung discussion Rel-16 5G_V2X_NRSL-Core R2-1912489

6.4.7 L2/3 protocols for cross-RAT resource allocation

Including L2/3 aspects for i) NR sidelink mode 1 scheduling by LTE Uu, ii) NR sidelink mode 2 resource allocation by LTE Uu, iii) LTE sidelink mode 4 resource allocation by NR Uu, and iv) LTE sidelink mode 3 resource allocation by NR Uu

R2-1914853 Cross-RAT scheduling for NR V2X SL Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1914451 Discussion on inter-RAT Cell Selection/Reselection CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-1914545 Consideration on NR V2X cross RAT support ZTE Corporation, Sanechips discussion
R2-1915147 BSR and SR reporting in Cross RAT V2X operation Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1915148 Cross RAT SL Configuration Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1915829 Open issues on system information OPPO discussion Rel-16 5G_V2X_NRSL-Core
R2-1916190 Inter-RAT BSR MediaTek Inc. discussion Rel-16

6.4.8 Others

Support of simultaneous configuration of mode1 and mode2 (first we need to complete design of mode1 and mode2), other working group procedures which require RAN2 discussion, etc.

⇨ Simultaneous mode1 and mode2 operation is deprioritized from RAN2 point of view in Rel-16

R2-1914656 Support of simultaneous mode 1 and mode 2 MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1913238
R2-1914872 RAN2 Aspects of Simultaneous Configuration of Mode 1 and Mode 2 InterDigital discussion Rel-16 5G_V2X_NRSL-Core R2-1912875
R2-1915152 SL and UL BWP Numerology Mismatch Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1915178 Simultaneous Mode 1 and Mode 2 Configuration LG Electronics Inc. discussion Rel-16 R2-1913277
R2-1915186 Discussion on SL radio link management Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1913127
R2-1915195 Discussion on the support of simultaneous mode 1 and mode 2 Nokia Denmark discussion 5G_V2X_NRSL-Core
R2-1915377 Inter-node resource coordination in NR SL Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1913319
R2-1915727 On the support of simultaneous configuration of mode1 and mode2 Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core R2-1912791
R2-1915777 UE Mobility for Simultaneous Mode 1 & Mode 2 configuration Apple discussion Rel-16 5G_V2X_NRSL-Core R2-1913498
R2-1915778 Resource allocations for UEs with simultaneous mode 1 & mode 2 configurations Apple discussion Rel-16 5G_V2X_NRSL-Core R2-1913499
R2-1915828 Simultaneous use of mode 1 and mode 2 KT Corp. discussion R2-1913943
R2-1915974 Discussion on related aspects of system information Huawei, HiSilicon discussion
R2-1915976 [Draft] LS on potential RAN2 impacts related to NR SL security design Huawei LS out 5G_V2X_NRSL-Core To:SA3 Cc:SA2
R2-1915978 Discussion about mode coexistence for NR sidelink Huawei, HiSilicon discussion
R2-1916005 Sidelink RLF enhancement MediaTek Inc. discussion Rel-16
R2-1916025 Considerations on simultaneous configuration of mode 1 and 2 ITL discussion Rel-16 R2-1913856
R2-1916038 Discussion on association between sidelink data and resource allocation modes ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core R2-1913772
R2-1916127 MAC header for SL-SCH Qualcomm CDMA Technologies discussion

6.5 Optimisations on UE radio capability signalling

(RACS-RAN-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: RP-191088). Documents in this agenda item will be handled in a break out session
Time budget: 0.5 TU
Tdoc Limitation: 2 tdocs

6.5.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs, etc

Workplan

R2-1915790 Work plan for RACS-RAN work item MediaTek Inc., CATT discussion Rel-16
⇨ Noted

Incoming LSs

R2-1914349 LS Reply on Handling of multiple PLMN-assigned capability IDs (S2-1910680; contact: vivo) SA2 LS in Rel-16 RACS-RAN, RACS To:RAN2

- Mediatek thinks that we don't need to take any action based on this

⇨ Noted

Stage 2 CRs

R2-1915781 Introduction of RACS [36.300] MediaTek Inc. draftCR Rel-15 36.300 15.7.0 B RACS-RAN-Core

- Ericsson suggest to change "PLMN assigned" to "network assigned" to align to the CT1 terminology

⇨ Change "PLMN assigned" to "network assigned"

⇨ Endorsed as Stage 2 running CR with the above change

R2-1915784 Introduction of RACS [38.300] MediaTek Inc. draftCR Rel-16 38.300 15.7.0 B RACS-RAN-Core

⇨ Change "PLMN assigned" to "network assigned"

⇨ Endorsed as Stage 2 running CR with the above change

6.5.2 UE radio capability signalling using UE capability identity

Other aspects, if any, can also be covered here

Remaining issues on UE capability identity

R2-1915265 Remaining issues on UE capability ID Huawei, HiSilicon discussion Rel-16 RACS-RAN-Core R2-1912406

- Regarding obs 1, QC thinks this can happen today in general, not only in this case. Also wonders why we should send an LS to RAN3, this could be brought there directly.
- QC/ZTE think that proposal 1 is a clarification with no RAN2 impacts.
- Spreadtrum/ZTE thinks there is no need to send any LS to RAN3

⇨ No need to send any LS to RAN3. This issue can be raised in RAN3 if needed

> Agreement (update of a previous one):
> 1. The UE shall associate the assigned PLMN specific UE Capability ID to the current UE capability configuration for this PLMN instead of the capabilities it has transferred earlier. No RAN2 impact is expected based on this.

R2-1915759 Remaining aspects on Capability ID Ericsson discussion Rel-16 RACS-RAN-Core

- discussed together with the next document

R2-1915079 UE radio capability ID exchange over X2/Xn and S1/NG interface ZTE Corporation, Sanechips discussion Rel-16 RACS-RAN-Core R2-1912672

- ZTE thinks we can wait for RAN3 feedback
- Mediatek/Intel agree

⇨ We wait for RAN3 feedback first

R2-1915080 Introduction of UE radio capability ID in inter-node RRC messages ZTE Corporation, Sanechips draftCR Rel-16 38.331 15.7.0 B RACS-RAN-Core R2-1912673

PLMN-wide filter

R2-1914455 Re-consideration on PLMN-wide Filter CATT discussion Rel-16 RACS-RAN-Core

- QC thinks SA2 already discussed this and in case the discussion should continue there.
- Samsung/Ericsson think that proposal 2 is already possible by implementation and see no need to restrict according to proposal 1. Intel agrees.

⇨ Noted

R2-1914456 Draft LS on PLMN-wide Filter CATT LS out Rel-16 RACS-RAN-Core To:SA2, RAN3

6.5.3 Segmentation of UE radio capabilities

RRC processing delay

R2-1915785 Processing time for segmented UE capability MediaTek Inc. discussion Rel-16
- Ericsson agrees with the proposal
- HW wonders whether this only includes the processing time to include the first message
- QC thinks that 80ms is from the time the UE receives the UE cap enquiry to when it's ready to transmit the first segment.
- Ericsson thinks 80ms is the time to send all the segments.
- Intel thinks we are talking about processing time, not transmission time.
- Apple thinks that 80ms is problematic even if it's only the processing time.
- ⇨ We reconfirm that also in this case "processing time" is defined as the time from when the UE receives the UE capability enquiry to when it's ready to receive the grant to transmit the first segment(s). How many segments depends on the size of the grant
- QC thinks 80ms is a huge number and we don't think we should extend this
- HW thinks that with the definition above 80ms is ok
- Apple think this should be a function of the number of segments

Agreement: 1. Maintain the 80-ms processing time for UE capability transfer procedures where the UECapabilityInformation message is segmented.

R2-1915955 UE Radio Capabilities Segmentation Remaining Issues Apple (UK) Limited discussion Rel-16

R2-1915758 Maximum processing time for RRC Segmentation Ericsson discussion Rel-16 RACS-RAN-Core

Other aspects

R2-1915246 Transfer of segmented UECapabilityInformation by SRB2 Samsung discussion Rel-16 RACS-RAN-Core R2-1912513

R2-1915266 Remaining issues on UE capability segmentation Huawei, HiSilicon discussion Rel-16 RACS-RAN-Core R2-1912407

Stage 3 CR

R2-1915789 Introduction of UECapabilityInformation segmentation in 36.331 MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO, Qualcomm Incorporated draftCR Rel-16 36.331 15.7.0 B RACS-RAN-Core

6.6 Study on NR non-terrestrial network

(FS_NR_NTN_solutions; leading WG: RAN3; REL-16; started: Jun 18; target; Dec 19; SID: RP-190710). Documents in this agenda item will be handled in a break out session

Time budget: 0.5 TU

Tdoc Limitation: 6 tdocs

6.6.1 General

Rapporteur input. Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

Including outcome of the email discussion [107bis#66][NTN] Running TP (Thales)

R2-1914352 LS on dependencies on AS design for mobility management aspects of NTN in 5GS (S2-1910786; contact: Qualcomm) SA2 LS in Rel-16 FS_5GSAT_ARCH To:RAN2, RAN3 Cc:CT1
=> Noted

R2-1916377 Draft LS response on mobility management Thales
=> LS should simply only include a reference to our TR and section number and delete all explanations
=> The LS is revised in R2-1916394

R2-1916394 Draft LS on dependencies on AS design for mobility management aspects of NTN in 5GS Thales LS out Rel-16 FS_5GSAT_ARCH To:SA2, RAN3 Cc:CT1

[MCC]: Removed "draft" from the title and added RAN2 as the source.
=> Revised in R2-1916470

=> The LS is approved

R2-1914353 LS on system level design assumptions for satellite in 5GS (S2-1910787; contact: Qualcomm) SA2 LS in Rel-16 FS_5GSAT_ARCH To:RAN2, RAN3 Cc:CT1

R2-1916378 Draft LS response of system level design Thales
=> LS should simply only include a reference to our TR and section number and delete all explanation
=> The LS is revised in R2-1916395

R2-1916395 Draft LS on LS on system level design assumptions for satellite in 5GS Thales LS out Rel-16 FS_5GSAT_ARCH To:SA2, RAN3 Cc:CT1

[MCC]: Removed "draft" from the title and added RAN2 as the source.
=> Revised in R2-1916620

=> The LS is approved

R2-1914632 [107bis#66][NR/NTN] Running TP (Thales) THALES pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions
=> The TP is revised in R2-1916376

R2-1916376 [107bis#66][NR/NTN] Running TP (Thales) THALES pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions
=> The TP is agreed

R2-1914633 Inputs to TR 38.821 recommendations THALES, Nomor, Nokia, Vodafone, Mediatek pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions
=> revised in R2-1916379

R2-1916379 Inputs tso TR 38.821 recommendations THALES, Nomor, Nokia, Vodafone, Mediatek pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions
Multiple transmission of the same TB to lower residual BLER should also be configured.
- Nokia would like to keep this at it has impact on DRX design

Per LCH
- ZTE and Mediatek think that there was a lot of problems. Nokia thinks that we agreed to this in the SI

=> per LCH is removed from the conclusions
=> Delete “The comparison of the respective specification impacts between Earth moving and fixed beam has been carried out via contributions (FFS conclusion).” Add a note that earth fixed beams will be concluded later
=> the TP is revised in R2-1916396

R2-1916396 Inputs tso TR 38.821 recommendations THALES, Nomor, Nokia, Vodafone, Mediatek pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions
- CATT thinks we should leave the discussion of feeder link switch. ZTE thinks that there is a lot of impact and we should limit the scope.
- Huawei understands that there maybe some implementation considerations that may require the options to be available. This can be discussed in the plenary.

=> Delete the feeder link switch recommendation and let the decision on which solution will be captured in the WI description in the plenary based on operator inputs.
=> The TP is agreed in R2-1916397 with the sentence deleted.

=> From RAN2 point of view, the Study item is considered complete, but pending conclusion of the the earth fixed beams.

6.6.2 Requirements and Scenarios

Contributions on overall requirements and scenario prioritization. Key issues and requirement related to one of the areas identified below should be submitted in those AIs.

R2-1914721 Input to TR38.821 on NGSO constellation greater than 600 km HUGHES Network Systems Ltd pCR Rel-16 38.821 0.9.0 FS_NR_NTN_solutions R2-1912405
=> The TP is agreed

6.6.3 User Plane

6.6.3.1 MAC Enhancements

Contributions related to MAC enhancements (e.g. DRX, HARQ, RA enhancements) and any other identified issues
Additional timers can be treated in later phases of the work
Impact of HARQ on other procedures and impact of propagation delay to user plane procedures (e.g. RA)

R2-1915566 DRX adaptions for NTN Ericsson, Nomor Research GmbH, THALES discussion Rel-16 FS_NR_NTN_solutions
=> Revised in R2-1916383

R2-1916383 TP merge on DRX, HARQ and UL scheduling Ericsson, Panasonic, Nomor Research GmbH discussion Rel-16 FS_NR_NTN_solutions
- ZTE is concerned with the feasibility aspects of the solution in 7.2.1.5.1. Ericsson indicates that it may be beneficial from RAN2 and feasibility can be checked later.
- LG and Nokia thinks that we should capture all the solutions and then discuss feasibility.

=> Update “However the feasibility of the solutions have not been discussed in detail and will be addressed during work item phase”
=> The TP will be reviewed over email discussion

✉ **[108#08][NTN] DRX, HARQ, and UL schedule (Ericsson)**
Intended outcome: agreed TP
Deadline: Thursday 28/11/2019
=> Endorsed in R2-1916415

R2-1915567 Remaining details on Random access for NTN Ericsson discussion Rel-16 FS_NR_NTN_solutions
=> Revised in R2-1916388

R2-1916388 Remaining details on Random access for NTN Ericsson discussion Rel-16 FS_NR_NTN_solutions
- ZTE thinks that the solution was explicitly excluded in RAN1 and the last solution is not workable. CATT explains that everything has been captured in RAN1

=> remove FFS from TP
=> The TP will be reviewed over email discussion merged with RAN1 input

✉ **[108#05][NTN] Remaining details on random access (Ericsson)**
Intended outcome: agreed TP
Deadline: Thursday 28/11/2019
=> Endorsed in R2-1916414

R2-1915081 TP on RACH capacity calculation based on typical cell sizeZTE Corporation, Sanechips draftCR Rel-16 38.321 15.7.0 B FS_NR_NTN_solutions
=> Revised in R2-1916392

R2-1916392 TP on RACH capacity calculation based on typical cell sizeZTE Corporation, Sanechips draftCR Rel-16 38.321 15.7.0 B FS_NR_NTN_solutions

=> The TP is agreed

Not treated

R2-1914497 Consideration on the SPS/CG for NTN CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1914498 TP on Random Access procedure CATT draftCR Rel-16 38.321 15.7.0 F FS_NR_NTN_solutions

R2-1914589 On Increasing Number of HARQ Processes in NTN MediaTek Inc. discussion

R2-1914615 DRX ambiguous period enhancements for NTN Asia Pacific Telecom co. Ltd discussion FS_NR_NTN_solutions

R2-1915166 Discussion on CG and SPS in NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1915167 Discussion on DRX operation in NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1915168 Discussion on time advance in NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1915169 Discussion on UL scheduling enhancement in NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1915179 Impact of disabling HARQ on DRXPANASONIC R&D Center Germany discussion R2-1912570

R2-1915422 Consideration on SR and DRX in NTN ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions

R2-1915565 Further details on uplink enhancements for NTN Ericsson discussion Rel-16 FS_NR_NTN_solutions

R2-1915568 On RACH less for NTN Ericsson discussion Rel-16 FS_NR_NTN_solutions

R2-1915913 Scheduling enhancement in NTN LG Electronics Inc. discussion FS_NR_NTN_solutions R2-1904730

R2-1916036 Remaining issues on random access procedures in NTN ETRI discussion Rel-16 FS_NR_NTN_solutions

R2-1916115 Remaining issues on RACH without location information Huawei, HiSilicon discussion Rel-16 FS_NR_NTN_solutions

R2-1916116 RACH resource configuration and utilization in NTN Huawei, HiSilicon discussion Rel-16 FS_NR_NTN_solutions

R2-1916148 Discussion on DRX operation associated with disabling HARQ feedback LG Electronics Polska discussion Rel-16 FS_NR_NTN_solutions R2-1913869

R2-1916196 Discussion on DRX operation impact for NTN Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions

6.6.3.2 RLC and PDCP Enhancements

Contributions on this topic related to RLC reordering (e.g. timers and SN space) and any other identified issues.

R2-1916104 PDCP enhancement for NTN LG Electronics Inc. discussion Rel-16 FS_NR_NTN_solutions

=> Not treated

6.6.4 Control Plane

R2-1916241 UE positioning requirements and solution analysis in NTN Nokia, Nokia Shanghai Bell, Thales discussion Rel-16 FS_NR_NTN_solutions

=> Revised in R2-1916384

R2-1916384 UE positioning requirements and solution analysis in NTN Nokia, Nokia Shanghai Bell, Thales discussion Rel-16 FS_NR_NTN_solutions

- Ericsson doesn't think we should capture this as it is setting requirements on positioning that is not part of our work.

- Sony supports including this and it is a way of scoping future work
- Thales doesn't want to set new requirements and we should analyse existing rel-16 solutions and their applicability to NTN. ESA also doesn't see why we need to set new requirements.

=> Noted

6.6.4.1 Mobility

Solutions addressing additional mobility issues and solutions for GEO and LEO based systems, including CHO specific aspects related to NTN, and positioning.

R2-1916240 Discussion on Earth fixed vs. Earth moving cells in NTN LEO Nokia, Nokia Shanghai Bell, Thales discussion Rel-16 FS_NR_NTN_solutions R2-1913923
=> Revised in R2-1916385

R2-1916385 Discussion on Earth fixed vs. Earth moving cells in NTN LEO Nokia, Nokia Shanghai Bell, Thales discussion Rel-16 FS_NR_NTN_solutions R2-1913923
- Ericsson disagrees as we haven't had a chance to study this in detail. Nokia explains that we are comparing the two and started this discussion since last meeting.
- Interdigital thinks that we have already done a lot of study on the moving beams and just refer to those for comparison purposes.
- Vodafone thinks that we need to extract and focus on what is the impact to the standards and the required work needed
- Ericsson indicates that we can complete the SI in February and continue studying this

=> The TP is moved over email discussion

✉ **[108#06][NR/NTN] Earth fixed vs. Earth moving cells in NTN LEO (Thales)**
- Extract what are the impact on the standards and the main differences with moving beams
- Capture the preliminary findings
  Intended outcome: agreed TP
  Deadline: Thursday 28/11/2019

=> Endorsed in R2-1916351

R2-1914494 Feeder link switch CATT discussion Rel-16 FS_NR_NTN_solutions
=> Revised in R2-1916386

R2-1916386 Feeder link switch CATT discussion Rel-16 FS_NR_NTN_solutions
- ITRI and CMCC support this. Nokia and ZTE would like to spend more time reviewing.

=> both solutions will be captured and details of wording and how it is captured can be discussed over email discussion
=> Revised to R2-1916555

R2-1916555 TP on Feeder Link Switch CATT discussion Rel-16 FS_NR_NTN_solutions
=> the TP is agreed

R2-1914974 Service continuity between TN and NTN NEC discussion
=> Revised in R2-1916387

R2-1916387 Service continuity between TN and NTN NEC discussion
=> Not agreed

R2-1914719 CHO for NTN LEO Ericsson pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions Late
=> Revised in R2-1916390

R2-1916390 CHO for NTN LEO Ericsson pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions Late
- InterDigital and Ericsson thinks that "- Pre-triggering based triggering" shouldn't be included and the impacts are not prope

rly analysed.
- Vodafone reminds everyone that the terminals will be simple and we should take this into account during WI and keep the solutions simple.

=> The pre-triggering based triggering and distance based triggering solution is removed from the TP

=> add distance as an example of the location based triggering
=> the TP is agreed with the deletion above in R2-1916393

Not treated

R2-1914495 Measurement Initiation Issue for NTN System CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1914585 Conditional HO with L2 packet duplication in NR NTN MediaTek Inc. discussion R2-1906376

R2-1914587 Configuring Threshold-based Soft Handover in LEO NTN MediaTek Inc. discussion

R2-1914588 Synchronized Handover without Random Access in LEO NTN MediaTek Inc. discussion Late

R2-1914724 Reduced User Data Interruption for NTN Ericsson pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions R2-1912595 Late

R2-1914739 Conditional Handover for Non-Terrestrial Networks Intel Corporation discussion Rel-16 FS_NR_NTN_solutions

R2-1914973 location based mobility enhancement NEC discussion

R2-1915073 Discussion on TAI list provisioning and TAU triggering ITRI discussion FS_NR_NTN_solutions

R2-1915082 Remaining issues in NTN-TN service continuity ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions R2-1912669

R2-1915083 Location report to help apply country specific policies ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions R2-1912668

R2-1915170 Discussion on handover for NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1915190 Discussion on feeder link switch for transparent LEO Huawei, HiSilicon pCR Rel-16 38.821 0.8.0 FS_NR_NTN_solutions

R2-1915191 Discussion on mobility with steerable beams in NTN Huawei, HiSilicon discussion Rel-16 FS_NR_NTN_solutions

R2-1915198 Further considerations on ephemeris data provision CMCC discussion Rel-16

R2-1915230 Location report in NTN Sony discussion Rel-16 FS_NR_NTN_solutions R2-1913354

R2-1915599 Hand-over rate in Earth fixed vs. Earth moving cells in NTN LEO THALES discussion Rel-16 38.821

R2-1915770 Conditional measurement configuration for LEO NTN InterDigital discussion Rel-16 FS_NR_NTN_solutions R2-1913603

R2-1916242 Pre-trigger based mechanism for NTN connected mode mobility enhancements Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions R2-1913924

6.6.4.2 Idle mode

Identify RAN2 specific issues/aspects to address related to tracking area management
Paging capacity analysis and solutions.
Impacts to cell selection reselection.
Contributions should address aspects of LEO and GEO separately (i.e. different sections/proposal within each contribution)

R2-1915084 Satellite type differentiation ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions
=> Revised in R2-1916389

R2-1916389 Satellite type differentiation LG discussion Rel-16 FS_NR_NTN_solutions
=> Not critical for the study items
=> Not agreed

Not treated

R2-1914496 Discussion on Location Report CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1914586 Improving Cell Reselection using Next Cell Information in LEO-NTN MediaTek Inc.
discussion R2-1912655

6.6.4.3 Other

Including outcome of the email discussion [107bis#67][NTN] Ephemeris data handling (Ericsson)

R2-1914763 Report of email discussion [107bis#67] [NR - NTN] Ericsson pCR Rel-16
38.821 0.8.0 FS_NR_NTN_solutions Late
=> Revised in R2-1916391

R2-1916391 Report of email discussion [107bis#67] [NR - NTN] Ericsson pCR Rel-16
38.821 0.8.0 FS_NR_NTN_solutions Late
=> The review is moved to email discussion

✉ **[108#07][NR/NTN] TP on ephemeris (Ericsson)**
Intended outcome: Agreed TP
Deadline: Thursday 28/11/2019
=> Endorsed in R2-1916469

Not treated

R2-1915085 Consideration on ephemeris data handling ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions

R2-1915189 Discussion on SSB measurement in NTN Huawei, HiSilicon pCR Rel-16 38.821 0.8.0
FS_NR_NTN_solutions

R2-1915192 Service continuity between TN and NTN Huawei, HiSilicon pCR Rel-16 38.821 0.8.0
FS_NR_NTN_solutions

R2-1915543 System Information in NTN Nomor Research GmbH discussion Rel-16 38.821 R2-1912697

R2-1915824 Cell identification information in NTN LG Electronics discussion Rel-16
FS_NR_NTN_solutions

6.7 NR Industrial Internet of Things (IoT)

(NR_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: RP-192324)
Time budget: 3 TU
Tdoc Limitation: 12 tdocs

6.7.1 General

Rapporteur input etc.
Including outcome of the email discussion [107bis#41][IIOT] Running CR 38331 (Ericsson)
Including outcome of the email discussion [107bis#42][IIOT] Running CR 38321 (Samsung)
Including outcome of the email discussion [107bis#43][IIOT] Running CR 38323 (LG)

LS in

R2-1914313 Reply LS on propagation delay compensation for reference time information delivery (R1-1911693; contact: Nokia) RAN1 LS in Rel-16 NR_IIOT-Core To:RAN2

⇒ **noted**

R2-1914337 LS Response on the feasibility of time synchronization accuracy requirements and related testing (R4-1912743; contact: Nokia RAN4 LS in Rel-16 NR_IIOT-Core To:RAN1, RAN2 Cc:RAN5

⇒ **noted**

CRs

R2-1914762 RRC running CR for NR IIoT Core — Ericsson — draftCR — Rel-16 — 38.331 — 15.7.0 — NR_IIOT-Core

⇒ **endorsed**

R2-1914897 PDCP Running CR for NR IIOT — PDCP Rapporteur (LG Electronics Inc.) — draftCR — Rel-16 — 38.323 — 15.6.0 — NR_IIOT-Core

- Nokia think there were comments not addressed, and think we shouldn't endorse now. Nokia would like to work out more issues first.
- LG think most comments are editorial and not functional.

⇒ **Can address further comments on this version in the work towards the next version**

R2-1914898 PDCP open issues for IIOT — PDCP Rapporteur (LG Electronics Inc.) — discussion — Rel-16 — NR_IIOT-Core

⇒ **noted**

R2-1915338 MAC Running CR for NR IIOT — Samsung — draftCR — Rel-16 — 38.321 — 15.7.0 — B — NR_IIOT-Core

⇒ **endorsed**

R2-1916553 Work plan for Industrial IoT WI finalization — Nokia (Rapporteur) — discussion — NR_IIOT

For 36.331, Ericsson to provide Draft CR to next meeting
For 36.323, LG to provide Draft CR to next meeting
Running CRs: 2 weeks before submission deadline, to allow input to address editors notes

✉ **[108#11][IIOT] Running CR 38.300 (Nokia)**
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916355

✉ **[108#32][IIOT] Running CR 38.331 (Ericsson)**
Intended outcome:
Deadline: 2020-01-23

✉ **[108#52][IIOT] Running CR 38.323 (LG)**
Intended outcome: Endorsable draft CR
Deadline: 2020-01-30

✉ **[108#12][IIOT] Running CR 38.321 (Samsung)**
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916352

✉ **[108#53][IIOT] EHC remaining issues (Huawei)**
Remaining Issues focus on:
- Whether to reset EHC protocol at PDCP re-establishment
- EHC feedback mechanism details
- EHC packet formats

Intended outcome: Report and agreeable TTP
Deadline: 2020-01-30

✉ **[108#47][IIOT] UE feature list (Nokia)**
Intended outcome: identify features relations, and discuss optionality
Deadline: 2020-01-30

DISCUSSION
- For EHC, Ericsson think processing order is not important.

- Chair proposes to remove this aspect until we have decision that it need to be taken into account

6.7.2 TSC

6.7.2.1 Accurate reference timing

Accurate reference timing delivery from gNB to UE using broadcast and unicast RRC signalling (with EUTRA Rel-15 signalling solution as baseline) for synchronization requirements defined in TS 22.104

Propagation Delay Compensation

R2-1915547	Propagation Delay Compensation by the gNB NR_IIOT-Core R2-1913267	MediaTek Inc.	discussion	Rel-16
R2-1915812	Discussion of RAN1 LS on propagation delay compensation and way forward Incorporated discussion R2-1913645	Qualcomm		
R2-1914749	On downlink delay compensation	Ericsson	discussion	NR_IIOT-Core
R2-1915691	Remaining issues for accurate reference time delivery discussion Rel-16 NR_IIOT	Nokia, Nokia Shanghai Bell		
R2-1914959	Propagation delay compensation for reference time	vivo	discussion	R2-1912311

DISCSUSSION on the 5 tdocs above

- Nokia think that R1 has pointed out that TA/2 is sufficient to achieve requirements, and that this is indeed needed.
- QC agrees that PD compensation is needed but think it can be left to gNB. QC think R1 has not been very explicit on when and how to apply TA/2 compensation by UE, and would prefer to not specify a UE mechanism.
- Intel think that we can specify that network can pre-compensate and indicate to the UE of that is done, or just indicate to the UE whether to compensate or not.
- Huawei agrees that UE shall compensate, and think the TA granularity is only a problem in the 15kHz numerology.
- Oppo think compensation shall be done by gNB. UE willnot be able to do accurate compensation in all cases.
- QC and Intel think the UE PD compensation is difficult.
- ZTE think that for broadcast Gnb cannot compensate anyway.
- Samsung think UE can do propagation delay compensation for Bcast time delivery.
- Oppo think we don’t need to specify anything for Bcast
- QC think that for unicast the network can always do pre-compensation.
- Ericsson think the network cannot know TA accurately. Chair think it is possible if the network uses PDCCH order. Samsung agrees with Ericsson that UE should do compensation. ZTE agrees.
- Ericsson think an indication is not useful.
- Nokia think it would be best to specify details but as this seems not possible think this indication is good.
- ZTE think that there may be problem scenarios that neither UE nor gNB do compensation and that neither do compensation.
- Ericsson think that if there is an indication the indication shall indicate to the UE to perform the compensation.

The following is FFS (Ericsson and LG have concerns):

⇒ **R2 assume that UE may perform propagation delay compensation.**

⇒ **We don’t specify how the UE perform propagation delay compensation.**

⇒ **For unicast and broadcast, the network can indicate to the UE to not do delay compensation.**

Reference Cell

R2-1914963	Reference cell for the dedicated provisioning of timing information	vivo	discussion

- QC wonder why SRB3. Vivo think it is for EN-DC. MTK wonder if En-DC is applicable for TSC. Vivo think yes. Nokia agree with MTK and think we can focus on SA. Oppo think there is MR-DC case.

⇒ **The reference cell of the time at the ending boundary of the SFN indicated by *referenceSFN* can be PCell**

R2-1915341 Reference Cell for Reference SFN Samsung discussion Rel-16 NR_IIOT-Core

Uncertainty

R2-1914748 Remaining issues for reference time delivery Ericsson discussion NR_IIOT-Core

R2-1914408 Open Issues of Reference Timing Delivery CATT discussion Rel-16 NR_IIOT-Core

DISCUSSION on the 2 tdocs above

- Ericsson indicate for P2 the number of bits can be lower
- ZTE prefer LSB

Linear 9
LSB 3

- Samsung wonder what zero means. Ericsson think it means that the provided value is exact.

⇒ **We use linear encoding**

⇒ **The uncertainty value of reference time info is the uncertainty field value multiplied by 25 ns**

⇒ **The number of bits to encode uncertainty field is 15 and the maximum value of uncertainty field is 2^15 -1, i.e., the maximum uncertainty value of reference time info is 0.8096 millisecond**

⇒ **The smallest uncertainty field value is zero**

R2-1915213 Further discussion on IE design of TimeReferenceInfo used for IIOT CMCC discussion Rel-16 NR_IIOT-Core

R2-1914725 Remaining issues for accurate reference timing delivery in TSC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-16 NR_IIOT-Core

R2-1914775 Remaining issues of reference time delivery Huawei, HiSilicon,China Southern Power Grid Co., Ltd discussion NR_IIOT-Core

R2-1915964 Remaining issues on accurate reference timing delivery NTTDOCOMO, INC discussion NR_IIOT-Core

6.7.2.2 Scheduling Enhancements

Enhancements to satisfy QoS for wireless Ethernet when using TSC traffic patterns and support for TSC message periodicities with non-integer multiple of NR supported CG/SPS periodicities.

6.7.2.2.1 CG and SPS for TSC - General and configuration impact

Including support for TSC message periodicities with non-integer multiple of NR supported CG/SPS periodicities, configuration and ranges and limits.

General

Offline 53, CG/SPS configuration and MAC CE for confirmation, report in R2-1916527 (Nokia)

R2-1916527 [Summary of] Offline 53, CG/SPS configuration and MAC CE for confirmation Nokia discussion

Proposal 4a: Multiple CG activation/deactivation confirmation MAC CE contains only a bitmap of CG configurations using CG ID unique per MAC entity and configured by RRC in addition to CG ID introduced by RAN1.

Proposal 4b: Multiple CG activation/deactivation confirmation MAC CE uses new LCID value.

Proposal 5a: In MAC specifications, correct formulas for CG occasion determination so that they consider N sequentially, as for SPS.

Proposal 5b: For Type-1 CG, after receiving the configuration, UE should first identify the lowest N value corresponding to the nearest available CG occasion, then, N is incremented after each CG occasion starting from the N identified in the first step.

Proposal 5c: Introduce timeReferenceSFN in RRC CG Type 1 configuration to avoid ambiguity of time assumed by the UE for its initialization.

Proposal 6a: HARQ process ID determination with multiple SPS configurations is based on the following formula:
HARQ Process ID = [floor(CURRENT_slot/periodicity)] modulo nrofHARQ-Processes + harq-ProcID-offset, Where CURRENT_slot = [(SFN × numberOfSlotsPerFrame) + slot number in the frame]

Proposal 6b: In Rel-16, SPS periodicities in RRC are expressed in number of slots.

DISCUSSION
P1
- QC think this has been discussed twice, and think we don't need this.
- CATT support this. CATT and Nokia think that the only reason for earlier concerns is the cross-slot-boundary-PUSCH which is now supported by R1.
- QC think we already have additional flexibility.
- Samsung think the advantage of this is just flexibility and think this is not essential. MTK agrees with Samsung
- Chair: No consensus
- Nokia want to send an LS to R1 to ask for technical feasibility. QC think it is not the feasibility that is in question it is the value.

P5b/c
- Nokia propose to resolve next meeting,
- Chair: postponed to next meeting

P6
- QC point out that we need to consider how to treat R-15.

⇒ **For CG/SPS periodicity determination, support the maximum values of N as specified already, depending on SCS, i.e. N= 640 for 15kHz, 1280 for 30kHz, 2560 for 60kHz and 5120 for 120kHz.**

⇒ **In addition to specific CG-LCH mapping It should be possible to configure that all CGs are allowed, and none of the CGs are allowed**

⇒ **Multiple CG activation/deactivation confirmation MAC CE contains only a bitmap of CG configurations using CG ID unique per MAC entity and configured by RRC in addition to CG ID introduced by RAN1.**

⇒ **Multiple CG activation/deactivation confirmation MAC CE uses new LCID value.**

⇒ **In MAC specifications, correct formulas for CG occasion determination so that they consider N sequentially, as for SPS.**

⇒ **HARQ process ID determination with multiple SPS configurations is based on the following formula: HARQ Process ID = [floor(CURRENT_slot/periodicity)] modulo nrofHARQ-Processes + harq-ProcID-offset, Where CURRENT_slot = [(SFN × numberOfSlotsPerFrame) + slot number in the frame]**

⇒ **In Rel-16, SPS periodicities in RRC are expressed in number of slots.**

Traffic CG/SPS alignment

Use selected subset CG/SPS occasions – implicit etc

R2-1914740 Support of multiple SPS and CG configurations Intel Corporation discussion Rel-16 NR_IIOT-Core

DISCUSSION

- Nokia think O1 is not correct, especially for DL, as we don't have skip for DL. Oppo agrees with this. Nokia agree for CG and UL. Intel think that if SPS mismatches we can use dynamic grant.
- LG agrees
- Sequans think that this is a bit risky to not restrict which resource the UE can use. Does this really work?
- Oppo think UE can generate transmissions outside the traffic pattern.

⇒ **noted**

R2-1914962 Discussion on the periodicity misalignment between TSC traffic and SPS/CG vivo discussion R2-1912316

R2-1915133 Remaining issue on support non-integer periodicity for TSN traffic Lenovo, Motorola Mobility discussion Rel-16

Use selected subset CG/SPS occasions – specity occasions matching to TSN pattern

R2-1916230 CG/SPS alignment on Resource Boundary Pattern Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1913622

⇒ **Noted**

DISCUSSION General and on the 2 noted tdocs above

- Fujitsu think that this kind of formula is better than overprovisioning and support this. CATT also support. CATT think this can be applied as is no change needed.
- Ericsson think the formula is too complicated, and wonder how this would work with dynamic TDD.
- Nokia support the direction to have a formula in MAC to achieve a resource allocation that aligns with the traffic. Nokia thin that TDD etc conflicts can be avoided,
- LG think that if we want to avoid over-provisioning a bitmap is easier to use.
- Lenovo also think this is complex, and wonder if it can handle all kinds of configuration, e.g. multiple SPS and CG configuration to a LCH.
- MTK think we need to take a step back. Why can't we use dynamic scheduling if patterns are known.
- Samsung also think existing solutions can work, but if anything really needed prefer bitmap
- Huawei support the formula.
- Vivo and Oppo can accept a bitmap.
- Sequans think that for a bitmap we would need to look at a TP first.

Main proposals on the table	SoH (multi support allowed)
a) Do nothing	10
b) Adapt to TSC traffic – formula	8
c) Adapt to TSC traffic – bitmap	7

⇒ **We don't introduce additional mechanism to align CG/SPS to TSC traffic pattern period**

Use selected subset CG/SPS occasions – specify periods of unavailability

R2-1915993 Approaches comparison of supporting TSN periodicities of non-integer CG-SPS periodicities CMCC discussion Rel-16 NR_IIOT-Core

Better matching CG/SPS pattern - bitmap

R2-1914779 Solutions to mitigate the periodicity misalignment between TSC traffic and CG/SPS Huawei, HiSilicon discussion NR_IIOT-Core

Better matching or selected subset, in any case aligned with TSN pattern

R2-1915092 Scheduling enhancements for TSC network OPPO discussion Rel-16

Better matching CG/SPS pattern – Shift by DCI or RRC reconfig

R2-1914750 On support of non-integer multiple of CG/SPS periodicities Ericsson discussion NR_IIOT-Core

Better matching CG/SPS pattern - Cyclic Shift

R2-1915692 CG/SPS alignment with TSN periodicity Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-1915017 Handling of periodicity misalignment between CG and TSN traffic Spreadtrum Communications discussion

Other

R2-1914751 SPS and CG remaining config aspects Ericsson discussion NR_IIOT-Core

R2-1914780 Remaining issues for CG/SPS configurations Huawei, HiSilicon discussion NR_IIOT-Core

R2-1915994 Supported periodicity values for CG SPS Configurations CMCC discussion Rel-16 NR_IIOT-Core

R2-1915337 Configuration of Multiple CG/SPS Configurations Samsung discussion Rel-16 NR_IIOT-Core

Collisions etc

R2-1915694 SPS collisions with multiple SPS configurations Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT R2-1909491

R2-1915827 Views on SPS collisions and some CG issues Qualcomm Incorporated discussion

HF boundary

R2-1916231 Impact of CG/SPS with periodicities non dividing HF length Sequans Communications discussion Rel-16 FS_NR_IIOT

R2-1915693 Further discussion on CG periodicities and CG and SPS occasions determination for new periodicities Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-1916512 Motivation for a dedicated mechanism for misaligned periodicities handling Nokia, Nokia Shanghai Bell, Sequans, Fujitsu discussion NR_IIOT

Further Enhancements

R2-1915995 Repetitions Transmission for SPS configurations CMCC discussion Rel-16 NR_IIOT-Core

R2-1914965 SPS and CG configuration issue on the partial overlapping TSN traffic pattern vivo discussion R2-1912318

6.7.2.2.2 CG and SPS for TSC - L2 impacts

Including CG SPS Confirmation, LCP impact if any etc.

General

R2-1914752 SPS and CG remaining MAC aspects Ericsson discussion NR_IIOT-Core

LCH restrictions and grant applicability

R2-1916071 The remaining issues on LCP restriction for CG ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core

R2-1914753 Reliability aspects in LCP restriction enhancement Ericsson discussion NR_IIOT-Core

R2-1914782 Discussion on mapping between LCH and CG configurations Huawei, HiSilicon discussion NR_IIOT-Core

Confirmation MAC CE

R2-1914781 New Confirmation MAC CE for multiple CG configurations Huawei, HiSilicon discussion NR_IIOT-Core

R2-1915334 New CG Confirmation MAC CE Samsung discussion Rel-16 NR_IIOT-Core

R2-1914409 Remaining Issues of Multiple SPS/CG Configurations CATT discussion Rel-16 NR_IIOT-Core

R2-1915093 Discussion on confirmation MAC CE for TSC network OPPO discussion Rel-16

R2-1915740 Configured grant confirmation MAC CE Intel Corporation discussion Rel-16 NR_IIOT-Core

R2-1915917 Contents of a new CG confirmation MAC CE for multiple CG configurations LG Electronics Inc. discussion NR_IIOT-Core Late

R2-1915999 Left issues of the new confirmation MAC CE format CMCC discussion Rel-16 NR_IIOT-Core

HARQ

R2-1915164 L2 impacts on supporting IIoT traffic NTT DOCOMO, INC. discussion Rel-16 NR_IIOT-Core R2-1913738

Further Enhancements

R2-1915229 Consideration on activation/deactivation for CG Type 1 Sony discussion Rel-16 NR_IIOT-Core R2-1913353

6.7.2.2.3 Other

Including systems aspects such as TSC assistance information, other L2 impacts if any,

R2-1915335 Configured Grant with Periodicity of any Integer Number of Slots Samsung discussion Rel-16 NR_IIOT-Core

R2-1915814 More granularity for PDCP discardTimer Qualcomm Incorporated, Ericsson discussion

R2-1915741 TSC assistance information Intel Corporation discussion Rel-16 NR_IIOT-Core

R2-1914754 Miscellaneous issues with L2 impacts Ericsson discussion NR_IIOT-Core

6.7.2.3 Ethernet Header Compression

Specify Ethernet header compression based on structure-aware algorithm.

Padding removal

R2-1916248 Padding removal Nokia, Nokia Shanghai Bell, vivo, OPPO, Mediatek, Samsung, Sony, Intel, ZTE, NTT Docomo discussion Rel-16 NR_IIOT R2-1915695
DISCUSSION
- Ericsson think there is decompression complexity, and think depending on Type field, padding may need to be added also for >64B PDUs. If we have this, it should be a separate feature with separate capability. QC also has some concern.
- QC wonder how often there will be padding. QC think that SA1 20B may only be application, and think that real field packets are longer. Nokia think SA1 has specified size that is carried over the 3GPP system. Docomo agrees with QC.
- LG agrees with Ericsson and QC.
- LG think the compression might not correctly remove the padding. LG think the compressor might be complex. Nokia think that for complex cases the compressor just don’t do it.
- Nokia don’t understand which cases padding is added for >64B PDUs.
- Vivo think that adding padding is a mandatory Eth function that can be reused in the decompressor.
- Futurewei think we don’t need optionality.

⇒ **There is support in R2 to have Ethernet Padding Removal for IIOT**

⇒ **The following tentative agreements are postponed, we send an LS to SA1, but we will decide next meeting regardless if get a reply in time or not.**

Padding Removal tentative agreements
- Specify the EHC decompressor behaviour such that it checks the frame size after reapplying the Ethernet header and in case it is lower than 64 bytes, the decompressor appends random bytes to make the frame a valid Ethernet frame (e.g. 64 bytes long).
- We don't specify the behaviour of the compressor/padding removal side
- Padding removal is an optional feature that is configurable.

R2-1915810 Draft LS on need for Ethernet padding compression Qualcomm Incorporated LS out To:SA1
Offline 64, word-smithing, revision in R2-1916547 (QC)
R2-1916547 LS on need for Ethernet padding compression RAN2 LS out Rel-16 NR_RAN_IIOT To:SA1

⇒ **Approved (this is the final version)**

R2-1915908 Dicussion on padding removal LG Electronics Inc. discussion NR_IIOT-Core
R2-1916212 Padding Removal and Feedback for Context Establishment China Telecommunications discussion

General

R2-1915075 Feedback for EHC algorithm Samsung discussion NR_IIOT R2-1912527
- Ericsson think feedback should be configurable on/off

⇒ **RAN2 confirm the feedback mechanism already agreed in the last meeting and apply this to both AM DRB and UM DRB.**

⇒ **The EHC algorithm is not allowed to be configured for a uni-directional link.**

R2-1914741 Details for Ethernet header compression solution Intel Corporation discussion Rel-16 NR_IIOT-Core
- Intel proposes PDCP control PDU

⇒ **noted**

R2-1915813 Feedback Frame Format for EHC and CIoT link Qualcomm Incorporated discussion
- QC proposes to have feedback need to have a EHC header, i.e. not just an IE, for portability
- Nokia support this.

⇒ **Noted**

DISCUSSION on the two tdocs above
- Intel think only CID is needed.

Chair: Continue this next meeting, not enough time

R2-1914778 Support non-compressed packets transmission without context establishment in EHC Huawei, HiSilicon discussion NR_IIOT-Core
R2-1916110 Handling of new flow when the number of stored contexts are already equal to the MAX_CID SHARP Corporation discussion Rel-16 NR_IIOT-Core R2-1913881
R2-1915864 Handling of EHC protocol at PDCP re-establishment LG Electronics Inc. discussion Rel-16 NR_IIOT-Core
R2-1915077 SDAP control PDU handling in Rel-16 EHC Samsung discussion NR_IIOT
R2-1914756 On EHC feedback Ericsson discussion NR_IIOT-Core
R2-1915907 Discussion on EHC feedback LG Electronics Inc. discussion NR_IIOT-Core

R2-1915546 Ethernet Header Compression Message Format MediaTek Inc. discussion Rel-16 NR_IIOT-Core R2-1913265
R2-1914410 Discussion on Ethernet Header Compression CATT discussion Rel-16 NR_IIOT-Core
R2-1915698 Further details of feedback mechanism Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT
R2-1915615 Remaining issues for EHC in TSC ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1912901
R2-1914777 Remaining issues for EHC Huawei, HiSilicon discussion NR_IIOT-Core
R2-1914960 Remaining issues for EHC vivo discussion R2-1912313
R2-1915094 Discussion on Ethernet Header Compression OPPO discussion Rel-16
R2-1915695 Padding removal Nokia, Nokia Shanghai Bell, vivo, OPPO, Mediatek, Samsung, Sony, Intel, ZTE discussion Rel-16 NR_IIOT Revised

Further Enhancements

R2-1914755 Ethernet header compression Ericsson discussion NR_IIOT-Core

DISCSUSSION
P2
- QC support
- Huawei wonder QTAG is detected. Intel think there is a special field Type that indicate the presence of QTAG. QC agrees and think this format detection can be done once and doesn't change.
- LG think we can remove QTAG if we can regard it to be a EHC-static field. LG wonder if this is static. Nokia think there is a field that can be different, Nokia think however such packets can either be compressed with different CID or not compressed at all, so from EHC perspective this can be static.
- MTK support this
- Oppo think P2 is ok but not P3.
- CATT Intel vivo Huawei also support P2 Samsung ok if static. LG too

⇒ **Q-TAGs can be removed in EHC, considering all sub-fields, assuming this is static (i.e. no dynamic indications in EHC)**

R2-1916155 Remaining issues of header compression for IIoT NTT DOCOMO INC. discussion Rel-16 NR_IIOT-Core
R2-1915697 Ethernet Header compression profiles Nokia, Nokia Shanghai Bell discussion Rel-16
R2-1915696 Joint IP and Ethernet Header compression Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT
NR_IIOT
R2-1915809 RoHC and EHC configuration on same PDCP entity Qualcomm Incorporated discussion
R2-1915906 Discussion on performing ROHC and EHC LG Electronics Inc. discussion NR_IIOT-Core

6.7.3 Intra-UE prioritization and multiplexing

Resource conflicts between dynamic grant (DG) and configured grant (CG) PUSCH and conflicts involving multiple CGs. UL data/control and control/control resource collision according to WID. At R2#107bis RAN2 deprioritized work on Intra-UE prioritization and multiplexing to allow R1 progress. Expectation that normal priority can be assumed for R2#108.

6.7.3.1 Handling of deprioritized transmissions

Autonomous transmission - Not

R2-1915817 Views on UE autonomous transmission using CG Qualcomm Incorporated discussion

- QC think that if we do retransmission in CG, time-line need to be specified, conditions for when it is allows to use CG for retransmission need to specified etc.

- QC think that if aut transmission is applied, we can reuse NR-U solution
- LG think e.g. CG retransmission timer is not needed. Nokia also agree that NR-U doesn't need to be reused exactly. Oppo think different HARQ process is complex

⇒ **noted**

R2-1916068 Some Considerations on autonomous re-transmission for deprioritized configured grant ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core

- ZTE has concerns that this may lead to obsolete BSR information provided to the network and the network will no know how old the information i

⇒ **noted**

R2-1914757 Handling of de-prioritized MAC PDUs Ericsson discussion NR_IIOT-Core

- Ericsson has looked into NR-U and think that we cannot reuse this as-is, that same/new transmission and same/different HARQ process requires a lot of discussion time

⇒ **noted**

R2-1914966 Discussion on the MAC PDU recovery procedure vivo discussion R2-1912320
- Vivo point out that R1 is ending their work this meeting

⇒ **noted**

Discussion on the above tdocs, on complexity etc
- LG think that Ericsson has concerns on timers which may be needed. LG think that the existing CG timer is sufficient. LG think that BSR can be outdated due to other reasons and there should be no additional problem. LG think no new timeline is needed. Nokia agrees. Sequans too.
- Lenovo also don't agree with the timeline issue, and think the HARQ process is clear, agree with LG on BSR.
- Huawei agree with LG and Lenovo.
- CATT has a solution that requires two changed lines in MAC. Sequans agrees that a solution can be very simple.
- Apple agrees with LG on the BSR comment.
- Samsung anyway think that we cannot immediately use the NR-U solution and are not sure we can conclude this on time.
- ZTE clarifies that if a retransmission becomes a new transmission the gNB may think this is accurate.
- Oppo think that we need to modify the behaviour on the CG-timer.
- LG think the pending PDU procedure for NR-U can be similar to what is needed here.

- Chair: there is still support to allow autonomous retransmission in a CG resource. Most companies think the complexity concerns are not serious and R1 will not need to be involved.

Autonomous Transmission Same HARQ process

R2-1915095 Consideration on UE autonomous retx for the deprioritized MAC PDU OPPO discussion Rel-16

R2-1915163 Recovery for deprioritized data transmission NTT DOCOMO, INC. discussion Rel-16 NR_IIOT-Core R2-1913746

R2-1915916 Deprioritized PDU Retransmission Schemes Apple (UK) Limited discussion Rel-16 NR_IIOT-Core

R2-1916186 Remaining issues on de-prioritized MAC PDU on CG resource LG Electronics Polska discussion Rel-16 NR_IIOT-Core

R2-1914606 HARQ process ID for deprioritized configured grants III discussion Rel-16 NR_IIOT-Core

Autonomous Transmission - Diff HARQ Proc

R2-1914412 Handling of Dropped MAC PDU CATT discussion Rel-16 NR_IIOT-Core

- LG think this is considered to be a new transmission, and this need to be discussed. LG think the UE should perform a retransmission. CATT think this PDU was never transmitted so there is no problem to make this a new transmission. Sony agree with CATT that this need to be a new transmission. LG are ok. LG think that if this is a new transmission there is huge complexity increase, and think for NR-U retransmission is assumed, and there may be less impact with this.
- Samsung think the text need correction, e.g. the word “obtain” is not proper. CATT think this PDU was deprioritized and need to be obtained from its buffer.
- QC wonder why we cannot reuse NR-U.
- Huawei think that if we use different HARQ process we may destroy soft combining.
- MTK think we need to consider HARQ RV.

Offline 40, summarize main options including draft TP, including the following options same/different HARQ process, retransmission/new transmission, including possible reuse from NR-U (CATT)

R2-1916531 Summary of offline #40 on UE autonomous (re)transmission CATT discussion

DISCUSSION

Chair asks if the TPs are correct to server as baseline, i.e. if they can be fixed to work.

- Oppo think the TPs have different behaviour wrt retransmission timer
- vivo wonder if gNB schedules retransmission before aut retransmission, what happens. CATT think this is handled in the TP. QC share the concern of retransmission, and think there is a time issue.
- QC think that the TPs assume that the next CG occasion can be used. QC think this is not always the case as CG period can be as small as 2symbols.
- LG agrees that all 3 TPs can work as baseline

P1

- LG agree with the intention, but think we need to change to multi-CG-configuration.
- CATT think P1 is according to majority view, but can possibly leave it FFS. MTK think different CGs can be for different traffic different TBs.

⇒ **The TPs can work, as baseline (maybe some details to fix)**

⇒ **UE autonomously transmits the de-prioritized PDU as a new transmission in a CG resource from the same CG configuration (FFS different CG configuration)**

⇒ **The new CG uses the same HARQ process as the deprioritized CG.**

⇒ **The Aut (re-) transmission feature is optional**

Offline 41, determine R1 impact if any (QC)

R2-1916561 Title Qualcomm Inc

DISCUSSION

- LG think that there are many such timing relation relating to MAC, we can use current time Nsymb can be applied.
- Lenovo also think processing time restrictions need to be respected, but nothing new is needed in the R1 spec. Huawei agrees, and think this is similar to repetitions. Sequans also think the current time can be used
- MTK share QCs concern, and think we need to avoid requiring the UE to perform retransmission within PUSCH preparation time
- Sony think this legacy processing time and there is no issue.
- Oppo think a) would be sufficient, and think the time could be shorter than current PUSCH prep time.
- Vivo think we should send an LS.

- Ericsson doesn't think it work as the network doesn't know what to expect. Ericsson think that we need to take into account the point in time when deprioritization happens. IDT agrees.
- Samsung think this could be left for UE implementation.
- Intel also think we need to consider the processing time.
- CATT think the configuration is strange, where one CG config would have periodicity smaller than PUSCH preparation time.
- CATT think R1 has not defined the preparation time for configured grant.
- CATT think a Note in the TS relying on UE implementation is the logical choice.

- Nokia think whether to do autonomous retransmission or not depends on whether the transmission has been started or not.
- Ericsson are worried that the network is not ready to receive this aut transmission. Lenovo think there is no problem, as the network can receive CG.

P2

- UE shall not perform autonomous transmission of the PDU if network has scheduled a retransmission grant for the PDU.
- Lenovo think this was discussed for NR-U and we agrees there that we would not specify the time relation. IDT think the NR-U discussions were slightly different
- LG think we should send LS to R1.
- Chair Observation: If this timeline would need to be specified, it would be in R1
- LG think this is a theoretical problem. The network can know whether there will be a autonomous retransmission and when it will occur, so this is not important. Any issue can be handled by the network.
- Ericsson would like to ensure that the UE behaviour is specified such that UEs don't use this to ignore dynamic grants.
- Chair: no blocker is found, we can continue, but shall address FFS

⇒ **The case when the next CG resource cannot be used for a retransmission because of UE processing time limitation can occur (no consensus on whether this is a corner case or a mainstream case). Leave the timeline restriction to UE implementation (we don't specify a new number, can specify something).**

⇒ **UE shall not perform autonomous transmission of the PDU if network has scheduled a retransmission grant for the PDU. FFS whether we specify some time restriction.**

R2-1915212 Further discussion on handling of de-prioritized MAC PDU CMCC discussion Rel-16 NR_IIOT-Core

R2-1915490 On Autonomous Transmission of Pending MAC PDUs Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core

R2-1916232 UE autonomous retransmission in a CG resource Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1913624 Late

Autonomous Transmission – and Further Enhancement

R2-1915228 How to handle the deprioritized PDU for uplink Intra-UE prioritization Sony discussion Rel-16 NR_IIOT-Core

R2-1914783 UE autonomous transmission in a CG resource for deprioritized data Huawei, HiSilicon, SIA discussion NR_IIOT-Core Withdrawn

R2-1916221 Transmission of Deprioritized Data by Retransmission Grant Samsung discussion Rel-16 NR_IIOT-Core

Dynamic Retransmission

R2-1915096 Issues on ignoring the received UL grant for deprioritized PDU OPPO,Sony,Huawei, HiSilicon, ZTE Corporation, Sanechips discussion Rel-16

R2-1916233 Enhanced rescheduling for dropped CG Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1913625 Late

R2-1915811 Views on handling of PDUs and data of deprioritized grants Qualcomm Incorporated discussion R2-1913641

6.7.3.2 Data Data prioritization with CG

L1 Priority General

R2-1916019 Discussion on RRC configurations of L1 parameters for eURLLC Huawei, HiSilicon discussion Rel-16 NR_L1enh_URLLC-Core

⇒ **noted**

R2-1915830 MAC prioritization for Intra-UE prioritization Qualcomm Incorporated discussion

P1
- Nokia wonder about p1 if we don't have data.
- CATT don't want MAC prioritization to be based on L1 priority. Intel agrees. Chair think the L1 priority is only about pre-emption/deprioritization cases.
- Huawei agrees that L1 priority should not be used in MAC.
- Vivo think that L1 priority can be used if same priority in MAC.

P2
- MTK has doubts.
- Convida think all 3 proposals wold follow the same logic.

⇒ **noted**

R2-1914879 L2 aspects of priority level indication InterDigital discussion Rel-16 FS_NR_IIOT

DISCUSSION

P2
- CATT think we shall discuss P2.
- QC wonder if this is overkill for CG. Intel agrees with QC. Interdigital think this should be general, and also applicable to CG. Huawei agree this is for DG.
- ZTE and LG think just one L1-priority is needed. LG think absence of configuration means that both are applicable.
- Samsung think L1 priority is not applicable to CG.

P3
- Ericsson indicate this is already agreed
-

⇒ **RRC configures a LCH with one or more allowed L1-priority level values (e.g. in a *allowedPriorityLevels* list*)* in *LogicalChannelConfig* (as in the current LCH restrictions), applied at least for mapping to DG, FFS for CG**

DISCUSSION General
- LG think it is beneficial to use two level priority in MAC as well.
- Nokia think we can use this by introducing L1 priority in LCH mapping rules. ZTE agrees, and think earlier agreements are still valid. Interdigital agrees.
- Fujitsu clarifies that the L1 priority is not data priority, and think it could be beneficial if L2 can map to L1 priority as L1 can then act without additional complexity.
- Convida think we shold be careful, as the L1 priority is actually a restriction.
- Huawei think we should consider how to consider mapping LCH to DG.
- Samsung think the L1 priority is orthogonal to prioritization in MAC.

General

R2-1914411 Intra-UE prioritization framework considering RAN1/RAN2 agreements CATT discussion Rel-16 NR_IIOT-Core

DISCUSSION
- LG cannot accept P5.
- Sony don't understand P5
- CATT wonders whether any priority levels shall be able to pre-empt any lower priority PDU.
- LG think we should decide how to determine the priority.

Offline 52, develop TP for LCH-priority based Data-Data and SR-Data prioritization in R2-1916526 (Samsung)

R2-1916526 Summary of Offline 52: TP for LCH-priority based Data-Data and SR-Data prioritization Samsung draftCR Rel-16 38.321 B NR_IIOT-Core

DISCUSSION

- QC think we need to change the wording

P1

- Oppo wonders which case is intended to be covered, and agree that data availability need to part of P1.
- LG think we need to avoid using resource priority in MAC.

⇒ **For CGCG conflicts, and CGDG conflicts, the priority value of an uplink grant (UL-SCH resource) is the highest priority of the LCHs that is multiplexed or can be multiplexed in MAC PDU, taking into account LCH restrictions and data availability.**

⇒ **If PUCCH resource for an SR's transmission occasion overlaps a UL-SCH resource, SR's transmission is allowed (prioritized) based on a comparison of priority of the LCH that triggered the SR and a priority value for the UL-SCH resource (where the priority value is determined as in previous agreement), if the priority of the LCH that triggered the SR is higher.**

⇒ **For CG-CG conflict with equal priority, prioritization is up to UE implementation.**

⇒ **For SR-Data conflict with equal priority, UL-SCH (i.e. data) is prioritized.**

R2-1915491 Intra-UE Prioritization with Per-Grant Priority Indication: MAC Perspectives Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core

R2-1915139 Solution for intra-UE prioritization Huawei, HiSilicon discussion NR_IIOT-Core

R2-1915342 Priority Value of an Uplink Grant Samsung discussion Rel-16 NR_IIOT-Core

R2-1914758 Main functions of intra-UE data-data prioritization Ericsson discussion NR_IIOT-Core

R2-1914878 Intra-UE Prioritization for Overlapping PUSCHs InterDigital discussion Rel-16 FS_NR_IIOT

R2-1915097 Intra-UE prioritization involving configured grant OPPO discussion Rel-16

R2-1915742 Intra UE prioritization of UL Data and Data Intel Corporation discussion Rel-16 NR_IIOT-Core

R2-1914413 MAC PDU Priority Determination CATT discussion Rel-16 NR_IIOT-Core R2-1912211

R2-1914415 The Prioritization between MAC CEs and UL Data CATT discussion Rel-16 NR_IIOT-Core R2-1912216

R2-1915918 Remaining issues in intra-UE prioritization LG Electronics Inc. discussion NR_IIOT-Core Late

R2-1916076 Consideration on HARQ conflict between configured grant and dynamic grant ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1913047

R2-1916185 Impacts of L1 priorities on data prioritization Fujitsu discussion Rel-16 NR_IIOT-Core

Equal Priority

R2-1914414 Equal-priority Handling CATT discussion Rel-16 NR_IIOT-Core R2-1912212

R2-1914969 Discussion on the UE handling for the equal priority of uplink grants vivo discussion R2-1905762

R2-1915018 Equal priority handling for CG and CG collision Spreadtrum Communications discussion

R2-1916000 Handling for CG resource collision of equal priority CMCC discussion Rel-16 NR_IIOT-Core

6.7.3.3 SR Data prioritization

R2-1915340 Prioritization of SR Transmission for URLLC Samsung discussion Rel-16 NR_IIOT-Core R2-1912495

R2-1914880 Intra UE Prioritization between SR and PUSCH InterDigital discussion Rel-16 FS_NR_IIOT R2-1912885

R2-1914759 Intra-UE control-data – SR over PUSCH Ericsson discussion NR_IIOT-Core

R2-1914776 Prioritization issues for MAC CEs and PUSCH Huawei, HiSilicon discussion NR_IIOT-Core

R2-1914968 Remaining issues for SR and PUSCH collision vivo discussion

R2-1915098 Discussion on SR cancelling on intra-UE prioritization involving SR OPPO discussion Rel-16

R2-1915492 Intra-UE Prioritization between SR and PUSCH Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core

R2-1915923 Enhancements of SR cancellation for URLLC traffic LG Electronics Inc. discussion NR_L1enh_URLLC-Core Late

6.7.3.4 Other

R2-1915099 Intra-UE prioritization between multiple SRs OPPO discussion Rel-16

R2-1916075 Consideration on the multiplexing BSR MAC CE and URLLC data ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1913046

R2-1914964 URLLC transmission within measurement gap vivo discussion R2-1912317

R2-1915919 Measurement gap skipping for TSN traffic LG Electronics Inc. discussion NR_IIOT-Core R2-1913135 Late

6.7.4 PDCP duplication enhancements

PDCP duplication with up to 4 RLC entities configured by RRC. Mechanisms or enhancements relating to dynamic control of how a set or subset of configured RLC entities or legs are used for PDCP duplication, duplication activation/deactivation.

6.7.4.1 Network Controlled Duplication

Network coordination

R2-1915493 Network Coordination for Uplink PDCP Duplication Nokia, Nokia Shanghai Bell, LG Electronics, III, Spreadtrum, NTT Docomo, Fujitsu, Mediatek, CATT, Samsung, Asia Pacific Telecom discussion Rel-16 NR_IIOT-Core

- QC propose to reword to “beneficial”. Nokia think that is ok
- Huawei think we don’t send an LS.
- Ericsson think we shouldn’t be very specific.

⇒ **Network coordination is beneficial for PDCP duplication in the uplink in NR-DC/CA architectures.**

R2-1915494 [Draft] LS on Network Coordination for UL PDCP Duplication Nokia, Nokia Shanghai Bell LS out Rel-16 NR_IIOT-Core To:RAN2

- Many companies think the LS shall be simplified

Offline 62, revision of DRAFT LS in R2-1916544 (Nokia)

R2-1916544 [Draft] LS on Network Coordination for UL PDCP Duplication Nokia, Nokia Shanghai Bell LS out Rel-16 NR_IIOT-Core To:RAN3

- Ericsson think R3 can decide if to do anything in any case and think the “Study ..” part shall be removed.

- LG think this is important for MAC CE. Chair think the nodes need to know but the issue is whether this is by signalling OAM etc. Futurewei agrees and think for Rel-15 this was not needed
- Docomo want to keep the “study ..”

⇒ **Remove “and study the coordination mechanisms for this purpose at RAN3’s discretion”**

⇒ **With this change the LS is approved in R2-1916576**

General

R2-1915495 Configuration and Control for Uplink PDCP Duplication discussion Rel-16 NR_IIOT-Core — Nokia, Nokia Shanghai Bell

DISCUSSION

P1

- Vivo think primary path can be for SCell that might be deactivated, and how can we then transmit data via the primary path. Oppo also wonders this. Intel think this is the case also for Rel-15, and support this proposal.
- Huawei think primary path should be possible to deactivate e.g. at bad radio conditions. LG agrees. LG think primary path is mainly for control PDU transmission. Sharp agrees, Apple as well. Apple think it can be even up to UE implementation which path is primary.
- Lenovo support the proposal. QC too. QC think that we anyway need to ensure the primary path works, QC think it is simple to follow Rel-15. Samsung and CATT also support. Oppo too
- Ericsson think either way could work.
- Nokia think this is the simplest proposal.
- CATT think there would need to be changes e.g. to move primary path at deactivation.
- MTK think we shouldn’t introduce restrictions.

The primary path should not be de-activated for data PDUs.

- Agree 10
- Not agree 7

P2

- Intel think all-DRB approach is better. Intel think the most typical case is that you change activation status for many DRBs at the same time.
- LG think most DRBs would not use duplication and think per DRB is sufficient.
- Samsung think all DRB format is better for all cases when no of DRBs > 1
- Samsung think network coordination is needed regardless MAC CE format
- Ericsson support this proposal
- QC support the proposal. QC think overhead is not an issue, and think there is more need for coordination when all DRBs are included.
- Huawei agree with this proposal.
- Intel think the all-DRB approach is the way of Rel-15.
- Nokia think there are two or more legs in a certain node, which is different to rel-15.

P3

- Nokia clarifies that this is intended for case that coordination will not be in place.
- MTK think that we can consider this if R3 decides to not have network coordination.
- Nokia think this can also be for future compatibility.
- Apple think we don’t need this, and it will introduce complexity, Oppo agrees. LG too
- Chair: no support

P4

- vivo think fallback state is split bearer for DC
- Samsung think there can be assymetric and think there are benefits to have RRC explicitly configure initial state of all legs.
- LG agrees with vivo that we need to consider the deactivation state.
- Ericsson think this proposal is simple ..
- CATT think that All legs ON is a bad initial state as it may not be intended at all with the configuration. Fujitsu agrees with CATT and think we can agree that RRC can configure

⇒ **The primary path should not be de-activated for data PDUs.**

⇒ **For PDCP duplication controlling MAC CE format, per DRB signaling with the activation status of the associated RLC entities should be adopted in Rel-16.**

⇒ **The initial state for each leg can be configured by RRC**

R2-1914760 Configuration and RRC aspects of PDCP Duplication Ericsson discussion NR_IIOT-Core
DISCSUSSION
P5
- LG doesn't agree and think there is no reason to have this, and more complex.
- Lenovo think it is all under network control anyway, so Rel-15 principle can be reused.

P6
- Nokia support this. Samsung too. Apple support. Huawei support the intention
- Vivo think there are two ways, we could use the MAC CE to indicate this.
- QC wonder if there is any reason to configure like this, it is related to how LCP restrictions are applied at deactivation.
- LG don't support this. Split bearer is for increasing Tput, which is different to duplication. The only motivation is TS based, and split-bearer should not be regarded to be a fallback. QC agrees with these concerns, but think it dwould be ok to follow Rel-15.
- Samsung don't agree with LG.
- Nokia think we don't need RRC configuration, we can instead just have a rule specifying to use PSCell in 2ndary CG.

⇒ **When multiple RLC entities are configured for the DRB, and PDCP duplication is deactivated (less than 2 RLC entities activated for duplication), fallback to Split bearer operation is supported in Dual Connectivity (2 RLC entities belonging to different cell groups).**

⇒ **For fallback to split bearer operation, a pointer to the secondary RLC entity is introduced in RRC to identify which of the multiple configured RLC entities shall be used.**

R2-1914416 Primary Path and Initial State for PDCP Duplication CATT discussion Rel-16 NR_IIOT-Core
- LG think this introduces

⇒ **One PDCP entity has one primary path.**

R2-1914967 Discussion on the support of DC+CA duplication vivo discussion R2-1912321
Can the rel-15 MAC CE be used for the new rel-16 configurations?
- Ericsson support this, and it would be an on/off
- CATT agrees that rel-15 MAC CE can be used and the Rel-16 MAC CE shall not be able to active/deactive but just select the legs. Nokia agrees. LG agrees that Rel-15 MAC CE can be used. ZTE support this.
- Huawei think it is better to use rel-16 MAC CE only. Apple agrees with Huawei. MTK think that using only Rel-16 MAC CE is easier. Oppo too, and think it would be complex to specify how they work together.
- Huawei point out that R15 MAC CE include all DRBs.
- Apple don't want to do two steps.

⇒ **R16 MAC CE for both leg selection and on/off**

⇒ **R15 MAC CE on/off (for R16 configurations) is FFS**

R2-1916223 Configuration and Initial State of PDCP Duplication Samsung discussion Rel-16 NR_IIOT-Core R2-1912497

R2-1915028 Consideration on activation and deactivation of PDCP duplication Spreadtrum Communications discussion

R2-1915004 Deactivation of Primary Path Sharp discussion
R2-1914997 Configuration of PDCP duplication with up to 4 RLC entities Sharp discussion
R2-1915943 Remaining Issues for PDCP Duplication Enhancements for IIOT Apple (UK) Limited discussion Rel-16
R2-1915100 Discussion on data duplication enhancement in IIoT OPPO discussion Rel-16
R2-1915815 PDCP duplication enhancements and RLC AM Qualcomm Incorporated discussion R2-1913640
R2-1915862 Remaining issues in PDCP duplication LG Electronics Inc. discussion Rel-16 NR_IIOT-Core
R2-1916073 Considerations on support of split bearer in the case of PDCP duplication with multiple copies ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1913044
R2-1916096 Discussion on the support of CA duplication with multiple legs vivo discussion

MAC CE

R2-1914761 Open issues related to MAC CE for PDCP duplication Ericsson discussion NR_IIOT-Core
R2-1914417 Discussion on Duplication MAC CE CATT discussion Rel-16 NR_IIOT-Core R2-1912219
R2-1914900 MAC CE format for PDCP duplication LG Electronics Inc. discussion Rel-16 NR_IIOT-Core R2-1913761
R2-1914784 Network controlled activation/deactivation of PDCP duplication Huawei, HiSilicon discussion NR_IIOT-Core
R2-1914742 PDCP duplication with multiple RLC entities Intel Corporation discussion Rel-16 NR_IIOT-Core
R2-1914999 MAC CE structure for PDCP duplication activation/deactivation Fujitsu discussion Rel-16 NR_IIOT-Core R2-1913166
R2-1915336 MAC CE for RLC Activation and Deactivation Samsung discussion Rel-16 NR_IIOT-Core
R2-1915818 MAC CE structure for PDCP duplication enhancement Qualcomm Incorporated discussion R2-1913638
R2-1915996 Down selection on the PDCP Duplication MAC CE Structure CMCC discussion Rel-16 NR_IIOT-Core

LCH-to-Cell Restrictions

R2-1916222 Split Bearer Fallback at Deactivation of PDCP Duplication Samsung discussion Rel-16 NR_IIOT-Core R2-1912496
R2-1914785 Cell restriction for PDCP duplication with up to 4 legs Huawei, HiSilicon discussion NR_IIOT-Core
R2-1914418 LCH-to-Cell Restriction in Rel-16 CATT discussion Rel-16 NR_IIOT-Core

RLC stuck

R2-1914901 Handling of RLC stuck problem with PDCP duplication LG Electronics Inc., LG Uplus discussion Rel-16 NR_IIOT-Core R2-1913805

Further enhancements

R2-1914899 Redundant retransmission in PDCP duplication LG Electronics Inc., LG Uplus discussion Rel-16 NR_IIOT-Core R2-1913759
R2-1915000 NW-based per-packet PDCP duplication Fujitsu discussion Rel-16 NR_IIOT-Core R2-1913167

6.7.4.2 UE controlled Duplication

NOTE that UE based mechanisms has lower priority.

R2-1914419 Discussion on UE based Duplication Activation/Deactivation CATT discussion Rel-16 NR_IIOT-Core R2-1912220
R2-1914743 UE based PDCP duplication activation/deactivation Intel Corporation discussion Rel-16 NR_IIOT-Core R2-1912720
R2-1915019 Consideration on selective PDCP duplication Spreadtrum Communications discussion
R2-1915101 Discussion on UE-based data duplication enhancement OPPO discussion Rel-16
R2-1915245 UE-assisted Activation/Deactivation for UL PDCP Duplication Enhancements III discussion Rel-16 NR_IIOT-Core
R2-1915831 Value of UE-based PDCP duplication Qualcomm Incorporated discussion R2-1913639
R2-1915946 UE based PDCP Duplication Enhancement Apple (UK) Limited discussion
R2-1916074 Discussion on UE based PDCP Duplication activationdeactivation ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1913045

6.7.4.3 Other

R2-1914961 Discussion on LCID restriction vivo discussion R2-1910004
R2-1915102 Cell restriction for PDCP duplication in IIoT OPPO discussion Rel-16

6.8 NR Positioning Support

(NR_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191156). Documents in this agenda item will be handled in a break out session
Time budget: 1 TU
Tdoc Limitation: 6 tdocs

6.8.1 Organisational

Including incoming LSs, rapporteur inputs, etc
Including outcome of the email discussion [107bis#78][NR Pos] Running stage 2 CR on NR positioning (Intel)
Including outcome of the email discussion [107bis#79][NR Pos] Running CR to 38.331 on NR positioning (Ericsson)

R2-1914310 LS on SRS for NR Positioning (R1-1911634; contact: Intel) RAN1 LS in Rel-16 NR_pos To:RAN2, RAN3 Cc:RAN4
⇨ Noted

R2-1914727 Running stage 2 CR on positioning ([107bis#78][NR Pos]) Intel Corporation, ESA draftCR Rel-16 38.305 15.4.0 NR_pos-Core
⇨ Revised in R2-1916472

R2-1916472 Running stage 2 CR on positioning ([107bis#78][NR Pos]) Intel Corporation, ESA draftCR Rel-16 38.305 15.4.0 NR_pos-Core R2-1914727
Qualcomm think the multi-RTT aspects require some fine-tuning (among others) and want to clarify that this is a work in progress. Intel think we could endorse this as a baseline for further discussion. Qualcomm think we can use it as a baseline but it's not ready for formal endorsement. Nokia wonder if it matters very much if we call it "endorsed" or not.
⇨ For revision by email to take into account decisions of this meeting

✉ **[108#84][NR/Pos] Running stage 2 CR on positioning (Intel)**
Intended outcome: Agreeable CR to be submitted to RAN2#109.
Deadline: Thursday 2020-01-23

R2-1915690 Running CR for the introduction of NR positioning Ericsson draftCR Rel-16 38.331 15.7.0 B NR_pos-Core
⇨ For revision by email to take account of decisions of this meeting

✉ **[108#41][NR/Pos] Running CR to 38.331 on positioning (Ericsson)**
Update the running CR. Final version to include the whole RRC spec with the changes.
Intended outcome: Agreeable CR for merge into the large RRC CR.
Deadline: Thursday 2020-01-23

R2-1914731 UE capability on positioning Intel Corporation discussion NR_pos-Core
Intel clarify this is provided for information and comments are invited offline.
Nokia understand this would be a RAN2 area to decide and wonder what RAN1 are discussing. Intel report they are discussing the capability for PRS measurements, Rx-Tx measurements, SRS.
CATT think we have no LS from RAN1 and we should wait for official guidance. Intel think we need to collect company views on the work split between RAN1 and RAN2 and companies can also coordinate internally.
Qualcomm think RAN1 will not send an LS before February, and everything specific to a positioning method is our business to capture.
⇨ Noted

6.8.2 Architecture and protocol aspects

6.8.2.1 Support of NR RAT-dependent positioning

Including outcome of the email discussion [107bis#80][NR Pos] Capturing RAN1 parameters for positioning (Intel)

RAN1 parameters

R2-1914728 LPP CR Capturing RAN1 parameters for positioning ([107bis#80][NR Pos]) Intel Corporation draftCR Rel-16 36.355 15.5.0 NR_pos-Core
Intel note measurement results are not yet captured. We need further decisions on the organisation of positioning methods and how we handle the measurements.
Ericsson think the description of the downlink PRS should be separated. They also think there are some inconsistencies in the spreadsheet from RAN1 regarding the hierarchy of parameters.
Intel understand that RAN1 will look at these issues and send us an update.

✉ **[108#85][NR/Pos] Running CR to 36.355 (Intel)**
RAN1 parameters part to be complete by 2020-01-23. Further aspects can be developed until the next meeting deadline.
Intended outcome: Agreeable CR to next meeting.
Deadline: Thursday 2020-02-13

Protocol design

R2-1914729 Support of NR dependent positioning methods Intel Corporation discussion Rel-16 NR_pos-Core

Qualcomm are not sure why the UE capabilities for SRS should be in RRC rather than LPP since the LMF needs to know about them. They also understand that we expect capability information from RAN1. Intel think the gNB needs the UE capability on SRS, and whether the LMF needs it can be further discussed. Qualcomm think the LMF needs to select the positioning method, so it needs to know what the UE supports.
Ericsson think the selection of positioning method depends on more than just the signal support.

Qualcomm wonders what the intention of P1 is; we need to capture what methods the UE supports, and each method has its own capabilities, as in the existing releases of LPP.
Ericsson think we have not yet agreed on the structure enough to know if we capture the capabilities per method.
Intel clarify P1 is not intended to exclude other items to be captured in LPP.
CATT think we need to be more specific about the PRS related configuration; different methods need different PRS information. They also understand that UE capabilities are under discussion in RAN1 and we need to wait for information on that discussion.

Offline discussion to collect company views on what capabilities are needed from RAN2 perspective. Offline #501, Intel; report in R2-1916401.

R2-1916401 Report of offline #501 Intel discussion
⇨ Not provided (will be discussed as part of the LPP email discussion)

R2-1915652 LPP, RRC and UE Rx-Tx Aspects of NR RAT dependent positioning Ericsson discussion

Intel think the E-CID measurements in general should follow what was decided in RAN1.
Qualcomm think we already decided to introduce a new NR E-CID method and this still makes sense; we could avoid touching the LTE part. Ericsson think there is enough commonality between the sections that it is reasonable to reuse the existing subsection.
Nokia agree with Intel that the RAN1 LS did not identify beam measurements as part of E-CID, but they understand that this was not intentional. Qualcomm think we cannot override what RAN1 sent us, which says we use Rel-15 RRM measurements.
CATT have two concerns: (1) NR E-CID should strictly follow the guidance from RAN1, (2) the measurements can be delivered by NRPPa based on the existing RRC measurement reports, instead of having E-CID measurements in LPP.
Intel think RRC+NRPPa does not work for some cases and we still need the LPP mechanism.
Ericsson think it is clear that both RRC+NRPPa and LPP are needed. NB-IoT was an example from LTE where RRC+LPPa would not work.
Ericsson think we could split discussion between the beam-based measurements and others like UE Rx-Tx.
Intel think we can stick to the agreement of last meeting to have a new NR E-CID method. For UE Rx-Tx, they think we can coordinate offline with RAN1.
CATT think we should not define when the UE reports by RRC vs. by LPP. We should define the two reporting channels. Intel think the UE cannot know if RRC is used for positioning, but we leave to the UE the fact that it reports on a best-effort basis.
Ericsson think we can discuss whether the RAN1 LS intended to include beam measurements; their understanding is that the measurements were drawn from 38.215, and those measurements are defined per resource. So they understand that the RAN1 LS implies measurements per beam.

Offline discussion on whether to include per-beam measurements. Offline #502, Ericsson; report in R2-1916402.

Intel think there are a lot of commonalities in the methods and it makes sense to capture them in a single structure.
Qualcomm think the commonality is on IE level but there are still differences in the positioning methods, and we need to have a clear UE behaviour for each positioning method. E.g. RSRP for E-CID is not the same as RSRP for DL-AoD.
Ericsson think the commonality is stronger than just at the IE level. Also the use of a particular measurement technique is not necessarily method-specific, e.g. the UE could use angular measurements for different purposes.
Nokia prefer to follow the existing structure, but think we should discuss from concrete examples as part of the general LPP discussion.
CATT want to clarify that this is only for RAT-dependent. In that context they agree with Qualcomm about the need for separate RAT-dependent methods, but they think the reporting message should be a single message. Where measurements are specific to a positioning method they could be captured under the positioning method.

T-Mobile want to have as much commonality as possible between different methods, and only signal as method-specific the parts that are not common.
Qualcomm think vendors need to know what to implement and the customer requests will be per method: “implement DL-TDOA”. So it should be clear what measurements are required for what methods. They think that we saddled ourselves with a lot of overhead for generic support of GNSS instead of being able to implement individual GNSSs separately, and we shouldn’t make the same mistake again. They also see this as the best way to support hybrid positioning and cannot see how the Ericsson proposal would support hybrid.
LG ask if the same measurement configuration can apply to different positioning techniques. Ericsson understand that it can, e.g. for timing measurements that would apply either to UE Rx-Tx or RSTD.
Ericsson think implementable techniques will not generally be restricted to a specific section in the spec. They also understand that GNSS is not a similar issue since the separate GNSSs evolve independently and are essentially different signals, whereas what we talk about here is e.g. the same DL-PRS being used in different ways.

Offline discussion on whether to have one method or follow the existing LTE structure. Offline #503, CATT; report in R2-1916403.

Offline discussion on whether to use the measurement structure from the Ericsson TP as a baseline for further discussion. Offline #504, Ericsson; report in R2-1916404.

R2-1916402 Report of offline #502 Ericsson discussion
Qualcomm think this goes beyond what RAN1 asked for and it is not a RAN2 decision to add it.
Intel have the same view as Qualcomm.
Ericsson have a different understanding of the meaning of the RAN1 LS; it referred to 38.215 which provides information per resource, so they understand that beam reports are there.
CATT agree with Qualcomm and Intel that we need clarification from RAN1 directly.
⇨ Noted

R2-1916403 Report of offline #503 CATT discussion
CATT report no consensus in the offline discussion and suggest we proceed by email.
Intel suggest that we take separate methods as a baseline in the running CR and we continue discussion in the next meeting; they doubt whether an email discussion will be productive.
Ericsson think there was a small majority for a single method and that would be a better baseline. Qualcomm think there was no consensus and support the way forward from Intel.
Ericsson think the objections to a single method have evolved and we now understand that it is possible; they point out that the single method TP is 11 pages shorter.
Ericsson would prefer to take option 1a as baseline and think it is in line with how we have worked previously in LPP.
Intel think if we agree to a single method it is easier to migrate from multiple methods than the other way round.
CATT disagree with Ericsson about the need to discuss message structure together with measurements, and think we need to take into account hybrid positioning.
T-Mobile support Ericsson’s way forward.
Sony think we should continue the offline discussion to give companies more time to analyse the options.
Nokia think there is no clear majority and support using the LTE approach with multiple methods as a baseline.
T-Mobile think it will be difficult to produce a separate CR.
Intel think we already agreed to use multiple methods for the running CR.

⇨ Continue to work with the running CR based on multiple methods. Competing proposals for a single method can be seen at the next meeting.

✉ **[108#86][NR/Pos] Single positioning method approach in LPP (Ericsson)**

Develop a detailed proposal for a single positioning method to compare with the multiple methods in the running CR.
Intended outcome: Text proposal to next meeting.
Deadline: Thursday 2020-02-13

R2-1916404 Report of offline #504 Ericsson discussion
⇨ Not provided (to be taken into account in the running CR)

R2-1914468 Signaling design for RAT-Dependent positioning methods CATT discussion Rel-16 NR_pos-Core

R2-1915171 NR RAT-Dependent Positioning Procedures LG Electronics Inc. discussion Rel-16

R2-1915238 Discussion on differnt RAT dependent NR Positioning techniques Sony discussion Rel-16 NR_pos-Core

Downlink methods

R2-1914978 Discussion on sigalling design for NR DL positioning procedures Huawei, HiSilicon discussion Rel-16 NR_pos-Core

R2-1915651 Additional path reporting for downlink NR positioning measurements Ericsson, T-Mobile, Nokia, Nokia Shanghai Bell, Deutsche Telekom discussion
⇨ Revised in R2-1916487

R2-1916487 Additional path reporting for downlink NR positioning measurements Ericsson, T-Mobile, Nokia, Nokia Shanghai Bell, Deutsche Telekom, Polaris Wireless discussion R2-1915651

Qualcomm think we should not treat this at the last minute. They understand that this was not agreed in RAN1 but think it should have been opened in the main session.
CATT agree with Qualcomm and think we can wait for guidance from RAN1. They also wonder what positioning method needs such measurements.
Ericsson think we could agree to support it as similar to LTE, except that we should discuss the maximum number of paths.
Huawei support the proposal.
Intel do not have a problem with the proposal but think we should complete the core functionality before adding enhancements.
Qualcomm think it should also be supported for UL measurements. Ericsson agree.
Huawei report that RAN1 agreed to per-resource path reporting.
Intel think we need further discussion about the details.

✉ **[108#87][NR/Pos] Additional path reporting (Ericsson)**
Discuss the proposed additional path reporting and develop a text proposal if the approach is agreeable.
Intended outcome: Agreeable TP for next meeting
Deadline: Thursday 2020-02-13

Proposal 1 Support UE reporting of detected additional paths with NR measurements based on downlink time of arrival.
Proposal 2 A UE measurement report not including additional paths for a specific resource is interpreted that the UE did not detect any additional paths.

Proposal 3 RAN2 to discuss the maximum additional paths per configured resource the UE supports, and whether the number is fixed, or configurable from the network

R2-1916049 Consideration of beam for NR OTDOA Samsung R&D Institute UK discussion R2-1912534

R2-1916105 Angle of Departure UE positioning technique Nokia, Nokia Shanghai Bell discussion Rel-16 NR_pos-Core R2-1913593

R2-1914980 Further considerations on DL procedures for NR positioning Huawei, HiSilicon discussion Rel-16 NR_pos-Core

Uplink methods

R2-1914979 Considerations on UL procedures for NR positioning Huawei, HiSilicon discussion Rel-16 NR_pos-Core

P1:
Intel think we can rely on RAN1 to take this decision.
P2:
Qualcomm do not see why SRS should be configured by RRC; the LMF needs to know the SRS configuration to provide it to neighbour TRPs, and in their view it should be able also to provide it to the UE. They understand that the resources will be configured by the gNB but the LMF could provide the configuration via LPP.
Ericsson think the gNB is responsible for the resources and it would be strange to have a different node configure the UE for transmission. Also the gNB is responsible for ensuring no resource conflicts.
Intel think we could look at multi-RTT first and come back to this issue.
Nokia think both options are possible and don't see a strong reason for choosing one over another, but have a slight preference for the LTE solution (i.e. using RRC to configure the UL signals).

R2-1914566 Modification to Multi-cell power control ZTE Corporation discussion Rel-16

Combined DL/UL and multi-RTT

R2-1915558 Stage 2 for Multi-RTT positioning Qualcomm Incorporated discussion

P1:
Ericsson think this was already agreed. Intel think it was discussed without a formal agreement but is aligned with the running CRs.
P2:
Nokia think this is a bit of a signalling optimisation.
CATT think if we agree to this there would be two channels to configure SRS to the UE.
Intel understand if we configure SRS within LPP, the gNB would need to release any existing SRS configuration. Ericsson point out the UE can have multiple SRS configurations. Intel understand in this case there is no blocking issue to have the LMF configure the SRS.
Nokia think this proposal is about the assistance parameters, which depends on the parameter list from RAN1. Qualcomm agree and think the parameter list indicates that the t/f information on the DL-PRS is needed in the UL-PRS configuration.
Ericsson think there are two aspects here, the pairwise association of DL-PRS with UL-PRS and the QCL information. Qualcomm clarify the proposal refers to the first one.
Intel think it works to transfer the configurations separately, but the linking information has to be provided to the UE, so they support the proposal.
Ericsson think the Rel-15 SRS configuration is also included here, so you need to indicate which SRSs the configuration relates to.

Qualcomm observe RAN1 have lately agreed that the Rel-15 SRS cannot be linked to the DL-PRS and can only be used for UL-TDOA. So this proposal only applies to Rel-16 SRS, which has no other purpose than positioning.
Huawei wonder what happens if you have multiple DL-PRS associated with one UL-PRS. Qualcomm explain that each resource is transmitted to a different beam and has its own spatial relation with the DL signals.
Ericsson think it is possible to have the notion of an uplink time reference without referring to a specific signal, as in the UE Rx-Tx. The UE does not need the UL signal per se to have uplink timing. So there is nothing to prevent reporting UE Rx-Tx without the Rel-16 SRS.
Qualcomm think multi-RTT intrinsically has the UL and DL measurements linked, so a UE Rx-Tx without an uplink signal cannot be used for this purpose since it does not allow the gNB to measure the uplink.
Nokia wonder if the same SRS configuration is used for UL-TDOA as well as multi-RTT. Intel understand that the Rel-16 SRS can be used for both.
CATT wonder if this SRS configuration is periodic or aperiodic or both, and if it is only for multi-RTT or for all uplink methods. Ericsson understand that once the gNB has UL-TOA, it can translate that to gNB Rx-Tx, and that multi-RTT can be viewed as a UE measurement and a gNB measurement, in which the UE measurement does not require transmitting anything.
Intel understand the status in RAN1 is that for UE Rx-Tx, the UE should send UL-SRS for the transmission timing.
Qualcomm understand that the UE Rx-Tx measurement can be done without transmitting, but from the standpoint of the multi-RTT method this does not help, and they see this as an example of why separate methods should be maintained.
Qualcomm think P2 is essentially about whether you provide the DL information to the UE twice.
Ericsson emphasise that technically the Rel-15 SRS can provide the same measurements as Rel-16 SRS. Qualcomm disagree but think it was discussed in RAN1.
Qualcomm understand that based on the parameter list we know which signals are used for which measurements. There is no standards impact to configure the UE with Rel-15 SRS and measure it, but for multi-RTT the UE needs the Rel-16 DL-PRS and UL-PRS.
Ericsson wonder if the need for UL-PRS from the UE perspective is to send something that the network can measure.
CATT suggest that SRS could be configured to the UE by either LPP or RRC, based on gNB implementation. Chair thinks this would require coordination with the LMF. Nokia would prefer to standardise one way.
Intel think we have agreement that the t/f information on DL-PRS is needed, and the question for P2 is whether we signal it once or repeat it.
Nokia understand that the issue for P2 is whether the UL-PRS information is part of the LPP AD signalling or part of the RRC signalling.
Ericsson wonder if we are focussing on what is needed for the UE Rx-Tx measurement, or what is needed for the UL-PRS configuration.
Qualcomm think P2 is not directly related to the Rx-Tx measurement, only to how we signal the t/f occupancy of the DL-PRS in the context of the UL-SRS information.
Ericsson think we don't need to agree to the proposal if it just restates the RAN1 parameter agreements. Qualcomm think we have to define the signalling to enable the parameter list.
Huawei ask if P2 is valid also in case the configuration is done by RRC. Qualcomm confirm it is.
P3:
Ericsson think we can wait for RAN1 to decide if SSB or something else should be used. Qualcomm understand this is already decided and included in the current baseline LPP CR.
Ericsson think this is only beneficial if the information is signalled in the same protocol. Chair understands that it could be separate protocols as long as the link is known at both nodes. Intel have the same understanding.
Huawei think there are cases where the SSB information is not needed by both DL- and UL-PRS. E.g. in UL-only positioning, there is no corresponding DL-PRS and no need to configure SSB.
P4:
Qualcomm think this proposal applies only for multi-RTT, and for UL-only positioning another solution could be valid.
Ericsson think this relates to whether we would have the single-method approach or the separate-methods approach. In their view the configuration of the UE for UL signalling is not assistance data.

Ericsson consider that the gNB needs to manage the UE's UL-PRS configuration. Qualcomm agree but think it makes sense to signal the configuration through LPP by arrangement between the gNB and the LMF.
Qualcomm think in the multi-RTT case there will always be AD, and no reason not to provide the UL-SRS configuration as part of it. Ericsson think this is specific to the special case of multi-RTT, and we should have a general solution that includes UL positioning. Qualcomm are not sure how this relates to LPP under the Ericsson proposals, which do not involve LPP in UL-only positioning.
Ericsson consider that multi-RTT includes configuring a UE Rx-Tx measurement, which requires DL-PRS.
Qualcomm point out we have not supported multi-RTT before, so doing things the way we have done before is not really an option.
Nokia want to confirm that for the AD parameters in P2-P4, the LMF gets them from the gNB via NRPPa. Qualcomm confirm this. Nokia consider that in this light it's natural to have the parameters in LPP.
Ericsson think multi-RTT is a combination of components that have existed before, but we are using new signals to support it in a more precise manner.
Intel wonder if we let the gNB configure UL-SRS, do we still need the LMF to provide AD to the UE—e.g. the timing of PRS from other nodes? Qualcomm understand that we do; the neighbouring node information can only be available from the LMF.
Ericsson understand that the overlap between DL and UL information is small: There is only one UL configuration and it includes an SSB. Qualcomm think in theory you could have 64 SSBs per TRP and this would be a large amount of duplicate information if signalled separately.
Qualcomm understand that because the SSB information includes neighbouring TRPs, it must come from the LMF; the question is whether to send it by LPP or by NRPPa+RRC. They agree that for UL-only and no LPP, this information must be provided in RRC as part of the SRS configuration.
Nokia wonder if we could look at two alternatives with call flows.
Ericsson wonder if the neighbouring node configurations could be configured via OAM. Qualcomm agree this would be possible, but the information is still needed at the LMF because the LMF selects the positioning neighbours.
Intel think both solutions can work but we must pick one.
Huawei think it is basically a question of how the network wants to implement.
Qualcomm wonder what the alternative to P4 is. Ericsson think there is a need to configure SSBs for DL-PRS and as QCL reference for UL-PRS, and they see this as a signalling transmission configuration that should be in RRC, rather than a positioning configuration that should be in LPP. Qualcomm ask if this would mean a new RRC message (or change to an existing one) to provide SSBs of neighbours to the UE.
Huawei agree with Ericsson that there are cases such as UL-TDOA/UL-AoA where RRC is the right way to configure it. They would prefer to use an RRC solution also for multi-RTT for consistency.

No official offline discussion. Discussion of this document to be resumed during the comeback session Thursday.

Agreements:
1 For Multi-RTT positioning, the DL-PRS information for the candidate TRPs are provided by an LMF to the UE in an LPP Provide Assistance Data message.
2 The time/frequency occupancy of the DL-PRS required in the UL-PRS (SRS) information is provided as part of the DL-PRS assistance data for Multi-RTT positioning. UL-PRS (SRS) information includes an index/pointer to the relevant information in the DL-PRS assistance data (e.g., DL-PRS Resource Set ID/Resource ID).
3 The time/frequency occupancy of the SSBs required in both, DL-PRS and UL-PRS is grouped in a single IE, and a pointer/index is used to reference the required information.

Ericsson understand that RAN1 have agreed that the UL-PRS are configured in RRC. Qualcomm consider that this only applies to UL-TDOA/UL-AoA.
Intel point out the LS received in this meeting only indicated that UL-SRS are in RRC, without reference to positioning method.

LG understand that RAN1 agreed to support aperiodic SRS, and wonder how LPP would handle this. Qualcomm think LPP can also carry the triggering; aperiodic does not necessarily imply lower layer control.
Ericsson think given that UL-SRS is configured in RRC, it is natural to activate it in RRC.
Intel think RAN1 have agreed on RRC control for Rel-16 SRS, and also that Rel-15 SRS can be used for positioning.
Huawei think we should take a decision for the RRC approach to make progress.
Intel think RAN1 want to reuse MAC CE and DCI for activation.
Huawei think there could be MAC impact to activate the Rel-16 SRS.
Qualcomm wonder how we should support methods requiring DL-PRS assistance data if the SSB information is in RRC instead of LPP. Intel think the SSB must be configured in RRC for the methods not involving DL-PRS, and for methods involving both DL-PRS and UL-SRS, we can discuss further how/whether to structure the signalling to avoid duplication.
Ericsson think for DL-only measurements the AD would be in LPP, but for multi-RTT there are UL/DL measurements combined and they can be controlled separately.
Qualcomm agree multi-RTT requires DL-PRS and UL-PRS, and they see duplication in the AD for the SSB information.
Intel see that the duplication can happen and think the question is whether to have a mechanism to avoid it. SSB information is needed for both the DL- and UL-PRS and if we don't do anything we would signal it twice.
Huawei think that RAN1 are also discussing higher-layer signalling for the various reference signals and we can wait for additional information on whether there is a duplication issue.
Intel think a TP for SRS in RRC was provided and could be discussed as part of the RRC email.

Agreements:
4 UL-SRS (both Rel-15 and Rel-16) for positioning is configured by RRC.
5 FFS if we take steps to reduce the duplicate configuration between RRC and LPP for methods involving both DL and UL measurements.

R2-1914565 Discussion on DL/UL PRS based positioning ZTE Corporation discussion Rel-16

E-CID

R2-1914977 Consideration on E-CID in NR Huawei, HiSilicon discussion Rel-16 NR_pos-Core

R2-1916050 Considerations for NR E-CID Samsung R&D Institute UK discussion R2-1912533

R2-1914567 Discussion on ECID positioning in NR ZTE Corporation discussion Rel-16

On-demand PRS

R2-1916106 On-demand and dynamic PRS configuration for DL-TDOA Nokia, Nokia Shanghai Bell discussion Rel-16 NR_pos-Core

6.8.2.2 Support of SSR phase 2 (PPP-RTK)

Including outcome of the email discussion [107bis#81][NR Pos] Update of SSR phase 2 running CRs (Qualcomm)

Running CRs

R2-1915560 Running LPP CR for PPP-RTK support (SSR) Qualcomm Incorporated discussion
⇨ Endorsed

R2-1915561 Running LTE RRC CR for PPP-RTK support (SSR) Qualcomm Incorporated discussion

posSIB numbers need to be harmonised with other CRs; this can be done from the next meeting when we merge CRs (and/or in ASN.1 review).
⇨ Endorsed

Other proposals

R2-1914989 Text Proposal for adding the Phase Bias Indicator to the SSR Phase Bias message Swift Navigation, Ericsson draftCR Rel-16 36.355 15.5.0 B NR_pos-Core

Qualcomm do not see this as basic functionality, and think the PPP-RTK modes (fixed, widelane, float) would need to be described. Also we might need UE capability for the modes.
Swift understand that this extension is necessary for GLONASS support at least. They think if we define the modes we would be moving towards specifying the user algorithms.
u-blox think the enhancement is valuable and support its inclusion, and don't think there is ambiguity in the modes.
Qualcomm understand that the modes are implementation-dependent and don't need to be specified, but a few sentences of description in the stage 2 would be good.
u-blox consider that all GNSS receivers implement fixed and float modes, and the fields are optional meaning that receivers not supporting all modes need not process them.
Ericsson think this is important to expand the ecosystem and get as good functionality as possible. They think capabilities may not be needed since these are well known techniques.
Swift think this is similar to RTK in Rel-15, where anyone familiar with the technique knows about the involvement of fixed and float modes.
ESA are also supportive of adding the field and having some more explanation in the stage 2.
Nokia would also like to see a brief description in stage 2.
ESA observe we could also align 36.305.

Agreements:
1 Add a per-satellite Phase Bias Indicator field to the SSR Satellite Phase Bias message to indicate which GNSS signals support Undifferenced Integer, Widelane Integer or Non-Integer positioning modes.

Offline discussion to converge on text suitable for inclusion in 38.305 and 36.305. Offline #508, draft CR in R2-1916409 [38.305] and R2-1916410 [36.305] (Swift).

R2-1916409 Draft CR on Phase Bias Indicator [38.305] Swift Navigation draftCR Rel-16 38.305 15.4.0 B NR_pos-Core
⇨ Endorsed

R2-1916410 Draft CR on Phase Bias Indicator [36.305] Swift Navigation draftCR Rel-16 36.305 15.4.0 B NR_pos-Core
⇨ Not provided (will be handled as part of the general CR for SSR)

R2-1915654 GNSS Integer Ambiguity Level Indications Ericsson, Swift Navigation,ESA discussion

Qualcomm think this is not related to SSR and shouldn't be discussed in this WI. Ericsson point out the WID mentions PPP-RTK, not SSR.
Qualcomm think the WID is specific to adding the Compact SSR messages and does not raise the issue of real-time integrity. Think this is suitable for a TEI16. Ericsson consider that the WID is explicit about supporting PPP-RTK, and also that the paper previously discussed is about real-time integrity.
u-blox think the technique is useful and adds significant implementation value.
Qualcomm think this may be useful but should not be considered as part of PPP-RTK.
Swift also think this is important to have.
Nokia note the reference station list should be NULL.

Draft CR (as TEI16) to be produced offline. Offline discussion #509 (Ericsson), draft CR in R2-1916411.

R2-1916411 GNSS Integer Ambiguity Level Indications Ericsson draftCR Rel-16 36.355 15.5.0 B TEI16
Nokia wonder about the need code for the OPTIONAL field. It should be Need ON.
⇨ Endorsed with this change as R2-1916412 (to be seen at next meeting)

R2-1916412 GNSS Integer Ambiguity Level Indications Ericsson draftCR Rel-16 36.355 15.5.0 B TEI16
=> Endorsed unseen

6.8.2.3 Broadcast assistance data

6.8.2.3.1 Content and delivery of broadcast assistance data

R2-1914470 Open Issues of Broadcast Positioning Assistance data CATT discussion Rel-16 NR_pos-Core

Qualcomm think P1 and P2 already captured in the draft CR. In the case of P2 it comes automatically with the reuse of LPP.
P3:
Qualcomm think if we have the area scope it should be part of RRC, not LPP. Ericsson think it may be intended that the area scope information would be provided by the LMF to the gNB.
Nokia agree with Qualcomm that it should be in RRC, similar to the existing framework.
CATT wonder if we have it in RRC, when the UE leaves the area scope of the posSIB, which layer will decide that the posSIB needs to be reacquired? Nokia assume the existing checks by the RRC layer would still apply for posSIBs.
Qualcomm think we need to have a separate positioning area scope rather than reusing the area from other SIBs. They assume it would be mainly used for the RAT-independent methods, for which the posSIBs may have very large validity areas.
Qualcomm understand that RAN3 are already considering introducing a positioning area scope and need an indication from RAN2.
CATT think the upper layer of the UE can make the decision on when to acquire the posSI. Even if we define the area scope in RRC, the upper layer would need to indicate when acquisition is needed.
Nokia think the area scope is a bit of an optimisation to prevent the UE from acquiring the SIBs in every cell, and do not see much value in defining a separate area ID for posSIBs.
Intel think we can reuse the framework, but whether we need a separate area ID could be left FFS.
Ericsson think the area scope will definitely be different because it is generated by the LMF. They agree that a similar principle to RRC can be used, but the reasoning driving it is not the same.
LG agree there would be a separate area scope.
Intel agree the area would come from the LMF, but it might still be possible to reuse the existing ID.
CATT consider that the context of the area scope for positioning is quite different from other SI.
Qualcomm think how to assign the area ID is up to deployment, but there needs to be an area ID in the posSIBs.
ESA think in the case of GNSS with different service levels, the validity areas will be different, so they do not see how we can define the areas properly in standards. It should be left to the deployment.
Nokia do not see the need for a separate area ID. Huawei have the same view and would prefer to leave it FFS.
Nokia are concerned about the size of the area ID, especially if it goes in SIB1. Intel have the same concern.
P5:
Nokia think this should be purely a gNB decision. The gNB has the choice of what SIBs it wants to broadcast or send on-demand. Ericsson agree.
P6:
Qualcomm think this is purely controlled by the gNB and the LMF just provides the data. Intel agree.

Agreements:
1 The NR UE acquires posSI(s) based on the request from positioning upper layers.
2 The area scope mechanism in RRC is copied into the scheduling information for posSIBs. FFS if there is a separate area ID for positioning.
3 The area scope of a posSIB and the corresponding SI validity area are part of the NRPPa metadata
4 It is RAN node to determine the SI broadcast status for posSI transmission (broadcasting vs. notBroadcasting).

R2-1914981 Discussion on broadcasting of positioning assistance data Huawei, HiSilicon discussion Rel-16 NR_pos-Core

P4:
Ericsson think we could support this for idle/inactive if we also support it in RRC_CONNECTED.
LG agree with P4 and P5 to align with the existing procedure.
CATT think we need to discuss the idle/inactive case and think we should not jump into support of SI acquisition for these UEs.
MediaTek agree with P4.
Qualcomm think P4 and P5 are part of using the existing broadcast mechanism and do not see the relation to connected mode.
Ericsson understand that the on-demand request in connected is available and we should use it.
CATT think we did not reach an agreement about on-demand in RRC_CONNECTED. Also think we cannot discuss acquisition for the different states separately.
Chair recalls that we agreed it was desirable to have on-demand in RRC_CONNECTED. Nokia agree, and also point out that we agreed not to take explicit measures to prevent an idle/inactive UE from using it.
CATT think we need the on-demand SI in RRC_CONNECTED.
Huawei also support on-demand in RRC_CONNECTED, but this paper is addressing the idle/inactive case.
Qualcomm think we need to have the request in idle/inactive; otherwise broadcast has to be always on.

For the Msg1 mechanism Ericsson would prefer to leave it FFS. MediaTek also have some concern about the reservation of resources.
CATT think Msg1 makes sense in idle mode. Huawei think if the network does not want to reserve the resources it will not use this mechanism. Qualcomm think we should have the same features available for posSI as normal SI, so they think Msg1 makes sense.
Ericsson would like more time for analysis of the Msg1 case.

Agreements:
1 posSIB change does not trigger SI change notification.
2 it is not needed to configure valueTag for each posSIB in SIB1.
3 Confirm that on-demand SI request should be supported for UEs in RRC_CONNECTED.
4 On-demand SI request is supported for positioning system information for UEs in RRC_IDLE/RRC_INACTIVE.
4a Msg3-based SI request mechanism should be extended to support positioning SI request for UEs in RRC_IDLE/RRC_INACTIVE
4b Working assumption: Msg1-based SI request mechanism should be extended to support posSIBs request. RACH resource for msg1-based request mechanism can be optionally configured.

R2-1915647 New SIB for hosting posSI Scheduling Information Ericsson discussion

R2-1915562 Remaining details on broadcast assistance data delivery Qualcomm Incorporated discussion

6.8.2.3.2 On-demand system information in connected mode

Note: Documents on on-demand system information in connected mode not specifically related to the positioning WI should be submitted to AI 6.21.

R2-1916107 Dedicated positioning SIB delivery for on-demand SI in connected discussion Rel-16 NR_pos-Core — Nokia, Nokia Shanghai Bell

CATT wonder about the case when there is no CSS. Nokia think that such a UE could use the LPP request for assistance data.
Ericsson think a UE in RRC_CONNECTED does not necessarily have an LPP session, and we already have the on-demand mechanism with the facility to deliver by broadcast or dedicated.
Huawei think the proposal is too restrictive and prefer to have the option to use dedicated signalling.
CATT think a UE that has already sent the request may not be able to start an LPP session.
Apple agree with Ericsson and think the current connected mode mechanism can be reused.
Intel think the general framework provides dedicated or broadcast, and don't see a reason why we should make an exception for positioning.
Qualcomm think the question is valid since not all SIs can be sent by dedicated signalling.
Nokia understand that we are enabling a mechanism where the UE not in a positioning session could request assistance data and store it. Ericsson have the same understanding.
LG support having both broadcast and dedicated.
Nokia wonder if the dedicated mechanism applies to the case where the UE has no CSS. CATT think this is a network choice.
Nokia think the UE with no CSS could be required to use LPP rather than on-demand SI. CATT consider that the gNB has different options for delivering SI to a UE with no CSS.
Intel point out that with no CSS, the UE does not know if the network will broadcast the SI or not.

> Agreement:
> 1 Support broadcast or dedicated delivery of system information carrying positioning assistance data upon on-demand SI request from UE in RRC_CONNECTED.

R2-1915780 On-demand system information and dedicated signalling — MediaTek Inc., Ericsson — discussion — Rel-16

R2-1915936 Positioning SIB Acquisition in Connected Mode — Apple — discussion — Rel-16 — TEI16

R2-1915656 On Demand Delivery of Positioning Assistance Data — Ericsson — discussion

R2-1914469 Broadcast Positioning Procedure in Connected Mode — CATT — discussion — Rel-16 — NR_pos-Core
⇨ Revised in R2-1916478

R2-1916478 Broadcast Positioning Procedure in Connected Mode — CATT — discussion — Rel-16 — NR_pos-Core — R2-1914469

R2-1914982 Discussion on demand SI in connected mode for positioning — Huawei, HiSilicon — discussion — Rel-16 — NR_pos-Core

✉ **[108#88][NR/Pos] Remaining issues on broadcast assistance data (Ericsson)**
Clarify the remaining issues on broadcast:
- Per-SIB vs. per-SI request in connected mode
- Per-SIB vs. per-SI request in idle mode
- Need of a separate SIB for posSIB scheduling
- "Subscription" mechanism for posSIBs
- FFS on separate area ID for posSI
- Unicast scope for posSIBs in SI scheduling

Intended outcome: Report and TPs (RRC, stage 2, and LPP if needed) to next meeting
Deadline: Thursday 2020-02-13

6.8.2.4 UE-based positioning

R2-1915563 Assistance Data for DL-only UE-based mode Qualcomm Incorporated discussion

Nokia wonder if P2 would have NRPPa impact. Qualcomm think it does have impact but the parameters are already included in the RAN1 list.
Huawei wonder on P2 if the beamwidth is really needed. Qualcomm think it helps for DL-AoD precision, and they understand it as natural to have as part of the beam information. Huawei would prefer to keep this aspect FFS.
Ericsson wonder if beamwidth is in the elevation or horizontal plane, and think introducing the ARP goes beyond what RAN1 discussed, complicates the hierarchy, and may not be strictly needed. Qualcomm explain that the reference point in space for the origin of the signal is needed, and this is a particular antenna; the same TRP may have significantly different antenna locations. Qualcomm agree this granularity of information may not always be needed but it should be possible to signal for the cases where it is needed, and they think this is also needed for UE-assisted.
CATT ask what the impact on broadcast of P1 and P4 would be.
Intel would like to understand how DL-AoD works for UE-based; the TRPs measured by the UE may be different from the ones provided by the network. Qualcomm understand that the UE would measure as for UE-assisted, and a basic DL-AoD can be done based on measuring the resource ID with the strongest RSRP and getting its beam direction from the AD.
Ericsson agree there is a need to send the antenna position, but they understand this is described as a TRP position in RAN1, and think we shouldn't introduce a new layer; rather we can model the TRP as being the antenna itself. Qualcomm agree this could be done, but they understand that the TRP is being defined differently in RAN3 as having a particular ID; you don't need to repeat the TRP ID for different resource sets, which would be needed if we modelled the TRP as the antenna.
Huawei understand the argument and think there are two questions: One is a modelling question about what we define as a TRP, and the second is which group should discuss, RAN2 or RAN1. Intel recall that the antenna location is captured in LPPa; Qualcomm confirm this is correct. Qualcomm understand RAN1 left the UE-based AD design to RAN2.
Ericsson think the antenna was implemented in LPPa as a transmission point and we could continue this model, but they see a possible disparity between the RAN3 and RAN1 understandings of TRP.
Intel think the definition of the AD should be the same no matter what name we use; we need to capture the antenna location.
CATT think we should work based on an LS from RAN3 before trying to capture the antenna location. Chair thinks we need the antenna location for UE-based to work. CATT are concerned about whether the carriers will want to share this information. Intel think we already agreed to support UE-based positioning and confirmed that this information can be provided.
Qualcomm think the RAN3 parameters for positioning need to come from RAN2; there are too many uncertainties about the contents of NRPPa.
Intel wonder if the beam information is only for DL-AoD. Qualcomm understand that it is useful for DL-TDOA as well.
Nokia think whatever we agree about the antenna location should have a common understanding between RAN1/RAN3/RAN4. Qualcomm think only RAN3 need the information and they should follow the RAN2 decision.
Qualcomm understand the Resource ID corresponds to the physical location that transmits the signal, irrespective of whether this is a TRP location or a separate antenna location; they think it can be indicated as a delta to a reference location for the TRP.
Qualcomm think ARP is a reasonable term, consistent with how it's used in SSR. Ericsson think it causes a bit of potential confusion between groups.
CATT wonder what the status is in RAN1 on this topic.

✉ **[108#89][NR/Pos] UE-based downlink positioning assistance data (Qualcomm)**

Intended outcome: Agreeable CR for merge into the general LPP CR
Deadline: Thursday 2020-01-23

Agreements:
1 The positioning measurement assistance data and position calculation assistance data are defined in separate IEs.
2 Include spatial direction information of the DL-PRS Resources in the position calculation assistance data (e.g., azimuth, elevation). FFS beamwidth.
3 Include a transmission reference location for each DL-PRS Resource ID. FFS the exact terminology.
a. Provide a reference location for the transmitting antenna of the reference TRP
b. Provide relative locations for transmitting antennas of other TRPs
c. ASN.1 formulation to be further discussed
4 Split the position calculation assistance data into two separate posSIBs, one containing the TRP coordinates and one containing the RTDs.

R2-1915658 UE-based configuration options Ericsson discussion

R2-1914730 Assistance data for UE based DL only positioning Intel Corporation discussion Rel-16 NR_pos-Core R2-1912705

R2-1916091 Remaining issue on UE-based positioning in NR ITRI discussion NR_pos-Core

6.8.3 Other

6.9 NR mobility enhancements

(NR_Mob_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-192277). Documents in this agenda item will be handled in a break out session
Treated together with 7.3,
Joint 6.9 and 7.3 Time budget: 3 TU
Joint 6.9 and 7.3 Tdoc Limitation: 12 tdocs

6.9.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc
Note: The running NR Stage-2 CR was endorsed as outcome of email discussion [107bis#08][NR MobE] Updated Stage-2 running CR for NR mobility (Intel) in R2-1913995.
Including outcome of email discussion [107bis#54][NR MobE] 38.331 RRC running CR NR mobility (Intel).

Stage-2 running CR

✉ **[108#62][NR Mob] Running Stage-2 CR (Intel)**
Updated running CR based on latest agreements (except CPAC).
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-30

RAN4 LS:

R2-1914336 LS on NR Mobility Enhancements (R4-1912707; contact: Intel) RAN4 LS in Rel-16 NR_Mob_enh-Core To:RAN2
⇨ Noted

Outcome of email discussion [107bis#54][NR MobE] 38.331 RRC running CR NR mobility (Intel).

CHO CR:

R2-1914834 RRC running CR for NR mobility on CHO ([107bis#54]) Intel Corporation draftCR Rel-16 38.331 15.7.0 B NR_Mob_enh-Core

⇨CR is endorsed as baseline RRC for CHO

DAPS CR:

R2-1914833 RRC running CR for NR mobility on DAPS HO ([107bis#54]) Intel Corporation draftCR Rel-16 38.331 15.7.0 B NR_Mob_enh-Core

⇨CR is endorsed as baseline RRC for CHO

✉ **[108#34][NR] Running RRC CR for CHO and DAPS (Intel)**
Two-phase discussion: 1st phase discussion to collect input for CHO and DAPS based on latest agreements and open issue email discussion, second phase to combine the CRs into one.
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-16

Rapporteur summary of open issues in the RRC CR(s):

R2-1914855 Summary of open issues on RRC running CR-CHO ([107bis#54]) Intel Corporation discussion Rel-16 NR_Mob_enh-Core

FFS issue 1. Whether A3/A5 can be configured simultaneously for the same execution condition, and whether we allow multiple execution conditions for the same candidate cell (more than two measIDs)?

FFS issue 2. what can be different in configuration for multiple events of the same execution condition?

FFS issue 3. Whether common field name conditionalReconfiguration should be used for CHO and PSCell addition/change, or separate field name for CHO and PSCell ?

FFS issue 4. FFS on measurement related configuration when conditional handover configuration is removed.

FFS issue 5. FFS on whether UE should remove the corresponding measId in CHO candidate configuration when the measId is removed from measIdRemoveList. FFS on whether UE should remove/ store VarMeasConfig.

FFS issue 6. FFS on S-measure should be applied or not on condition handover

Proposal 1. Ask RAN2 to confirm, for same candidate cell, network can only configure one execution condition, and max two measID.

Proposal 2. We should try to have common change between PCell and PSCell if possible.

Proposal 3. Ask RAN2 to confirm, for same candidate cell, network can only configure one execution condition, and max two measID.

Proposal 4. Ask RAN2 to confirm, Quantity configuration is not used for execution condition.

Proposal 5. Ask RAN2 to confirm, the modelling issue on how to capture execution condition can be closed.

Proposal 6. Ask RAN2 to confirm, the issue on how to capture neighbor cell for trigger events A3/A5 can be closed.

Proposal 7. Ask RAN2 to confirm, the UE is not required to continue the measurement for evaluating execution condition purpose during CHO execution.

Proposal 8. Ask RAN2 to confirm, current text is sufficient to capture CHO failure except the “first failure”.

Proposal 9. Ask RAN2 to discuss, whether leave “first failure” to UE implementation.

Proposal 10. Ask RAN2 to confirm, execution condition and target cell configuration is mandatory present for the first time when the network configures the CHO configuration for the candidate cell.

Proposal 11. Ask RAN2 to confirm, cho-RRCReconfig is Need S, i.e. the UE shall continue to use stored cho-RRCReconfig if not present.

R2-1914835 Summary of open issues on RRC running CR-DAPS ([107bis#54]) Intel Corporation
discussion Rel-16 NR_Mob_enh-Core
FFS issue 1. During DAPS handover, can target node change any SDAP configuration or not? E.g. header enable/disable?
FFS issue 2. During DAPS handover, can target node perform the QoS flow to DRB remapping?
FFS issue 3. During DAPS handover, can target node change the common parameters for single PDCP entity, e.g. SN length, statusReportRequired, t-Reordering timer and discardTimer? And whether target node can change the target specific parameters, e.g. security and RoHC?
FFS issue 4. During DAPS handover, can full configuration be supported or not?
FFS issue 5. During DAPS handover failure recovery, how to handle source SRB?
FFS issue 6. How to handle system information, paging and RRM in source for DAPS handover?
FFS issue 7. During DAPS handover failure recovery, how to handle DAPS DRB?
FFS issue 8. During DAPS handover failure recovery, how to handle non-DAPS DRB?
FFS issue 9. During DAPS handover, how to handle source configuration upon source RLF, e.g. whether to fallback to normal single protocol stack configuration?
FFS issue 10. During DAPS handover, can DAPS handover command contains both source and target configuration and how, e.g. whether a new target CG should be introduced?
FFS issue 11. During DAPS handover, how to handle source/target SCell configuration.
FFS issue 12. Whether UE applies BCCH and paging configuration from source cell or target cell.
FFS issue 13. When releasing source cell, can UE release all source cell configuration (e.g., including SRBs and DRBs).
FFS issue 14. Whether to support autonomous or explicit release of source cell upon handover successful.
FFS issue 15. What target PCell configuration to be released when T304 expires.
The followings are proposed:
Proposal 1. RAN2 confirm the working assumption that DAPS configuration is per DRB.
Proposal 2. Ask RAN2 to confirm, reestablishPDCP and recoverPDCP is not configured for DRB configured with DAPS HO.
Proposal 3. Ask RAN2 to confirm, the PDCP reconfiguration action in clause 5.3.5.6.5 is not applied for DAPS handover.
Proposal 4. No need to specify stopping of the RLM in source PCell after RACH successful in target PCell.
Proposal 5. Ask RAN2 to confirm, model the DAPS handover as same cell group if DAPS handover command can only contain target configuration;
Proposal 6. RAN2 confirm to use the term “source” and “target” to indicate the configuration common for all cells in source and target.

P2
LGE wonders if this means we would have new indication for PDCP actions. QC agrees and thinks we are still using the existing actions.

Agreements

1 Use the term “source” and “target” to indicate the configuration common for all cells in source and target.
2 reestablishPDCP is not configured for DRB configured with DAPS HO.

CBF
- Intel would like to collect open issues in email. Qulacomm indicates this could be done in 2 steps. Intel thinks we should try to solve the existing open issue.
- Samsung wonders if we sohuld have email discussion on open issues.
- Qualcomm thinks we could discuss whether to include CPAC from this email discussion

✉ **[108#66][LTE NR Mob] Open issues for LTE and NR mobility (Intel)**

Collect remaining open issues (for the whole WID) and disucss if some can be resolved over email. Can have two phases to first, one to resolve existing issues where possible and second to collect other issues to resolve in the next meeting. Resolve dissues should be input to running CR discussion(s)
Intended outcome: Email discussion report + input to running CRs on agreeable issues
Deadline: 2020-01-30

Feature list for mobility enhancement:

R2-1914841 UE Feature list for Rel-16 Mobility Enhancement Intel Corporation discussion Rel-16 NR_Mob_enh-Core

⇨ **Offline discussion 106 (Intel): Collect feedback on NR mobility capabilities. Outcome of the discussion can be provided in R2-1916320 (CBF)**

R2-1916320 UE Feature list for Rel-16 Mobility Enhancement Intel Corporation discussion Rel-16 NR_Mob_enh-Core

⇨ **R2-1916320 was not available during the session - to be considered in running CR (including RAN1/4 LS)**

- Samsung wonders if we add capabilities from RAN1/4 in the running CR.

⇨ **38.306 and 36.306 CRs can be considered in next meeting**

✉ **[108#45][LTE NR Mob] UE feature list for LTE and NR mobility (Intel)**
Collect UE feature list from RAN2 viewpoint and consider RAN1/4 input to this meeting (also from LSs not yet treated). After the dicussion, take the UE capabilities into account in RRC running CR.
Intended outcome: Email discussion report.
Deadline: **2019-12-13**

=> Reserved in R2-1916644

6.9.2 Reduction in user data interruption during DAPS handover

Contributions on DAPS handovers for LTE and NR are treated jointly in under 7.3.2. Do not use this AI for any item that can be discussed jointly - This AI only addresses NR-specific topics.
Including details on SDAP handling during DAPS handover.

Support of QoS flow remapping in SDAP during DAPS handover:

R2-1914612 QoS Flow to DRB Remapping during DAPS HO Mediatek Inc., Apple discussion

Observation 1: A PDCP SN is assigned to the PDCP PDU carrying the end-marker. The in-sequence delivery of the end-marker can be guaranteed by the PDCP layer.
Observation 2: Different gNBs may apply different QoS flow to DRB mapping rules for the UE.
Observation 3: QoS flow remapping during HO is supported in Rel-15 NR for both RLC AM DRBs and RLC UM DRBs without any stage-3 UP changes.
Observation 4: During DAPS HO, the DL PDCP SDUs forwarded from the source gNB to the target eNB apply the old QoS flow to DRB mapping rule and the DL packets received from the 5GCN can apply the new mapping rule. The target gNB sends the end-marker to the old DRB.
Observation 5: During DAPS HO, in-sequence delivery of the end-marker to SDAP layer for DL reception at the UE side can be guaranteed by PDCP layer.
Observation 6: For UL packets, the end-marker is transmitted to the target gNB, which is kept by the PDCP entity of the old DRB until all missing PDCP SDUs are successfully received. Then all buffered PDCP SDUs of the old DRB including the end-marker are delivered to the SDAP layer.
We propose:

Proposal 1: QoS flow remapping during DAPS HO is supported.
Proposal 2: For DAPS HO, the same principle as the legacy HO (note in 38.300) is applied, i.e. for DL, the target gNB should first transmit the forwarded PDCP SDUs on the old DRB before transmitting new data from 5GCN on the new DRB. For UL, the target gNB should not deliver data of the QoS flow from the new DRB to 5GCN before receiving the end marker on the old DRB from the UE.
Proposal 3: Specify in 37.324 that UE applies the new mapping rule and sends the end-marker after UL data switching.

O5
- Samsung wonders if this is correct. MediaTek indicates it is.

P1
- LGE supports this. Qualcomm wonders if there are problems in going from DAPS DRB to normal DRB.
- Intel wonders how DL is handled if source and target use different SDAP configurations. Apple thinks both source and target use the same configuration during HO. MediaTek clarifies target first uses old configuration and then switches to new one.
- Nokia supports this. This is the same handling as in current handover.
- Intel thinks target can only switch to new configuration after UL switching. Nokia clarifies that this only measn the RRC configuration is received a bit later than now.

P2
- LGE supports this. Nokia agrees.

P3
- Nokia thinks we should keep SDAP unaware of lwoer layers. It only receives configuration from RRC. LGE agrees.
- MediaTek thinks UL switching is different and prefers using SDAP. Nokia thinks this is just modelling difference. LGE agrees.
- Intel clarifies this means MAC indicates the UL switching to RRC, which indicates it to SDAP.

Agreements

1 QoS flow remapping during DAPS HO is supported.
2 For DAPS HO, the same principle as the legacy HO (note in 38.300) is applied, i.e. for DL, the target gNB should first transmit the forwarded PDCP SDUs on the old DRB before transmitting new data from 5GCN on the new DRB. For UL, the target gNB should not deliver data of the QoS flow from the new DRB to 5GCN before receiving the end marker on the old DRB from the UE.
3 Specify in 38.331 how the QoS flow remapping is triggered after UL switching. Stage-3 details how this information is handled (form MAC to RRC, from RRC to SDAP)

R2-1914613 draft CR to 37.324 to support QoS flow remapping during DAPS HO Mediatek Inc., Apple
draftCR Rel-15 37.324 15.1.0 B NR_Mob_enh-Core

Supported DAPS scenarios for NR:

R2-1914885 Down-scoping of DAPS HO scenarios for NR Qualcomm Incorporated discussion

Agreements for NR

1 DAPS HO for FR2 to FR2 case is not supported in Rel-16.

P2

- Ericsson thinks synchronous is ambiguous. Only dual Tx was difficult in RAN4 LS reply. Async is most common use case for intra-band CA. ZTE agrees. Nokia agrees.

MBB handover for NR:

R2-1916087 Introducing Make-Before-Break in NR Samsung draftCR Rel-16 38.331 15.7.0 B NR_Mob_enh-Core

Withdrawn:

R2-1916086 On Supporting Make-Before-Break in NR Samsung discussion NR_Mob_enh-Core Withdrawn

R2-1915931 DAPS HO UP Apple discussion Rel-16 NR_Mob_enh-Core Withdrawn

6.9.3 Conditional handover and fast handover failure recovery

Contributions on conditional handover for LTE and NR are treated jointly under 6.9.3 except where otherwise noted.
No documents should be submitted to 6.9.3. Please submit to 6.9.3.x

6.9.3.1 Conditional handover – configuration and execution details

This AI jointly addresses NR and LTE.
Including RRC and ASN.1 details not handled in email discussions.
Including details of the agreement to stick to current specification on CHO command validity checking, maximum number of configured CHO target cells, details of when CHO configurations are released (e.g. at configuration change, HO command reception, state transition, security key change, re-establishment, etc.).

Compliance check for CHO configuration:

R2-1915498 On when to decode and non-compliance with target cell configuration Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core
Proposal 1: For CHO, the UE may decode the target cell configuration only when the CHO execution condition triggers.
Proposal 2: The UE detaches from the source cell AFTER the decoding is successfully completed and the UE complies with the CHO command.
Proposal 3: Regardless of when UE does the decoding of CHO command, UE shall only trigger re-establishment if the corresponding CHO execution condition triggers.

- Futurewei thinks most companies supported early check but the problem is early re-establishment.
- Qualcomm thinks there are no FFSs anymore.
- MediaTek supports P3 and thinks re-establishment is not needed at check failure.
- Intel thinks current specification is up to UE implementation and UE triggers re-establishment. Thinks the proposals are optimization.
- Ericsson thinks LTE and NR specifications are different. Samsung thinks currently we always apply configuration and there's no delay which is different in CHO.
- Qualcomm thinks applying configuration is only upon execution.
- OPPO thinks in legacy we do early check.

⇨ **If compliance check fails, UE does re-establishment.**
⇨ **No changes needed to running CR**

R2-1914837 Handling of CHO configuration and requirement (compliance check) Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

Agreements

1 RAN2 to confirm agreement on source configuration change are:
- Network ensures the UE stored CHO configuration is valid after source configuration change;

- This may or may not require the network to provide the UE with a new CHO configuration along with the new source configuration;

2 Upon CHO execution, UE applies the CHO configuration (i.e. RRC message containing the CHO configuration) on top the current source configuration. in case of fullConfig, this replaces the source configuration.

3 Use existing processing time for RRC reconfiguration message containing CHO configuration (step 1).

P1

- Qualcomm wonders what P1 means? Intel clarifies this is about what happens if network doesn't provide updated configuration. ZTE would like well-defined UE behaviour.
- Samsung thinks P1 is about reconfiguration: UE just stores the delta and UE just stores that. UE doesn't need to compute full configuration. Qualcomm thinks network ensures correct configuration.
- ZTE thinks UE always follows the network configuration. Ericsson agrees.

P3

- MediaTek supports this. LG agrees but thinks this is about sending RRCComplete to network.

R2-1915963 Further details of CHO configuration and execution China Telecom discussion *(moved from 7.3)*

R2-1914812 Further issues on CHO configuration and execution ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

R2-1914888 Compliance Check for CHO Target Cell Configurations MediaTek Inc. discussion

R2-1914489 Remaining Issues of CHO Configuration CATT discussion Rel-16 NR_Mob_enh-Core

R2-1915845 Discussion on execution aspect for CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1912740

R2-1915160 Compliance check for CHO configuration OPPO discussion Rel-16 NR_Mob_enh-Core

R2-1916197 CHO compliance check and handling CMCC discussion Rel-16

R2-1916209 Consideration of Compliance Check in CHO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core R2-1913862

Release of CHO configurations (at configuration change, HO command reception, state transition, security key change, re-establishment...):

R2-1915767 Validity of CHO configurations based on security configuration SHARP Corporation discussion Rel-16 R2-1913668

Observation: When the AS key is updated (upon HO, re-establishment or a key update initiated by the network), a stored CHO configuration becomes invalid.

Proposal 1: The UE releases a stored CHO configuration when the AS security key gets updated.

~~Proposal 2: Validity of a CHO configuration after executing a CHO to another candidate cell should be discussed after SA3 responses to the LS with regard to key derivation for multiple candidate cells (R2-1911565).~~

Proposal 3: Study if stored CHO configurations can be used while the UE stays in intra-gNB-CU cells among which no AS security key change is required.

P1

- Ericsson thinks this is already handled in current running CR. Intel agrees. Nokia agrees.
- Apple thinks this is SA3 matter.
- Sharp thinks re-establishment case is not covered in running CR
- Apple thinks this is not suitable for FR2 mobility.

Agreements

1	After successful reconfiguration with sync (with or without key change) (NR) or handover (LTE), UE releases stored CHO configurations.

R2-1914698 Discussion on CHO release vivo discussion Rel-16 NR_Mob_enh-Core R2-1912340
R2-1914635 Handling of a HO command while UE is monitoring CHO Ericsson discussion NR_Mob_enh-Core
R2-1916226 CHO UE behaviour upon transitioning to RRC_INACTIVE/RRC_IDLE Samsung R&D Institute India discussion
R2-1914636 Suspend/Release while monitoring CHO in NR Ericsson discussion NR_Mob_enh-Core
R2-1914513 Consecutive Conditional Handover Apple Inc. discussion Rel-16 NR_Mob_enh-Core R2-1912464
R2-1915930 Further Detail on CHO Release Apple discussion Rel-16 NR_Mob_enh-Core
R2-1916206 Consideration of CHO Release After HO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

CHO execution and configuration options:

R2-1914634 Remaining open issues for CHO Ericsson discussion NR_Mob_enh-Core

P4

- Intel thinks it's not clear what this proposal means. Id indicates which configuration is stored. Should always have both.

P10

- Samsung thinks b and c are strange since HO has completed.
- Intel thinks we can agree not to specify mismatch issue resolution.

P11/12

- LG thinks we can't omit the message. Samsung think CHO is configured in advance and this is a corner case. Qulacomm wonders what happens if recongiruation is received before CHO exeuction. Ericsosn confirms UE continues with CHO execution.
- Ericsson thinks UE shouldn't stay on source cell when CHO executes. Intel agrees but this is already considered in running CR.

⇨ **Noted**

R2-1914638 TP for 38.331 on CHO Ericsson discussion NR_Mob_enh-Core
R2-1916053 Normal handover using conditional handover configuration Samsung R&D Institute UK discussion
R2-1914491 Discussion on a configuration mismatch between a UE and a target gNB KDDI Corporation discussion R2-1913675
R2-1914697 RRC remaining issues for conditional handover configuration vivo discussion Rel-16 NR_Mob_enh-Core R2-1912339
R2-1914702 Discussion on the DC configuration in conditional handover vivo discussion Rel-16 NR_Mob_enh-Core
R2-1916194 Discussion on multiple triggering conditions for CHO Samsung Electronics Polska discussion NR_Mob_enh-Core
R2-1914813 Discussion on CHO execution condition ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core
R2-1916205 Measurement ID Swapping Issue for CHO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

CHO ASN.1 handling: Does UE use source configuration + delta at CHO execution or store the source configuration + CHO delta at CHO configuration time?

R2-1915736 CHO configuration/ execution, remaining aspects Samsung Telecommunications discussion Rel-16 NR_Mob_enh-Core Late

R2-1915161 CHO configuration handling upon source configuration update OPPO discussion Rel-16 NR_Mob_enh-Core

Number of target cells for CHO:

R2-1915844 Discussion on configuration aspect for CHO Huawei, HiSilicon, China Telecom discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1912739

R2-1915217 Discussion on the maximum number of configured CHO candidate cells CMCC discussion Rel-16

R2-1914699 Discussion on the number of prepared cells for CHO vivo discussion Rel-16 NR_Mob_enh-Core R2-1912342

R2-1916274 On Maximum Number of CHO Candidate Cells and Nodes Charter Communications, Inc discussion Rel-16 NR_Mob_enh, LTE_feMob, NR_Mob_enh-Core, LTE_feMob-Core Late

Withdrawn:

R2-1914886 On Maximum Number of CHO Candidate Cells and Nodes Charter Communications, Inc discussion Rel-16 NR_Mob_enh, LTE_feMob, NR_Mob_enh-Core, LTE_feMob-Core

6.9.3.2 Conditional handover – failure handling

This AI jointly addresses NR and LTE.
Including open issues and details on CHO failure handling not handled in email discussions

Details of CHO failure recovery:

R2-1915499 Failure Handling via CHO recovery Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core

Observation 1: The proposed running CR to 38.331 does not reflect the agreement on failure handling.

Observation 2: Suspending the RBs before the cell selection removes major part of the benefits of executing CHO instead of full re-establishment.

Proposal 1: The cell selection for the CHO failure handling is done before triggering re-establishment procedure.

Proposal 2: RAN2 to specify the procedure illustrated in section 6 to correctly reflect the earlier RAN2 agreement.

P1

- LGE thinks we reuse re-establishment procedure. Intel clarifies that capturing the cell selection was not clear yet. Current running CR assumes no new procedures. vivo thinks re-establishment procedure should not be changed and running CR works. Ericsson agrees.
- MediaTek supports this.
- Nokia thinks the current running CR violates the agreement.

⇨ **Noted**

R2-1915130 Remaining issues for failure handling Lenovo, Motorola Mobility discussion Rel-16

Proposal 1: A new timer T311-like should be introduced to control the new cell selection before re-establishment initialization.

Proposal 2: T310 expiry, T304 expiry and T304-like expiry can be considered to start the new timer for RLF, HO failure and CHO failure, respectively.

Proposal 3: RAN2 need to study whether new recovery mechanism including CHO can be applied to the following failure cases:

- RRC re-configuration failure
- Integrity check failure indication from lower layers
- Mobility from NR failure (see 38.331)
- Mobility from EUTRA failure (see 36.331)

Proposal 4: CHO candidate cell should be prioritized over non-CHO candidate cell if both CHO candidate cell and non-CHO candidate cell are suitable during cell selection.

Proposal 5: UE selects one cell among the cells except for the cell which has experienced HO failure or CHO failure.

- Intel thinks this coudl be one solution for hanlding the “first failure” but prefers Ericsson approach.
- Lenovo thinks reusing existing timer may not be optimal as shorter values are not possible.
- Nokia is fine to reuse existing timer and Ericsson proposal. Futurewei agrees.

⇨ **Noted**

R2-1914639 Further details on CHO failure handling Ericsson discussion NR_Mob_enh-Core

1	Upon RLF/HOF the UE starts timer T311 and performs cell selection. Upon selecting a suitable cell while timer T311 is running the UE applies stored CHO configuration for that selected cell, if available; otherwise it performs re-establishment.

R2-1914700 Discussion on the timer design for CHO vivo discussion Rel-16 NR_Mob_enh-Core

R2-1914984 CHO execution with multiple candidate cells before HOF Futurewei discussion Rel-16 NR_Mob_enh-Core R2-1912812

R2-1915009 Further discussion on RLF recovery in CHO SHARP discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

R2-1916256 Discussion on the use case of CHO failure recovery Beijing Xiaomi Software Tech discussion Late

Reporting the CHO failure, e.g. via RLF report:

R2-1915454 RLF report for CHO NEC discussion Rel-16 NR_Mob_enh-Core R2-1913057

Observation 1: In LTE, UE only stores the latest RLF or handover failure related information.

Observation 2: RAN2 is working on NR SON/MDT which is based on LTE specs.

Observation 3: If RLF or legacy handover failure happens, and there is following CHO execution attempt which also fails, the UE can only report failure information of the last CHO execution failure.

Observation 4: If two consecutive CHO execution attempts fail, the UE can only report CHO failure information of the last CHO execution.

Observation 5: If the CHO execution attempt to the first candidate cell fail, and the following CHO execution to the other candidate cell successes, the UE will still submit RLF-report to the network.

Proposal 1. CHO failure information should be able to be stored in RLF-report, and the connection failure type should be set as CHO failure.

Proposal 2. RAN2 is kindly asked to study how to handle the RLF-report issues caused by two consecutive connection failures, i.e. RLF/HO failure /CHO failure followed by another CHO failure.

P1

- OPPO thinks this is not essential part of the WID. Huawei wonders if we should rather discuss this in SON/MDT WID. Qualcomm agrees and thinks SON/MDT should be done jointly. NEC thinks the Rel-16 will only focus on NR, but for LTE we already have RLF report. ZTE also thinks we should consider this in SON/MDT. Samsung thinks we should not consider SON/MDT in this WID. Intel agrees. LGE agrees although this would be useful for network. Futurewei agrees.
- Nokia supports RLF reporting for CHO failures. Ericsson agrees. China Telecom agrees. CMCC clarifies that Rel-17 discussion on SON/MDT is already discussing and this could be added there.

- Qualcomm thinks SON/MDT usually addresses completed features.
- Ericsson thinks for LTE this is very minor thing to handle and should be done. NEC agrees and thinks LTE has no SON/MDT discussions currently.

⇨ **Consider RLF reporting of NR CHO failures in Rel-17 SON/MDT discussion. LTE RLF report can be considered in TEI (if not possible to handle jointly in the NR discussion).**

R2-1915497 On RLF reporting for CHO and DAPS Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core
R2-1916276 The Reporting of CHO failure CMCC discussion Rel-16 NR_Mob_enh-Core Late

Combining CHO failure recovery with fast MCG recovery (from Rel-16 DCCA WID):

R2-1914814 Discussion on fast RLF recovery when applying CHO and fast MCG recovery ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core
R2-1914486 Consideration on WA or MCG Fast Recovery Upon RLF CATT discussion Rel-16 NR_Mob_enh-Core

Optimized T312 handling for CHO:

R2-1916224 Fast failure recovery in CHO Samsung R&D Institute India discussion
R2-1915071 T312 mechanism for conditional handover ITRI discussion NR_Mob_enh-Core

Withdrawn:

R2-1916052 Clarification on failure handling using CHO Samsung R&D Institute UK discussion Late

6.9.3.3 Conditional handover - other aspects

This AI jointly addresses NR and LTE.
Aspects not addressed by the 3 previous agenda items, e.g. UE capabilities, combining DAPS HO and CHO, RRC size limitations, security key aspects, etc.
Including details of measurements with CHO(e.g. s-Measure applicability, removal of CHO configuration, restrictions on CHO triggering events, measurement reporting while CHO is configured etc.)

Measurement reporting:

R2-1914839 Handling of measurement configuration for execution condition Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

Proposal 1: For A3 event, A3 event offset, hysteresis and time to trigger should be allowed to configure differently for the 2 measID for the same event, same RS type and same measurement object.
Proposal 2: For A5 event, A5 threshold 1 and A5 threshold 2, hysteresis and time to trigger should be allowed to configure differently for the 2 measID for the same event, same RS type and same measurement object.
Proposal 3: For both A3 and A5 events, Cell specific offset of the target candidate cell and cell specific offset of the serving cell should be allowed to configure differently for the 2 measID for the same event, same RS type and same measurement object.
Proposal 4: maxNrofRS-IndexesToReport, maxReportCells, reportAddNeighMeas, reportAmount, reportOnLeave, reportQuantityCell, reportQuantityRS-Indexes, and useWhiteCellList are not supported within the measID that is configured for triggering conditional handover.
Proposal 5: S-measure should not be applied to measurements of the CHO candidate cells.
Proposal 6: Network shall not remove the corresponding measID linked to the CHO configuration before CHO configuration is removed.
Proposal 7: measurement ID is explicitly removed by network after CHO configuration is released.

Discussion
P1/2

- MediaTek agrees but wonders if ths is supported currently already. Intel clarifies this is already included in running CR.
- Nokia wonders why different TTTs are needed in practice or is this just about easy specifying effort. Intel thinks TTT could be different and doesn't think we need to restrict. Ericsson agrees.
- Samsung wonders if this restricts the event configuration. Intel thinks this is still open and this doesn't preclude that combination.
- OPPO wonders what different TTT means: Shall UE consider both TTTs as they may not expire at the same time? LGE thinks we are using "and" for the conditions. Intel agrees and thinks both have to expire for the execution to trigger.
- Samsung thinks A3+A3 and A5+A5 do not make sense. Intel thinks we could have A3 RSRP and A3 RSRQ. Samsung thinks this is not required and will impact CHO execution success.
- Huawei agrees all combinaitons could be supported.

P3

- Nokia wonders why cell-specific offset would be different. Intel thinks RSRP and RSRQ might need different offsets. Qualcomm thinks the offset is used to compensate UL/DL imbalance. Samsung thinks this is located in the MeasObject and not in ReportConfig. OPPO agrees. Nokia agrees and thinks the extra flexibility is not needed.

P5

- LGE thinks s-Measure is needed to avoid UE power consumption. Qualcomm agrees. OPPO agrees

P6/7

- Ericsson thinks P6 need not be specified and network can remove measId at the same time as it removes CHO configurations. LGE thinks UE could autonomously release the measId since CHO configuration is released after HO. Samsung thinks there's no issue for network to do this.
- Huawei thinks measId is part of CHO configuration. Intel thinks the same measId could be used for multiple CHO configurations.

Agreements

1 For A3 event, A3 event offset, hysteresis and time to trigger should be allowed to configure differently for the 2 measID for the same event, same RS type and same measurement object.
2 For A5 event, A5 threshold 1 and A5 threshold 2, hysteresis and time to trigger should be allowed to configure differently for the 2 measID for the same event, same RS type and same measurement object.
3 All event combinations (i.e. A3+A5, A3+A3 and A5+A5) are supported.
4 For both A3 and A5 events, no changes to cell specific offset.
5 maxNrofRS-IndexesToReport, maxReportCells, reportAddNeighMeas, reportAmount, reportOnLeave, reportQuantityCell, reportQuantityRS-Indexes, and useWhiteCellList are not supported within the measID that is configured for triggering conditional handover.
6 No changes to S-measure, i.e. it applies to measurements of the CHO candidate cells.

=> FFS on Stage-3 details: whether there are issues with configuration of different events (e.g. A3+A5) and how to handle the "and" of two triggering events in RRC

Wording discussed on measId release (not agreed during the session)

??

7 CHO measurement ID needs to be explicitly removed by network. UE is not require CHO measurement ID that is not linked to CHO configurations.

⇨ **Offline discussion 109 (Ericsson): Discuss how measId is released for CHO and RRM configuration. Outcome can be provided in R2-1916322**

R2-1916322 Outcome of offline disucssion 109 on release of measId for CHO Ericsson discussion
Rel-16 NR_Mob_enh-Core, LTE_feMOB-Core

- OPPO wonders if this is the CHO field of measID or the entire measID.
- Samsung still wonders what the problem is with network release.

Agreements

1 When the network explicitly removes the stored CHO configuration for a candidate, the network explicitly releases the measIDs associated to the CHO configuration for that candidate cell if it's not used by other CHO configurations.
2 When the CHO configurations are autonomously released by the UE, it is FFS if the UE autonomously releases the associated measIDs.
FFS whether UE removes reportConfig.

R2-1914889 Measurement Report for Conditional Handover Procedures MediaTek Inc. discussion R2-1913001
R2-1915022 Measurement report enhancement in conditional handover Spreadtrum Communications discussion R2-1912240
R2-1915541 Measurement reporting while CHO is configured PANASONIC R&D Center Germany discussion R2-1912693
R2-1916051 Measurement aspects for CHO Samsung R&D Institute UK discussion R2-1912529 *(moved from 6.9.3.1)*

Combining DAPS HO and CHO:
R2-1914815 Discussion on combination of DAPS and CHO ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core
R2-1915455 Combination of CHO and DAPS NEC discussion Rel-16 NR_Mob_enh-Core
R2-1914876 On Combining RUDI and CHO InterDigital discussion Rel-16 NR_Mob_enh-Core R2-1912881
R2-1915846 Discussion on combination of simultaneous connectivity and CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1912743
R2-1914488 Coexistence of Simultaneous Connectivity and CHO CATT discussion Rel-16 NR_Mob_enh-Core
R2-1914701 Discussion on simultaneous connectivity in CHO vivo discussion Rel-16 NR_Mob_enh-Core R2-1913145
R2-1914805 Mobility Robustness enhancement for combined CHO and DAPS HO Qualcomm Incorporated discussion Rel-16 LTE_feMob-Core R2-1913677
R2-1915037 Combination of CHO and RUDI Handover ETRI discussion Rel-16 NR_Mob_enh-Core R2-1913793

Security key derivation:
R2-1914991 Timing of Key Derivation in Conditional Handover Futurewei discussion Rel-16 NR_Mob_enh-Core
R2-1914992 Draft LS on the Timing of AS Key Derivation in Conditional Handover Futurewei discussion Rel-16 NR_Mob_enh-Core

UE capabilities for CHO:
R2-1915556 UE capabilities for CHO Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1913015

RRC signalling size for CHO:
R2-1915023 RRC signaling size restriction in CHO Spreadtrum Communications discussion R2-1912241

6.9.3.4 Fast handover failure recovery

This AI only addresses NR.
Specification details of NR T312 support, including TPs for both PCell and PSCell operation. For PSCell T312, proponents should provide TPs to illustrate the needed functionality.

T312 for PSCell:

R2-1916195 Confirmation of working assumption for T312 support on PSCell Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated discussion NR_Mob_enh-Core
Observation 1: T312 based functionality is beneficial on PSCell when SCG measurements are configured over SRB3.
Observation 2: T312 based functionality is beneficial on PSCell when SCG measurements are configured over SRB1.

Agreements

1 Confirm the working assumption to Introduce T312 based mechanism on PSCell for fast declaration of SCG failure
2 T312 on PSCell can be configured for SCG measurement configurations provided over SRB3 or SRB1.

=> FFS how the PSCell T312 triggers (to be handled with the running RRC CR dicsusion)

P2

- OPPO wonders how SRB1 case works. Why does PSCell quality affect SRB1 reporting. SRB3 seems more useful case. Samsung clarifies that for MN-initiated SN change, SRB1 is needed. OPPO thinks this would mean PCell T312 is started. Nokia agrees that SRB3 is more valid but it's easier to support for both SRBs. Qualcomm agrees we should be able to use SRB1. LGE agrees with the proposal.
- Intel wonders if this means we support EN-DC or NR-DC with this case. Samsung clairifies this is for any case of NR PSCell.
- Samsung clarifies that if SRB3 is configured, UE always uses that. Otherwise it uses SRB1. Intel thinks the only change is in NR RRC.

R2-1915500 DraftCR for early RLF and fast handover failure recovery for PSCell Nokia, Nokia Shanghai Bell draftCR Rel-16 38.331 15.7.0 B NR_Mob_enh-Core
R2-1916198 Introduction of T312 for PCell and PSCell in NR (Draft) Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated draftCR Rel-16 38.331 15.7.0 NR_Mob_enh-Core

✉ **[108#16][NR Mob] T312 for PCell and PSCell (Samsung)**
Running CR showing changes required to adopt T312 in NR
Intended outcome: Endorsed Draft RRC CR
Deadline: 2019-12-13
=> Endorsed in R2-1916640

R2-1915551 On T312 in NR and its relationship with T310 Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh
R2-1916199 Further consideration on T312 for conditional handover LG Electronics Inc discussion Rel-16 NR_Mob_enh-Core
R2-1915159 Further considerations for T312-based mechanism OPPO discussion Rel-16 NR_Mob_enh-Core

Merging RRCReestablishment and RRCReconfiguration:

R2-1915997 Message Mergence for fast HO failure recovery CMCC discussion Rel-16 NR_Mob_enh-Core

Early UE context fetch:

R2-1915218 Discussion on fast handover failure recovery CMCC discussion Rel-16

Event-based faster pseudo-RLF:

R2-1915038 Faster Handover Failure RecoveryETRI discussion Rel-16 NR_Mob_enh-Core R2-1913794

6.9.3.5 Conditional handover - beam specific aspects

This AI only addresses NR.

Including discussion on beam-related aspects for CHO. New proposals should provide TPs illustrating the required Stage-3 specification changes.

Beam-specific enhancements:

R2-1914487 Further Discussions on Cell Evaluation for CHO Cell Selection CATT discussion Rel-16 NR_Mob_enh-Core

6.9.4 Conditional PSCell addition change

Including outcome of email discussion [107bis#52][NR MobE] Open issues Conditional PSCell addition/change (CATT). Details of the solution, especially how to resolve the identified open issues of the email discussion, including TPs (where possible) should be provided.

Outcome of email discussion [107bis#52][NR MobE] Open issues Conditional PSCell addition/change (CATT):

R2-1915962 Report on Email Discussion [107b#52][NR MobE] Open issues Conditional PSCell addition/change CATT discussion Rel-16 NR_Mob_enh-Core
⇨ Revised in R2-1916300

R2-1916300 Report on Email Discussion [107b#52][NR MobE] Open issues Conditional PSCell addition/change CATT discussion Rel-16 NR_Mob_enh-Core

Agreements

1. CPAC is defined as the UE having network configuration for initiating access to a candidate PSCell, either to consider the PSCell as suitable for SN addition or SN change including intra-SN change, based on configured condition(s).
2. Usage of CPAC is decided by the network. The UE evaluates when the condition is valid.
3. Support configuration of one or more candidate cells for CPAC;
o FFS how many candidate cells (UE and network impacts should be clarified). FFS whether the number of candidate cells for CPAC different from that of CHO.
5. Allow having multiple triggering conditions (using “and”) for CPAC execution of a single candidate cell. Only single RS type per CPAC candidate is supported. At most two triggering quantities (e.g. RSRP and RSRQ, RSRP and SINR, etc.) can be configured simultaneously. FFS on UE capability
6. Define an execution condition for conditional PSCell change by the measurement identity which identifies a measurement configuration There is already an agreement for conditional PSCell addition
7. Cell level quality is used as baseline for Conditional NR PSCell addition/change execution condition;
g. Only single RS type (SSB or CSI-RS) per candidate PSCell is supported for PSCell change.
h. At most two triggering quantities (e.g. RSRP and RSRQ, RSRP and SINR, etc.) can be configured simultaneously. FFS on UE capability.
i. TTT is supported for CPAC execution condition (as per legacy configuration)
8. No additional optimizations with multi-beam operation are introduced to improve RACH performance for conditional PSCell addition/change completion with multi-beam operation.
9. For FR1 and FR2, leave it up to UE implementation to select the candidate PSCell if more than one candidate cell meets the triggering condition. UE may consider beam information in this.

10. UE is not required to continue evaluating the triggering condition of other candidate PSCell(s) during conditional SN execution.

For PSCell addition:

4. The baseline operation for CPAC procedure assumes the RRC Reconfiguration message contains SCG addition/change triggering condition(s) and the RRC configuration(s) for candidate target PSCells. The UE accesses the prepared PSCell when the relevant condition is met.

a. Multiple candidate PSCells can be sent in either one or multiple RRC messages.
b. As part of the CPAC configuration to be sent to the UE, the RRC container is used to carry candidate PSCell configuration, and the MN is not allowed to alter any content of the configuration from the PSCell. moreover, in case of SN change, source SN is not allowed to alter any content of the configuration from the target SN.
c. Use add/mod list + release list to configure multiple candidate PSCells.
d. CPAC execution condition and/or candidate PSCell configuration can be updated by modifying the existing CPAC configuration.
e. Reuse the RRCReconfiguration/RRCConnectionReconfiguration procedure to signal CPAC configuration to UE.

FFS handling of conditional SN addition associated to the SN terminated bearer.

- Ericsson thinks P1.9 should also consider beam information (up to UE implementaiton)
- FW wonders if UE continues doing measurements in P1.10. Qualcomm thinks UE may not be able to continue measurements. Nokia wonders when this would not be possible. Qualcomm thinks this may depend on frequency, e.g. intra-frequency may be difficult. Futurewei thinks there may be many candidates and failing one candidate doesn't mean all candidates fail.

P2

- Ericsson thinks one level of encapsulation is missing here. LTE RRC mesage would contain another LTE message containing the conditions and NR RRC message.

P3

- OPPO wonders if the deciding entity always indicates the condition. SN-initiated case might not require this. Qualcomm agrees.
- OPPO thinks target SN doesn't need to know the condition. Nokia agrees.
- Intel wonders why we have different principles than in CHO where only source knows it. OPPO thinks this is not explicitly indicated but as part of the CPAC RRC transparent container.

P4

- Samsung thinks this would be different for MN and SN-initiated procedures so it can't be baseline with P1.4

P5

- QC wonders if this is sent via SRB3 or SRB1. Chair thinks SRB1 can always be used for EN-DC.

P6

- Samsung thinks we agreed to prioritize SN-initiated SN change. One key point is use of SRB3 since in EN-DC SN change MNB was always involved. LGE agrees and wonders if current specification supports this and whether we need a new procedure.
- Samsung thinks we should identify any RAN3 impacts as well.

Agreements for CPAC configuration related proposals

2 For conditional PSCell addition, the MN transmits the final RRCReconfiguration/ RRCConnectionReconfiguration message to the UE, which includes the execution condition generated by the MN, and encapsulates the RRCReconfiguration provided by the candidate PSCells. FFS how the encapsulation is done exactly (can be considered in Stage-3)

3 SN decides on the condition for SN-initiated procedures and MN decides on the condition on MN-initiated procedures.

FFS whether we need coordination on exact execution conditions or just measurements.
FFS whether source or target SN knows the condition
FFS in which exact cases the condition needs to be indicated

5 Both the execution condition and the configuration for the candidate PSCell (as a container) can be included in the RRCReconfiguration message generated by the SN for intra-SN conditional PSCell change initiated by the SN (without MN involvement).

6 SRB1 can be used in all cases. SRB3 may be used to transmit conditional PScell change configuration to the UE for intra-SN change without MN involvement.

⇨ **FFS how to generate the final RRC message to the UE in the SN initiated conditional PSCell change with MN involvement.**
⇨ **FFS if for both cases and for inter-SN change involving MN, the deciding entity (MN/SN) indicates the condition to the other involved entities (e.g. MN, source SN) via X2/Xn inter-node message.**

⇨ **Offline 108 (CATT): Which of the remaining proposals could be agreeable. Discuss also what are the potential RAN3 impacts. Result can be provided in R2-1916321 (CBF)**

R2-1916321 Outcome of offline discussion 108 on Conditional PSCell Addition/Change CATT discussion Rel-16 NR_Mob_enh-Core

R2-1916329 Outcome of offline discussion 108 on Conditional PSCell Addition/Change CATT discussion Rel-16 NR_Mob_enh-Core

- CATT reports that several copmanies gave input but not necessarily all and the proposals may not have been fully reviewed.
- Qualcomm thinks if we can't agree to the scope now we can't finish the work in Rel-16.
- Intel thinks there are still open issues on e.g. RRC message generation and is not sure how to take this into account in running CR.
- Samsung thinks the annex describes the general principles and status of any open issues. Limiting to intra-SN case shows not many open issues, signalling strucuture is simple and there is no RAN3 impact. Would suggest to focus on that. Could have email discussion.
- ZTE thinks this may not be sufficient but limiting to intra-SN change could help. MN involvement complicates the procedures.
- Nokia thinks we should limit to a single scenario to have something in Rel-16. Intra-SN is simplest but thinks it's not the most important case. Would like to consider addition as well. Ericsson agrees and thinks we could also do the whole thing in Rel-17.
- LGE also agrees to limit to intra-SN change. OPPO is fine with this but thinks we could still imit to case without MN involvement.
- Intel thinks we may not be able to finish this procedure in Rel-16 and would not like to move whole WID to Rel-17.
- Qualcomm thinks CU-DU case could still make sense for intra-SN change. IDT agrees.
- Samsung thinks MN involvement is not a big issue. Only selectedBandCombination may be affected. Qualcomm thinks using SRB1 doesn't mean the same as MN involvement.
- Intel thinks we should still prioritize CHO and DAPS in this WID.
- Nokia thinks RAN should decide whether this should continue to be included in the WID.
- Intel thinks we need to prioritize the basic features over the latest features.

⇨ **There are some concerns whether this topic can be finished in Rel-16.**
⇨ **Limit to intra-SN change without MN involvement (i.e. no MN reconfiguration or decision needed but SRB1 can be used) in Rel-16. Other cases may be discussed in later releases if WID is agreed.**

✉ **[108#67][NR Mob] Resolving open issues in CPAC and creating TP (CATT)**
Discuss contents of R2-1916329 to see if they are agreeable. Attempt to close open issues and create TP illustrating the changes needed for this feature.
Intended outcome: Report and RRC TP for CPAC feature.
Deadline: 2020-01-30

⇨ **Send LS to RAN3 (cc: RAN, RAN4) on our agreements for CPAC (CATT) and indicate RAN2 sees no RAN3 impact for intra-SN change without MN involvement. LS can be provided in R2-1916330 (CBFM)**

R2-1916330 DRAFT LS on Conditional PSCell addition/change CATT LS out Rel-16 NR_Mob_enh-Core To:RAN3, CC: RAN, RAN4

R2-1915985 Draft Stage-2 CR for Conditional PSCell Addition/Change CATT draftCR Rel-16 37.340 15.7.0 B NR_Mob_enh-Core

Draft LSs to other groups:

R2-1915849 Draft LS to RAN3 on conditional Pscell change Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core

R2-1915960 DRAFT LS to SA3 on Conditional PSCell addition/change CATT LS out Rel-16 NR_Mob_enh-Core To:SA3

R2-1915961 DRAFT LS to RAN3 on Conditional PSCell addition/change CATT LS out Rel-16 NR_Mob_enh-Core To:RAN3

Overall functionality of CPAC:

R2-1914877 Conditional PSCell addition/change InterDigital discussion Rel-16 NR_Mob_enh-Core

R2-1914637 Conditional PSCell addition/change Ericsson discussion NR_Mob_enh-Core

R2-1914517 CHO SN addition/change handling Qualcomm Incorporated discussion

R2-1914703 Remaining issue of conditional PSCell addition and change vivo discussion Rel-16 NR_Mob_enh-Core R2-1912343

R2-1915024 Remaining issues for Conditional PSCell Change Spreadtrum Communications discussion *(moved from 6.9.3.4)*

R2-1916208 Consideration of After-action upon Conditional PSCell Addition LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

R2-1914816 Discussion on conditional PSCell addition and change ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

R2-1914985 Remaining issues on procedure and signaling of CPAC Futurewei discussion Rel-16 NR_Mob_enh-Core R2-1912816

R2-1915848 Discussion on conditional PScell change Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core

Failure handling:

R2-1914518 CHO SN addition/change failure handling Qualcomm Incorporated discussion

R2-1915153 Failure handling for conditional PScell change and addition OPPO discussion Rel-16 NR_Mob_enh-Core

R2-1915915 Considerations on failure handling for CPAC in NR Potevio discussion NR_Mob_enh-Core

R2-1916207 SCG Failure Handling with Conditional PSCell Configuration LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

R2-1914986 Handling of multiple candidate cells for CPAC Futurewei discussion Rel-16 NR_Mob_enh-Core

Details of SN-initiated SN change:

R2-1915243 Expected signalling flows for SN-initiated PSCell change NEC discussion Rel-16 NR_Mob_enh-Core

R2-1915737 Main issues remaining for SN initiated SN change Samsung Telecommunications discussion Rel-16 NR_Mob_enh-Core Late
(Revised in R2-1916273)

R2-1916273 Main issues remaining for SN initiated SN change Samsung Telecommunications discussion Rel-16 NR_Mob_enh-Core Late

Details of MN-initiated SN change:

R2-1915847 Discussion on MN initiated conditional PScell change Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core

Security aspects:

R2-1914993 Handling of Key Derivation in Conditional PSCell Addition/Change Futurewei discussion Rel-16 NR_Mob_enh-Core

R2-1915645 Draft LS on S-KgNB/KSN Derivation in Conditional PSCell Addition/Change Futurewei discussion Rel-16 NR_Mob_enh-Core

6.10 DC and CA enhancements

(LTE_NR_DC_CA_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-192336, see also guidance in RP 192326)
Time budget: 2 TU
Tdoc Limitation: 8 tdocs

6.10.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc
Including outcome of the email discussion [107bis#44][DCCA] Running CRs 38331 36331 (Ericsson)
Including outcome of the email discussion [107bis#45][DCCA] Running CR 37340 (Vivo)

R2-1914936 Running CR to 37.340 for CA_DC enhancements vivo, Ericsson draftCR Rel-16 37.340 15.7.0 LTE_NR_DC_CA_enh-Core

⇒ **endorsed**

R2-1915281 Running CR for 36.331 for CA/DC Enhancements Ericsson draftCR Rel-16 36.331 15.7.0 LTE_NR_DC_CA_enh-Core Late

R2-1915282 Running CR for 38.331 on CA/DC Enhancements Ericsson draftCR Rel-16 38.331 15.7.0 LTE_NR_DC_CA_enh-Core Late

- Ericsson indicate that only 3-4 companies inputted. There are significant number of open issues.

Offline 42, revisions in R2-1916518, R2-1916519, to address open issues (Ericsson)

- Ericsson report that there was not much progress and suggest to endorse the original docs and progress further after the meeting

⇒ **running CRs above are endorsed**

R2-1915279 Running CR for 36.300 on CA/DC Enhancements Ericsson draftCR Rel-16 36.300 15.7.0 LTE_NR_DC_CA_enh-Core

R2-1915280 Running CR for 38.300 for CA/DC Enhancements Ericsson draftCR Rel-16 38.300 15.7.0 LTE_NR_DC_CA_enh-Core

- Ericson think these are stable.

⇒ **noted**

=> Revised in R2-1916518 and R2-1916519

R2-1916518 Running CR for 36.300 on CA/DC Enhancements Ericsson draftCR Rel-16 36.300 15.7.0 LTE_NR_DC_CA_enh-Core

=> Endorsed

R2-1916519 Running CR for 38.300 for CA/DC Enhancements Ericsson draftCR Rel-16 38.300 15.7.0 LTE_NR_DC_CA_enh-Core
=> Endorsed

R2-1915056 Open issues in DCCA WI Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core
- Nokia think this is just for information.

⇒ **noted**

Email Discussions

Rapporteur proposes to have one email discussion per WI objective to progress FFSes

✉ **[108#13][DCCA] Stage 2 running CRs 36.300, 38.300 (Ericsson)**
Scope: Final check on the stage 2 CRs
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Reserved in:
R2-1916518 (36.300)
R2-1916519 (38.300)

✉ **[108#14][DCCA] Stage 2 running CRs 37.340 (vivo)**
Scope: Final check on the stage 2 CRs
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916642

✉ **[108#33][DCCA] RRC running CRs 36.331, 38.331 (Ericsson)**
Scope: agreeable Draft CRs for next meeting, capturing agreements
Intended outcome: Agreeable Draft CR
Deadline: 2020-01-23

✉ **[108#54][DCCA] Early measurements (Ericsson)**
Scope: Identify and progress if possible any remaining issues
Intended outcome: Report with TPs for next meeting
Deadline: 2020-01-30

✉ **[108#55][DCCA] MCG SCell and SCG Configuration with RRC Resume (ZTE)**
Scope: Identify and progress if possible any remaining issues (Main OI: How to handle the case if Resumed cells/scg or cells/scg to resume is in fact not present, smaller OI: gNB indicate what to resume/release to the UE).
Intended outcome: Report for next meeting
Deadline: 2020-01-30

6.10.2 NR-NR Dual Connectivity

RAN2 aspects related to NR-NR Dual Connectivity, to be discussed after RAN1 has made some progress.

R2-1915372 NR-DC power control Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1912542

R2-1914677 NR-DC power control Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914937 Power control for NR DC vivo discussion R2-1912269
DISCUSSION on the 3 docs above
- Vivo think that MN shall configure the power also for SCG
- Ericsson think that the SN configures the power for SCG

- Ericsson think we need R1 input for this. Nokia think we need more input from R1. Ericsson think we can just wait.
- Huawei think MN-SN coordination can be discussed offline.

Offline 43, try to converge on the needed signalling, determine whether to send LS (vivo)

R2-1916532 Offline discussion about Power control for NR-DC vivo discussion Rel-16 LTE_NR_DC_CA_enh-Core
- Vivo indicate that not many companies inputted and suggest email discussion. Ericsson support to have email discussion.

✉ **[108#15][DCCA] Power control for NR DC (Vivo)**
Intended outcome: Endorsed TP, input to the running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916643

6.10.3 Early measurement reporting

Early measurement reporting for MR-DC, NR-DC, and CA in IDLE, INACTIVE.

R2-1914917 Discussion on early measurement configuration upon state transition MediaTek Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1913835
DISCSUSSION
P1
- QC agrees, Nokia too.
- Ericsson think delta configuration shall be supported. Nokia has the opposite view.
- Samsung think that if delta configuration is supported it should be simple
- Chair: limited support for delta signalling

P2
- Nokia has a different view.
- Nokia think the timer can continue, and continue early measurement based on Bcast configuration.
- QC think that if src RAT has included a measurement configuration of the other RAT the the UE can continue, otherwise not. LG agrees.
- MTK think that dedicated config for other RAT doesn't make sense. QC think that EN-DC would benefit. Nokia think it wouldn't make sense for the UE to continue. MTK think the set of frequencies would typically be different. QC think that UE can know which freq applicable for DC due to UE capability. Nokia think this is not only about UE capability.
- vivo and oppo think the measurement just continues.
- ZTE think NR and LTE is likely not synchronized so Nokia proposal is the preferred way.
- CATT anyway think that when UE goes to another RAT there will be TAU which will clear the configuration.
- Samsung think also the Nokia proposal is complex and support the original MTK proposal. Intel agrees to keep it simple support MTK proposal.
- Huawei think the UE could keep the dedicated configuration for usage when the UE comes back.
- Ericsson wonder about the measurement results. Nokia think we don't specify, it will be up to R4. Samsung think this can be up to implementation.

P3
- MTK think there is are some abnormal cases.

P6
- CATT think it should also be possible for the network to tell the UE to release. QC agrees
- Oppo think timer and validity area can be used for release
- Samsun think we can use delta signalling. Intel wonder how the network can know if the UE has a configuration
- Ericsson think we use setup/relase structure. ZTE wonder how this would work. Clarification that if the IE is not present then UE just keep/continue.

⇒ **Upon entering RRC CONNECTED mode, the UE stops validity timer T331 (if running) and deletes the dedicated idle mode measurement configuration (if configured).**

⇒ **After moving to another RAT due to inter-RAT cell reselection, the UE stops validity timer T331 (if running) and deletes the dedicated idle mode measurement configuration (if configured)**

⇒ **While transition from NR INACTIVE mode to NR IDLE mode, the UE keeps the validity timer T331 (if running) and the dedicated idle mode measurement configuration (if configured), i.e. just continue.**

⇒ **While transition from LTE INACTIVE mode to LTE IDLE mode, the UE keeps the validity timer T331 (if running) and the dedicated idle mode measurement configuration (if configured), i.e. just continue.**

⇒ **When UE reselects to a cell that is not part of the validity area, the UE stops the validity timer and also clears the entire early measurement configuration.**

⇒ **For the early measurements during a 2-step resume:**
if *RRCConnectionRelease* does not include idle/inactive measurement configuration, the UE keeps the configuration and T331 continues running (i.e. no action);
if *RRCConnectionRelease* includes idle/inactive measurement configuration, the new configuration completely replaces the old configuration (incl timer which would be started).
if *RRCConnectionRelease* includes an release indication, the UE releases the old configuration, stops timer.

R2-1915284 Remaining issues for early measurement results and configurations Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

P1
- Nokia wonder if we have in LTE the PCI list. Ericsson think yes.
- Oppo think this is different to LTE.

P6
- Nokia think the UE shouldn't use Bcast configuration from previous cell. Samsung agrees,

P7
- Samsung think the UE should not do this, the UE shall keep the dedicated configuration. Possibly the UE can be smarter based on implementation.
- Nokia think this wouldn't occur.
- Intel think the UE uses SMTC from the serving cell.

⇒ **The validity area is defined as a carrier list (which could be different from the carriers to be measured during RRC_IDLE/INACTIVE) with optional PCI list per carrier.**

⇒ **The early measurement results are sorted by RSRP unless only RSRQ is configured as reporting quantity.**

R2-1915730 Remaining issues for early measurements upon UE mobility Samsung Telecommunications discussion Rel-16 LTE_NR_DC_CA_enh-Core Late

P5/6
- Nokia think this wouldn't work, e.g. there would not be any test cases.
- Huawei don't like P5, and think it is difficult to differentiate between this case and out of coverage. Intel think that e.g. if Bcast SMTC and dedicated SMTC is different.

P7
- Nokia think the definition of improper is needed, but the intention is ok.

⇒ **The validity area cannot include IRAT cells**

⇒ **If, for a frequency for which SSB config was provided by broadcast @ initial configuration, reselected cell does not broadcast SSB config the UE is not required to measure concerned frequency while camping on concerned cell (but should re-attempt following another re-selection)**

R2-1914380 Remaining issues of NR early measurements Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core
DISCUSSION
P3
- Ericsson support.
- Oppo think this is not needed, for delta config. QC think this is not for delta configuration. Ericsson agrees, and think it is mainly for network requesting the measurement results (provide proper grant).
- MTK think it is ok to have network coord.
- Samsung think the network and UE may have different understanding. Huawei agree. LG as well. Intel agrees.
- QC also think that the network can know if the UE has a non-useful configuration and can avoid asking for results
- ZTE don't like this

P4/5
- CATT think P5 is based on MN request
- LG wonder if this has R3 impact,
- Ericsson think P4 is already the only possibility, and P5 is too complex. Nokia Huawei too.
- Samsung support these proposals and think they are quite natural ..
- QC think MN doesn't have the information to do this without coord. Nokia think this is by O&M

P13/14
- Nokia think we can generalise.

⇒ **Measurement for Cell reselection (304) and early measurements are independent.**

R2-1915060 Early measurement handling during reselection Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core
DISCUSSION
P5
- QC support these proposals. QC think we can just follow 304 wrt PLMN selection.
- MTK also support
- Ericsson wonders about P5.
- Samsung think for PLMN selection UE transit to connected.
- Chair: seems P5 is not needed

⇒ **In case UE cannot find suitable cell to camp or in anycell selection does not trigger stopping T331 or deleting early measurement configuration (no need to capture in the TS).**

R2-1914553 Open issues for early measurement OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914569 Draft LS on early measurement configuration during 2 step resume procedure without UE context relocation OPPO LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN3

R2-1914821 Inter-RAT Operation ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914854 Discussion of the Working assumption on Measurement configuration during INACTIVE Intel Corporation discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914940 UE measurement behaviour regarding autonomous state transition vivo discussion R2-1912272

R2-1915286 Delta configurations for early measurement configurations Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1915822 Handling early measurement results upon cell reselection LG Electronics discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914458 Discussion for early measurement configuration for 2-step resume China Unicom discussion

Validity Area

R2-1914938 Remaining issues for Validity Area vivo discussion

R2-1915821 Considerations on validity area in NR LTE_NR_DC_CA_enh-Core LG Electronics discussion Rel-16

R2-1914457 Proposal about the configurations of validity area for early measurement discussion China Unicom

Resume

R2-1915285 Applicability of early measurement solutions for LTE 16 LTE_NR_DC_CA_enh-Core Ericsson discussion Rel-

DISCUSSION

P2

- Nokia supports
- Huawei wonder if this is only for the case when freq list

P3

- Nokia think it is better to not indicate anything in SI.
- Intel think it is useful to have a SI indication as the UE can choose not to measure. Samsung agrees and support.
- ZTE support this. Vivo also think this is good.
- MTK think this is not needed if P4 is agreed.
- QC are not convinced about this.

P4

- LG agrees. In addition LG think non-reported results shall be discarded.
- Nokia think this is not needed. SIB indication will limit measurements to what is useful to report.
- ZTE support P4 because the UE can only report 3 freq but can measure 8 so the network need to be able to choose.
- LG think the UE may have stored results that should not be reported.
- chair: seems to be doubts about the benefits of this proposal

⇒ **The NR Rel-16 early measurement reporting solution is introduced in LTE**
a. The network can request (in RRCConnectionResume) the UE to send early measurements
b. The UE can include early measurements in RRCConnectionResumeComplete.

⇒ **If a UE is released by an eNB which only configures bcast LTE early measurements and then reselects to an eNB which broadcasts both LTE and NR idle/inactive measurement configurations, the UE shall apply these NR configurations**

⇒ **A new indication is introduced in SIB2 to indicate that the UE can perform NR early measurements while camped on the cell.**

⇒ **At least one indication is introduced in RRCConnectionResume to indicate that the UE shall include the LTE and/or NR early measurements in RRCConnectionResumeComplete.**

R2-1914528 Measurement Configuration in Inactive Mode and MR-DC LTE_NR_DC_CA_enh-Core CATT discussion Rel-16

R2-1914939 Early Measurement Reporting for INACTIVE State vivo discussion R2-1912271

R2-1915052 Fallback procedure for INACTIVE mode LTE_NR_DC_CA_enh R2-1912524 Samsung discussion

R2-1915059 early measurements and 2-step resume 16 LTE_NR_DC_CA_enh-Core Nokia, Nokia Shanghai Bell discussion Rel-

R2-1915283 Idle measurement configuration in UE Inactive AS context 16 LTE_NR_DC_CA_enh-Core Ericsson discussion Rel-

Misc

R2-1914425 Remaining issues on early measurement LTE_NR_DC_CA_enh-Core CATT discussion Rel-16

R2-1914678 Idle/inactive NR measurements in LTE and in NR Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914820 Remaining Issues on Early Measurements ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1915823 Remaining issues on early measurement configuration LG Electronics discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914407 Discussion on SSB measurement configuration with UE mobility China Unicom discussion

New Cases

R2-1914529 Considerations on cell reselection for early measurement reporting CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1915020 Consideration on early measurement reporting Spreadtrum Communications discussion

R2-1915021 Early measurement in NR-U Spreadtrum Communications discussion

UE capability

R2-1914952 Capability for early measurement reporting MediaTek Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1915061 UE capabilities for early measurements Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1916151 Further consideration on capability reporting LG Electronics Inc. discussion Rel-16 R2-1913919

Withdrawn

R2-1914941 IDC impact for early measurement vivo discussion R2-1912273 Withdrawn

6.10.4 Efficient and low latency configuration signalling

Minimizing signalling overhead and latency needed for initial cell setup, additional cell setup and additional cell activation for data transmission. Contributions related to early measurement reporting should not be submitted in this AI.

No documents should be submitted to 6.10.4. Please submit to 6.10.4.x

6.10.4.1 Direct SCell activation

Further details related to direct SCell activation by RRC upon SCell addition or after a handover. Support of MCG SCell and SCG Configuration with RRC Resume (AI 6.10.4.3) should be concluded before discussing whether direct SCell activation by RRC is applicable to RRC Resume (outstanding FFS from RAN2#105).

6.10.4.2 Fast SCell activation

Solutions for fast SCell activation including 'dormancy' like behaviour, provision of temporary RS resources at SCell activation, etc. This topic will be discussed again by RAN2 after receiving input from RAN1/4 on the feasibility and benefit of the potential solutions in response to LS R2-1908483 sent from RAN2#106.

SCell Dormancy

R2-1914575 SCell Dormancy operation in NR Intel Corporation discussion LTE_NR_DC_CA_enh-Core

DISCSUSSION

- Nokia think R1 agreed BWP model already, and think R1 agreed on two different switching methods. Nokia think we cannot change this as it would change too much in R1. LG also think so.
- Ericsson think the Intel proposal would be less limiting, and see no issues with it.
- QC wonder about worksplit between R1 and R2.
- Samsung think it is not clear whether BWP is agreed in R1 or not.
- ZTE think BWP is agreed in R1.
- vivo think this is just modelling and both Intel approach and BWP switching can work. .

⇒ **We use BWP model as agreed/assumed in R1.**

R2-1915688 Configuration of dormancy behaviour in SCell Ericsson discussion

DISCUSSION
P1
- nokia support. QC think we should remove e.g. part. QC thikn another way is to not confiugre search space, coreset etc. QC think there are R1 agreements that require some common ss PDCCH monitoring. Nokia point out that this is only for Scell. Samsung thikn there is no common info reception in Scell, LG agrees. Chair thikn we can come back if P1 is wrong, urge companies to check with R1 delegates

P2
- Nokia support, and P3 and P4 as well.
- ZTE wonder if we can have both BWP without PDCCH. Nokia think no. Intel agrees. QC agrees
- Oppo think there is only one dormant BWP ..
- Ericsson think there could be two BWP configured without PDCCH, e.g. if the normal one is used only with cross-carrier scheduling.

P3
- ZTE think P4 is not needed.
- Oppo agrees, but thikn there are several signalling solutions.

P6
- Ericsson explains that this means that for UL we'd adopt the Intel proposal to define behaviour rather than UL BWP. Samsung think for UL we can also switch BWP,
- QC wonder if PUCCH, SRS, RACH is allowed.

⇒ **R2 confirm that The dormant BWP is not configured with PDCCH monitoring, this is done by the IE pdcch-Config being absent in the BWP configuration.**

⇒ **The dormant BWP is configured only when the SCell is configured with at least one other UE-specific RRC configured BWP (i.e., a 'regular BWP'). There can be only one configured dormant BWP for an SCell.**

⇒ **UE determines via RRC configuration, which DL BWP among the UE-specific RRC configured BWPs is the dormant BWP**

Offline 46, on UL behaviour, confirm what UL transmissions are allowed in dormancy, if any, and related modelling option (QC).

R2-1916581 Offline 46 Qualcomm Inc.
DISCUSSION
- Intel support 1-5 request decision for 6.
- FW think that switching latency need to be very short, and think UL SRS is needed.
- On P1 Samsung wonder what suspend means. Nokia think that for Type1 it is not crystal clear, but should mean clear Grant.

P4
- Huawei would like to take some more time for P4. Intel don't understand, and think we should keep it simple in this release, i.e. not support dormant SCell that uses cross-carrier scheduling. LG think cross-carrier scheduling is available acc to current agreement.
- QC think there are further R1 and R4 impacts if we allow cross carrier scheduling.
- FW think we need input from R1.
- Ericsson propose an email discussion to resolve this
- FW think R1 need to decide the UL behaviour.
- Oppo think we should not send an LS, there are many open issues. Intel strongly agrees that we should not ask R1. Ericsson agrees and think R2 can decide. Intel think we should conclude on SRS before we send an LS.

⇒ **Upon entering dormancy, the UE clears/suspends any uplink grants (type 1 and type2) associated with the SCell.**

⇒ **In dormancy SCell, the UE doesn't perform RACH.**

⇒ **In dormancy SCell, aperiodic CSI/SRS via self-carrier scheduling is not allowed.**

⇒ **WA: If in dormancy SCell, aperiodic CSI via cross-carrier scheduling is not allowed, FFS for SRS**

⇒ **As dormant state in LTE euCA, SCell dormancy is not applicable to the PUCCH SCell.**

⇒ **Send LS to R1 cc R4 informing of agreements, stating that this is not finished and e.g. SRS transmissions on the dormancy SCell is still FFS (no action)**

✉ **[108#56][DCCA] Scell Dormancy Open Issues (Oppo)**
Intended outcome: Report, paving the way for fruitful discussions next meeting
Deadline: 2020-01-30

Offline 65, DRAFT LS To R1 cc R4 on SCell dormancy in R2-1916587 (Intel)

R2-1916587 DRAFT LS To R1 cc R4 on SCell dormancy
- Change meeting to 108, fix typo

⇒ **With the comments LS is approved in R2-1916601**

R2-1915062 Fast Scell Activation Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914363 Remaining issues of dormancy behaviour Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914552 Introduction of dormancy behavior in NR OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914679 MAC impact to support the efficient and low latency SCell configuration and activation Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914822 Scell dormancy behaviour ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914943 Dormancy-like behavior on SCell vivo discussion
R2-1915181 Consideration on dormancy behavior LG Electronics Inc. discussion LTE_NR_DC_CA_enh-Core

Temporary RS

R2-1914381 Discussion on fast SCell activation based on Aperiodic TRS (A-TRS) Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914530 Temporary RS utilization for SCell and SpCell CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1915184 Temporary RS for fast SCell activation LG Electronics Inc. discussion LTE_NR_DC_CA_enh-Core
R2-1915223 To reduce SCell activation delay in NR Samsung discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1912476

Others

R2-1914551 Fast Scell activation in sTAG OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.10.4.3 MCG SCell and SCG Configuration with RRC Resume

Support of CA/DC configuration with RRC resume.

Suspended SCG

R2-1914576 Practical scoping of SCG suspension operation in NR Intel Corporation discussion LTE_NR_DC_CA_enh-Core

⇒ **noted**

R2-1915687 Open issues for supended SCG behaviour Ericsson discussion

⇒ **noted**

DISCUSSION
- QC wonders what state is the PSCell in?
- Oppo think we need to discuss what kind of SCG this applies to.
- LG think that PSCell should be deactivated. IDT agrees.
- Intel think the PSCell is just configured, and nothing is active.
- Huawei agrees with the Intel proposal. Ericsson think their proposal is consistent with the Intel proposal.
- Ericsson think that this looks similar to conditional PSCell addition.
- IDT think we need to figure out e.g. what happens for RBs for the SCG.
- QC think the PSCell is activated. QC think that if we want to enhance the time this it required. Apple agrees.
- Intel think that 50% of time requirement is met by measurement. If this is not sufficient the CSG can be in DRX.
- vivo think that Scell and PScell shall be handled differently,
- LG think that if PSCell dormancy has R1 impact this is difficult.
- QC think we can progress anyway.
- IDT think we don't do at all this release. Ericsson agrees.
- ZTE think that the Intel proposed stored SCG configuration will not meet the requirement.

Chair: Think that the only possibility is to follow the Intel proposed model as this can be done without R1 impact and is similar to current suspend-resume, OR we do nothing.

Chair: Many companies think we cannot progress a solution that really gives reactivation time benefits now due to lateness in the release and that R1 is closing now.

⇒ **R2 suggest to not progress this objective further in Rel-16**

R2-1914951 Discussion on Suspended SCG MediaTek Inc. discussion Rel-16
R2-1914823 On SCG suspension ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1915933 SCG Suspension Apple discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1916157 Clarification of suspended SCG LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1916161 Resumption of suspended SCG LG Electronics Inc. discussion Rel-16
R2-1914364 Further discussion on suspension of SCG Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914944 UE behavior for suspended SCG vivo discussion
R2-1914531 Consideration on Dormant SCG State CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914895 Support of dormancy SCG OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914896 Draft LS on support of dormancy SCG OPPO LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN3
R2-1915511 On the modelling of dormant SCG Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

SCG at Resume

R2-1914874 Handling the SCG Configuration in RRC Resume InterDigital, Ericsson, LG, OPPO, KT Corp discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1914824 Maintaining SCG Configuration in Resume procedure ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1915731 Resumption based on early measurement results Samsung Telecommunications discussion Rel-16 LTE_NR_DC_CA_enh-Core Late
R2-1915026 Enhancements of resuming MR-DC configuration with RRC Resume Spreadtrum Communications discussion

6.10.4.4 Other

Other enhancements not addressed in the AIs above

New Cases

R2-1914942 Speed Up CA/DC setup during RRC Connection Re-establishment vivo discussion R2-1912274

R2-1915865 Latency reduction enhancements for SCG RACH procedure Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1913161

Capability

R2-1914953 Capability for fast DC/CA setup MediaTek Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.10.5 Fast MCG link Recovery

Further details of fast recovery of MCG link by utilizing the SCG link for recovery during MCG failure while operating under MR-DC.

R2-1914681 Remaining issues on fast MCG link recovery Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

DISCUSSION

P1

- Ericsson think we can allow SIB as well.
- Nokia think P1 is ok, and is by MN.
- Intel also support P1 and think if we use is as in P2 it must be dedicated sign
- Oppo support P1 and P2
- LG QC support P1.
- Intel think that other timers are in SIB because of particular reasons, but there is no such reason for this timer.

P2

- vivo agrees
- Nokia think that this means that the UE doesn't initiate the procedure.

P3/4

- Ericsson think that the feature can still work without this.
- QC wonder if P4 is really acc to current principle.
- LG think R3 can progress this.

P6

- QC think this is confusing.

General

- ZTE think we should send an LS to R3 about inter-node coordination for SN capability to support this feature. Nokia and Vivo think R3 already know.

⇒ **The guard timer for fast MCG link recovery should be configured via dedicated signalling, it is configured by the MN.**

⇒ **The configuration of guard timer implicitly indicates that the feature of fast MCG link recovery is enabled by the network, and that the UE shall initiate the procedure.**

General:

⇒ **For fast MCG recovery, R2 assumes this is now finished (w.r.t functionality)**

R2-1915063 Configuration of MCG failure recovery Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914826 Configuration for MCG fast recovery ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914863 Open issues on Configuration of MCG failure indication and timer T316 Intel Corporation discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1915244 Network configuration for fast MCG recovery NEC discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1915944 Discussion on Configuration of MCG Fast Recovery CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

Re-est cause

R2-1914893 Discussion on RRC reestablishment initiated by failure of MCG failure recovery SHARP discussion LTE_NR_DC_CA_enh-Core

New cases

R2-1914825 Further issues on MCG fast recovery ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1914945 Remaining issues on MCG fast recovery vivo discussion R2-1912277

R2-1914680 CG fast recovery via alternative UL Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.10.6 Cross-Carrier scheduling with different numerologies

RAN2 aspects related to cross-carrier scheduling, to be discussed after RAN1 has made some progress.

R2-1914362 CR to 38.331 on support of cross-carrier scheduling with different numerology Qualcomm Incorporated, ZTE Corporation, Sanechips draftCR Rel-16 38.331 15.7.0 F LTE_NR_DC_CA_enh-Core

⇒ **Noted**

R2-1914682 RAN2 impact to support cross-carrier scheduling with different numerologies Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

- Huawei has placed the IEs in PUCCH config instead.

⇒ **Noted**

R2-1915064 CR on how to introduce x-scheduling with different numerologies Nokia, Nokia Shanghai Bell draftCR Rel-16 38.331 15.7.0 LTE_NR_DC_CA_enh-Core

- Nokia indicate that this is similar ot the QC proposal, but think also the Huawei proposal can work.

⇒ **Noted**

DISCUSSION WAY FORWARD

- Huawei think we may need to evaluate impact of the two alternatives. Huawei and Intel think email discussion is needed.
- Intel wonder about PUCCH groups in the QC CRs, if used they need to be defined.
- Samsung prefer the QC/Nokia proposal. Ericsson agrees. Huawei point out that R1 specified the Huawei proposed structure.

Offline 45, arrive at a draftCR to be endorsed as baseline (QC).

R2-1916582 Offline 45 Qualcomm

⇒ **Noted**

R2-1916583 CR to 38.331 on support of cross-carrier scheduling with different numerology Qualcomm Incorporated draftCR Rel-16 38.331 15.7.0 F LTE_NR_DC_CA_enh-Core

⇒ **endorsed as baseline, check details if needed as part of running CR discussion**

6.10.7 Other

Including any RAN2 aspects related to the objectives 6, 7 and 8 (for which the WID did not identify RAN2 impact)

Timing

R2-1914361 Discussion on RAN2 impacts of async CA Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

DISCUSSION

General

P2

- Futurewei wonder if there will be R4 impact. Ericsson think maybe R4 need to discuss P2. MTK and ZTE agrees. QC think not. MTK would prefer that the network indicate which cell is the reference.

P3

- Ericsson are ok except for P3 where we should wait for R1. QC think this comes from RP decision. Vivo also think we should wait for R1. Intel think we can revisit later after R1 conclusion.

P1

- Oppo wonders what is the unit of the slot, QC think this is for R1.
- Ericsson think we can take into account R1 progress by email discussion.

P4-6

- MTK think these can be agreed

⇒ **P1: for email discussion**

⇒ **P3: wait for R1**

⇒ **Under async CA, clarify that the UE uses SFN of primary cell (i.e. PCell or PSCell) within the same cell group for the calculation of HARQ Process ID in SPS/CG, i.e. no change of rel-15 legacy UE behaviour.**

⇒ **Under async CA, clarify that the UE uses SFN of primary cell (i.e. PCell or PSCell) within the same cell group for calculation of downlink/uplink assignment occurrences of SPS/CG, i.e. no change of rel-15 legacy UE behaviour.**

⇒ **Under async CA, clarify that the UE uses SFN of primary cell (i.e. PCell or PSCell) within the same cell group for DRX on-duration determination, i.e. no change of rel-15 legacy UE behaviour.**

✉ **[108#57][DCCA] Async CA (QC)**
Scope: RRC signalling design for slot offset, taking into account R1 Nov outcome.
Intended outcome: agreeable TP for RRC
Deadline: 2020-01-30

P2: ask R4 about R4 impact, include P3 from the Ericsson doc below.

Offline 44, Draft LS to R4 (QC)

R2-1916584 [Draft] LS on FR2 gap timing impacts of async CA Qualcomm Incorporated LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN4

- Nokia wonder if we really need the question. Ericsson think we should ask. ZTE think we don't need to ask R4.
- Nokia think R4 will not have time to reply.
- QC think only one company think there is R4 impact bu there is no harm in asking.
- MTK think after this discussion it is cela that we don't need R4 input.

⇒ **Not agreed. We don't send this LS**

R2-1915224 Support of unaligned frame boundary for inter-band TDD CA Samsung discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1912477

DISCUSSION

- Several companies think this should be decided in R1. Samsung think this could simplify a lot.
- Ericsson still think this is R1 scope. QC agrees, and think that in any case FDD need to be handled. QC think we should just wait tof R1.

⇒ **We wait for R1 conclusions**

R2-1915371 Unaligned frame boundary with slot alignment and partial SFN alignment Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
DISCUSSION
- Ericsson proposes to discuss P4 and P5

P4/5
- QC think there is no ambiguity as broadcast system information is always from Primary cell.
- nokia think we can conclude there is no impact to SI reception.
- intel point out that DRX operation is also discussed in the Ericsson paper. Ericsson assumes that there is no impact.

⇒ **R2 assumes that SFN from Pcell is used for SI reception, thus no impact to SI reception**

⇒ **R2 assumes that SFN from Pcell is used for Rel-15 DRX, thus no impact to Rel-15 DRX.**

R2-1914510 FDD and TDD Timing Alignment for Dual Connectivity Vodafone discussion
DISCSUSSION
- Ericsson think we already got these parameters from R1 but think R1 is still discussing.
- Nokia think we just wait for R1.

⇒ **Noted**

R2-1915199 Impact analysis of NR CA frame timing relaxation CMCC discussion Rel-16 R2-1912941

⇒ **R2 assumes that SFN from Pcell is used for UP operation (CG, DRX etc), thus no impact to UP.**

UE Capabilities

R2-1914684 UE capabilities for DC and CA enhancements Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

DISCSUSSION
P1-P7:
- Ericsson agrees with most proposals but think we can have email discussion. Intel agrees and think we can focus on R2 capabilities.
- Oppo think there can also be dependencies to existing capabilities, e.g. for LTE.

P8-P14: We expect R1 to produce feature list.

✉ **[108#48][DCCA] DCCA R2 feature list (Huawei)**
Scope: Identify features and dependencies (incl also e.g. TDD-FDD FRx applicability), and structure (per band per BC when applicable), for LTE and NR,
Intended outcome: Agreeable Input to R2 feature list(s), Agreeable TPs 38.331 38.306
Deadline: 2020-01-30

R2-1914379 UE capability of Rel-16 DCCA enhancement Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

Other

R2-1914683 Clarification on RAN2 impact to support DL HARQ timing for dual UL EN-DC Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.11 UE Power Saving in NR

(NR_UE_pow_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191607, See also guidence in RP-192326). Documents in this agenda item will be handled in a break out session. NOTE: "SCell dormancy" like behaviour will be discussed in MR-DC WI.

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

6.11.1 Organisational

Including incoming LSs, running TS, rapporteur inputs, etc

Running CRs for 38.304 and 37.340 are expected to be submitted by the rapporteurs Vivo and Oppo

NOTE: any stage 3 identified issues with MIMO configurations should be provided to 38.331 rapporteur (Mediatek)

Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

Including outcome of the email discussion [107bis#69][PowerSaving] Running CR 38.300 (CATT)

Including outcome of the email discussion [107bis#70][PowerSaving] Running CR 38.331 (Mediatek)

Including outcome of the email discussion [107bis#71][PowerSaving] Running CR 38.321 (Huawei)

R2-1914305 LS on PDCCH-based Power Saving Signal/Channel carrying indication of UE wakeup before DRX ON (R1-1911475; contact: CATT) RAN1 LS in Rel-16 NR_UE_pow_sav-Core To:RAN2
=> Noted

R2-1914307 LS on UE higher layer signalling for cross-slot scheduling (R1-1911586; contact: MediaTek)RAN1 LS in Rel-16 NR_UE_pow_sav-Core To:RAN2
- Ericsson and Vivo understood this LS as RAN1 is asking RAN2 to introduce this as UE assistance information
- Intel thinks that we can enable it upon RAN1 request
- Nokia thinks that UE capability is sufficient for this

Discuss whether K0/K2 should be signalled via UE assistance
- Ericsson thinks that it should be UE assistance. LG thinks this is UE implementation and should be static. CATT confirms that RAN1 intended it to be UE assistance. Mediatek thinks that if we go with UE assistance we have to decide whether it is dynamic or static.
- Nokia thinks that this should be static and capability is sufficient. Intel also understands that this is dynamic.

=> Noted

Agreements
1 minimum K0/K2 value is signalled as UE assistance. Value of infinity can be configured for the prohibit timer.

R2-1916373 LS on RAN1 on higher layer signalling for cross-slot scheduling Mediatek
- simple question – was this meant to be UE assistance or capability
- if so how is the UE supposed to set it
- Intel and Ericsson confirm that the intention was UE assistance. Qualcomm thinks that RAN1 still needs to discuss whether it is static or dynamic. If it is static it is UE capability.

=> RAN2 will decide whether this is dynamic or static on CB on Friday
=> We will not send the LS
=> Noted

R2-1914312 LS on UE power saving terminology and text proposal to 38.300 (R1-1911667; contact: CATT) RAN1 LS in Rel-16 NR_UE_pow_sav-Core To:RAN2
=> Revised in R2-1914360

R2-1914360 LS on UE power saving terminology and text proposal to 38.300 (R1-1911667; contact: CATT) RAN1 LS in Rel-16 NR_UE_pow_sav-Core To:RAN2
=> Noted

R2-1914523 [107bis#69][PowerSaving] Running CR 38.300 (CATT) CATT (rapporteur) discussion Rel-16 NR_UE_pow_sav-Core Late
- Oppo asks if the new terminology is intended to be used in all specs or just RAN1.
- CATT would like to use an abbreviation and we should agree here
=> The CR is endorsed

R2-1914393 Text proposal on power saving impacts on TS 37.340 OPPO draftCR Rel-16 37.340 15.7.0 B NR_UE_pow_sav-Core
=> Oppo will check with spec rapporteur on how to deal with new features being captured in the spec
=> The changes will be captured in one of the existing sections
=> the CR is moved to email discussion

R2-1914522 RAN2 work plan for UE Power Saving WI CATT (rapporteur) discussion Rel-16 NR_UE_pow_sav-Core
=> Noted

✉ **[108#39][Power Saving] Running 38.331 (Mediatek)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 23/01/2020
Phase 2 :
Capture open issues from contribution from RAN2#108 (UE assistance including MR-DC related aspects) and from CR implementation phase on all aspects related to RRC
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#78][Power Saving] Running 38.321 (Huawei)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2 :
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#79][Power Saving] Running 38.304 (Vivo)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2 :
Capture open issues from contribution from RAN2#108 (RRM measurements) and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#80][NR/Power Saving] Running 38.300 (CATT)**
Outcome: Running CR for 38.300
Deadline: 13/02/2020

✉ **[108#81][NR/Power Saving] Running 37.340 (Oppo)**
Outcome: Running CR for 37.340
Deadline: 13/02/2020

6.11.2 PDCCH-based power saving signals/channel Additional stage-3 RAN2 aspects

NOTE: 3. As per plenary guidance (RP-192289), RAN2 is not expected to discuss any aspects related to whether additional UE behavior is needed when UE is also configured for receiving PDCCH based power saving signal/channel outside active time. No contributions on this topic should be submitted under power savings.

R2-1915527 Report of email discussion [107bis#71][PowerSaving] 38.321 running CR report Rel-16 NR_UE_pow_sav-Core Late Huawei, HiSilicon
=> Moved from 6.11.1
Proposal 1: WUS impact on the start condition of drx-onDurationTimer is specified in MAC specification.
- Intel asks why we need to duplicate the offset since it is already captured in RAN1. Vivo thinks that all timer related behaviours are captured in the MAC. Nokia also thinks it should be on the MAC.

=> work offline how to properly specify the offset
=> Abbreviation “DCP” is used in RAN2 specifications for the RAN1 terminology “DCI with CRC scrambled by PS-RNTI”.
=> Noted

R2-1916374 Summary of offline discussion on MAC CR
Discussion on where the offset is specified
- Huawei and Nokia thinks that the offset should be specified in the MAC. RAN2 specifies when the UE wakes up and RAN1 specifies what the UE monitors.
- Qualcomm explains that the WUS offset depends on the coreset.
- Nokia thinks that to know when the onDuration timer start is dependend on the formula and the WUS is dependend on this.
- Huawei thinks that we should decide whether this is a RAN2 behaviour or RAN1 behaviour. We don’t typically wait.

=> The rapporteur will bring this up in the his rapporteur CR
=> Noted

R2-1915528 Running CR for Introduction of Rel-16 NR UE power saving in TS 38.321 draftCR Rel-16 38.321 15.7.0 B NR_UE_pow_sav-Core Late Huawei, HiSilicon
=> Moved from 6.11.1
=> the CR is will be updated with agreements made in RAN2#108 and reviewed over email discussion

R2-1914524 Remaining issues of PDCCH-WUS CATT discussion Rel-16 NR_UE_pow_sav-Core
Proposal 1: a PDCCH-WUS indicating UE to wake-up and start the drx-onDurationTimer on its next occurrence restarts the bwp-InactivityTimer.
- ZTE supports the proposals. Nokia thinks that the data will start the bwp-timer so this is not needed. Vivo, LG, Oppo agrees with Nokia.
- Huawei explains that it is possible that the time expires between WUS and data scheduling. Qualcomm thinks its ok to keep the legacy behaviour. There may be an issue if the UE misses the WUS and this can be solved by network configured.
- APT and Lenovo supports the proposal.

Proposal 2: UE follows PDCCH-WUS indication regarding start/not start of the drx-OnDurationTimer on its next occurrence irrespective of BWP switch procedure.
- Oppo thinks that if you switch BWP you follow the new BWP configuration (legacy behaviour)
- Intel thinks we should hold this discussion until RAN1 finalizes the discussions.
- Nokia asks what do we do during RAR window since it is not considered as active time.

=> Noted

Agreements:
1 PDCCH-WUS does not impact bwp-InactivityTimers, data inactivity timer and SCell inactivity timers
2 From RAN2 perspective, PDCCH-WUS indication regarding start/not start of the drx-OnDurationTimer on its next occurrence irrespective of BWP switch procedure (if WUS is configured in the new BWP otherwise the UE follows legacy).
3 UE behavior when PDCCH-WUS occurs during BWP switch is the same as when PDCCH-WUS occurs during Active Time (i.e. onDurationtimer is started).
4 UE behavior when PDCCH-WUS occurs during a measurement gap is the same as when PDCCH-WUS occurs during Active Time ((i.e. onDurationtimer is started)

R2-1916176 Link management with WUS Qualcomm Inc discussion Rel-16
- Qualcomm explains RAN1 has made some agreements.
=> We will wait for the RAN1 agreements. Rapporteurs are expected to take the agreements into account
=> Noted

Not treated

R2-1915263 Further discussion on the impact of PDCCH-WUS Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core

R2-1915924 Open Issues on PDCCH-WUS Mechanism Apple discussion Rel-16 NR_UE_pow_sav-Core

R2-1914525 Impacts of PDCCH-WUS on RRC CATT discussion Rel-16 NR_UE_pow_sav-Core

R2-1914690 Left issues and RRC parameters for PDCCH-WUS vivo discussion Rel-16 FS_NR_UE_pow_sav

R2-1914394 Remaining issues on PDCCH-based WUS OPPO discussion Rel-16 NR_UE_pow_sav-Core

R2-1914395 Impacts of power saivng signalling on CSI reporting OPPO discussion Rel-16 NR_UE_pow_sav-Core

R2-1914691 WUS impact upon BWP switching vivo discussion Rel-16 FS_NR_UE_pow_sav R2-1912331 Withdrawn

R2-1914845 PDCCH-WUS operation with CDRX Intel Corporation discussion Rel-16 NR_UE_pow_sav

R2-1914987 Discussion on PDCCH-WUS missing problems during BWP switching and handover Xiaomi Communications discussion

R2-1914988 Procedures on how the PDCCH-WUS works with C-DRX Xiaomi Communications discussion

R2-1914990 Some remaining issues on the CSI and SRS reporting Xiaomi Communications discussion

R2-1915183 Remaining issues on PDCCH-WUS LG Electronics Inc. discussion NR_UE_pow_sav-Core

R2-1915293 RAN2 impact of WUS in connected mode Ericsson discussion Rel-16 NR_UE_pow_sav-Core

R2-1915520 Further details on PDCCH WUS Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-1915540 SI update notification and PWS notification in WUS PANASONIC R&D Center Germany discussion R2-1912694

R2-1915550 Periodic CSI and SRS with wake-up indication MediaTek Inc. discussion Rel-16 FS_NR_UE_pow_sav R2-1913259

R2-1915729 UE capabilities for features specified in R16 PWS WI Intel Corporation discussion Rel-16 NR_UE_pow_sav

R2-1915771	Further considerations for the WUS NR_UE_pow_sav-Core	InterDigital	discussion	Rel-16	
R2-1916001	Discussion on impact of PDCCH-WUS on timer-based BWP switching Rel-16	CMCC	discussion		
R2-1916175	Configuration aspects of wakeup signaling	Qualcomm Inc	discussion	Rel-16	R2-1913899

6.11.3 UE assistance

Stage 3 details of reportings mechanisms for a UE to 1) indicate its preference of transitioning out of RRC_CONNECTED state 2) c-DRX and 3) SCell

NOTE: MR-DC specific solutions are to be discussed in the main room discussion with UE overheating

R2-1915549 Open issues related to the running 38.331 CR FS_NR_UE_pow_sav Late — MediaTek Inc. — discussion — Rel-16

=> Moved from 6.11.1

Proposal 1: RAN2 to decide if the UE can provide cDRX assistance information without a cDRX configuration

- Intel thinks that we shouldn't restrict this scenario. Nokia thinks this shouldn't happen and there is no use.
- Vivo also thinks that a smart network will properly configure.

Proposal 2: RAN2 to decide if the UE can only indicate cDRX parameters from a preconfigured set of values by the NW, or if the UE can provide any value.

- Intel explains the real question is whether the UE can indicate any value within the range. Intel thinks that we can allow the signalling on both options
- Qualcomm thinks that the UE should be allowed to report any values. Oppo agrees.
- Vivo thinks it is better for the UE to report from a set of configured values to ensure that no unreasonable things are requested. Both options can work together.
- Ericsson doesn't want to expose network configurations that the network supports. We should support signalling a value and explain what. Apple, Samsung, also supports option 2.

Proposal 3: RAN2 to decide if the UE can provide 'no preference' for any of the power saving parameters (cDRX, number of SCells, aggregated BW or number of MIMO layers)

- Ericsson would prefer not to support it as it makes it complicated and it will not be easy to define what no preference means. Qualcomm shares the same view as Ericsson.
- Samsung thinks this feature is useful.

Proposal 4: RAN2 to decide if the UE can indicate that it no longer prefers to leave RRC connected state

Proposal 5: RAN2 to decide on the interpretation of a release request sent without a preferred state: a) no preference, b) same preference as earlier indicated value or c) to stay in connected mode

- Ericsson thinks that we need to keep it simple and we should not have a no preference signalling. Nokia agrees.
- LG asks how the UE cancels its preference. Intel explains that in LTE if you don't send it anymore you mean you don't want it anymore. Qualcomm thinks the UE can just send a new value.
- Ericsson thinks that just a release is sufficient and can be separately configured
- Intel thinks that it is helpful for the UE to indicate that it wants to be released.
- Nokia thinks that we should also indicate that the UE wants to stay in connected. Ericsson thinks this opens up to bad UE implementations

Proposal 6: RAN2 to clarify what reduced BW (i.e. from overheating) refers to: a) reduced from UE capability or b) reduced from current configuration?

- Ericsson and Nokia ask how increasing BW can help save UE power. Intel explains that the UE may be able to save power by transmitting the data in one shot. Apple agrees and sees the benefits.

=> Noted

Agreements:

1 For cDRX assistance information, the UE can signal any value within the current value range

2	The UE assistance information for cDRX, state transition, SCell, and aggregated BW, and max MIMO layer can be independently configured (i.e. including prohibit timers).
3	The UE can provide assistance information when configured to report UE assistance
4	Explicit signalling for 'no preference' is not supported for any of the power saving parameters (cDRX, number of SCells, aggregated BW or number of MIMO layers)
5	The UE can report the following: a. UE can report release only (i.e. no state preference) b. Indicate explicit state preference c. The UE wants to remain in connected mode
6	FFS SCell and Aggregated BW can refer to any value within the UE capability for the purpose of power saving [rapporteur will include it in email discussion]

Not treated

R2-1915548	Running CR for 38.331 for Power Savings	MediaTek Inc.	draftCR	Rel-16	38.331	15.7.0
	FS_NR_UE_pow_sav Late => Moved from 6.11.1					
R2-1914527	Reusing overheating fields for SCell assistance information	CATT, Apple	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1915294	UE Assistance Information for cDRX and SCell	Ericsson	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1916178	Remaining issues on UE Assistance Information	Qualcomm Inc	discussion	Rel-16		
R2-1916046	Release of UE assistance information	OPPO	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1914526	Remaining issues on UE assistance for power saving	CATT	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1914555	UE assistance information reporting for RRC_INACTIVE UE	OPPO	discussion	Rel-16	NR_pos	
R2-1914692	UE assistance information for power saving	vivo	discussion	Rel-16	FS_NR_UE_pow_sav	
R2-1914846	UE assistance for C-DRX, SCell and moving UE out of RRC_CONNECTED	Intel Corporation	discussion	Rel-16	NR_UE_pow_sav	
R2-1915086	Remaining issues in efficient state transition by UE assistance	ZTE Corporation, Sanechips	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1915087	Remaining issues in C-DRX and Scell related UE assistance information	ZTE Corporation, Sanechips	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1915182	Consideration on UE assistance information	LG Electronics Inc.	discussion		NR_UE_pow_sav-Core	
R2-1915232	Power Saving techniques, UE assistance information	SONY	discussion	Rel-16	NR_UE_pow_sav-Core	R2-1913358
R2-1915264	Remaining issues on UE assistance information for power saving	Huawei, HiSilicon	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1915295	UE Assistance Information for minimum K0 and K2	Ericsson	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1915523	On UE assistance	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_UE_pow_sav-Core	
R2-1915925	UE Assistance Information for CDRX Configuration	Apple	discussion	Rel-16	NR_UE_pow_sav-Core	

R2-1915926	UE Assistance Information for SCell Configuration NR_UE_pow_sav-Core	Apple	discussion	Rel-16	
R2-1915927	UE Assistance Information for MR-DC	Apple	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1915942	Some remaining issues on the UE assistance information	Xiaomi Communications	discussion		
R2-1916002	Discussion on UE assistance information	CMCC	discussion	Rel-16	
R2-1916177	Prohibit timer for Release Request	Qualcomm Inc	discussion	Rel-16	
R2-1916179	UE indication on expected data	Qualcomm Inc, Apple	discussion	Rel-16	R2-1913901
R2-1916219	UE Assistance for Release Request NR_UE_pow_sav-Core	Samsung	discussion	Rel-16	

6.11.6 RRM measurement relaxation

Contributions should focus on additional enhancements to LTE relaxed monitoring criteria that are specific to NR and whether neighbour cell RSRP should also be considered in cell-edge criterial.

Discuss type of RRM measurement relaxation by allowing measurements with longer intervals, and/or by reducing the number of cells/carriers to be measured. NOTE: this topic should be considered together with RAN4.

Including outcome of the email discussion [107bis#68][PowerSaving] RRM measurement relaxation (Mediatek)

R2-1914890 Report of Email Discussion 107bis#68 Power Saving RRM Measurement Relaxation MediaTek Inc. report

2: For not-at-cell-edge scenario, the thresholds can be based on RSRP or RSRQ. For low-mobility scenario, the thresholds are only based on RSRP

- ZTE thinks that RSRQ should also be considered. Huawei thinks that RSRQ is not a good for low mobility purposes.

Proposal 3: RAN2 considers RRM measurement relaxation in time-domain and frequency-domain. Further confirmation by RAN4 is needed.

- Intel and Vivo see no benefit in asking RAN4

For not-at-cell-edge scenario, measurements on frequencies with higher priority is not relaxed.

- Ericsson thinks that this should be general for RRM measurements. Nokia agrees.
- Huawei is wondering why we would treat higher priority frequencies differently in cell-edge. Ericsson thinks that high priority frequencies are already relaxed. Huawei explains that lower priority frequencies are more relaxed, the UE doesn't measure them.
- Intel suggests to make it configurable.
- Panasonic thinks that it should be configurable. Vivo agrees with configurability. CMCC also thinks that there are good use cases where configuration can be beneficial. Qualcomm likes the compromise.

Network configures RRM measurement relaxation via broadcast only; dedicated control is not supported.

- Nokia and Sony sees benefits to dedicate configuration on a per UE basis. Huawei is not sure how useful this is.
- Ericsson still hasn't understood how the network would select on a UE basis. Vivo thinks that this can be dependent on the UE traffic characteristics.

Intel thinks that we didn't have a chance to discuss this in detail.

=> This can be discussed during email discussion [scope of email discussion finalized on Friday]

=>Noted

Agreements

1 Measurement relaxation criteria is evaluated using cell quality only, and we do not define beam-specific conditions for RRM measurement relaxation.

2 For not-at-cell-edge scenario, the thresholds can be based on RSRP and/or RSRQ and is configurable by the network. For low-mobility scenario, the thresholds of the delta are only in relation to RSRP.
3 Whether higher priority frequencies can be relaxed is up to network configuration. FFS on how the configuration is done.
4 Network configures RRM measurement relaxation via broadcast only; dedicated control is not supported
5 For modifications of low-mobility scenario, TSearchDeltaP less than 5 minutes is configurable in NR.

R2-1916375 LS to RAN4 on RAN2 agreements Mediatek
- Panasonic indicates that RAN4 has identified a scenario where both conditions are satisfied. Huawei thinks that this scenario doesn't need special triggering. The conditions is at least any of the conditions.

=> The LS is approved

Not treated

R2-1914689 38.304 Running CR on UE Power saving in NR vivo CR Rel-16 38.304 15.5.0 0142 - B FS_NR_UE_pow_sav

R2-1914397 RRM relaxation for power saving OPPO discussion Rel-16 NR_UE_pow_sav-Core

R2-1914693 Network controlled RRM measurement relaxation and criteria vivo discussion Rel-16 FS_NR_UE_pow_sav

R2-1914694 UE Power Consumption Reduction in RRM Measurement vivo discussion Rel-16 FS_NR_UE_pow_sav

R2-1914847 Relaxation of RRM measurements Intel Corporation discussion Rel-16 NR_UE_pow_sav

R2-1914913 Discussion on measurement relaxation rule in time domain ZTE Corporation, Sanechips discussion Rel-16 NR_UE_pow_sav-Core

R2-1915210 Discussion on power saving for inter-frequency measurements CMCC discussion Rel-16 R2-1912959

R2-1915233 UE power saving for inter frequency measurements Sony discussion Rel-16 NR_UE_pow_sav-Core

R2-1915234 Details of Relaxed monitoring for NR UE power saving Sony discussion Rel-16 NR_UE_pow_sav-Core

R2-1915296 RRM measurement relaxation Ericsson discussion Rel-16 NR_UE_pow_sav-Core

R2-1915521 Dedicated RRM Measurement Relaxation Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-1915522 Further details on RRM measurement relaxation Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-1915529 On SrxlevRef adaptation in relaxed monitoring Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core

R2-1915530 Reducing the number of neighbour cells/carriers to measure Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core R2-1913569

R2-1915539 Considerations on the RRM measurement relaxation PANASONIC R&D Center Germany discussion R2-1912691

R2-1915819 Coexistence of measurement relaxation and early measurements LG Electronics, Ericsson, MediaTek discussion Rel-16 NR_UE_pow_sav-Core

R2-1915820 RRM measurement relaxation based on measurement results LG Electronics discussion Rel-16 NR_UE_pow_sav-Core

R2-1916054 On the supporting of relaxed measurement state for UE power saving Samsung R&D Institute UK discussion R2-1912531

R2-1916089 On Triggering RRM Measurement Relaxation Samsung discussion NR_UE_pow_sav-Core

6.12 SON/MDT support for NR

(NR_SON_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; target; Mar 20; WID: RP-191776). Documents in this agenda item will be handled in a break out session
Time budget: 1 TU
Tdoc Limitation: 10 tdocs

6.12.1 General

Including LSs, work plan, rapporteur inputs, running TS
Including outcome of the email discussion [107bis#82][NR MDT] 37.320 running CR (CMCC, Nokia)
Including outcome of the email discussion [107bis#83][NR MDT] Running 331 CR for introducing MDT (Huawei)
Including outcome of the email discussion [107bis#86][NR L2 meas] running 38.314 (CMCC)
Including outcome of the email discussion [107bis#87][NR SON] running 331 CR for introducing SON (Ericsson)

R2-1914329 LS on PRACH configuration conflict detection (R3-196270; contact: CATT) RAN3 LS in Rel-16 NR_SON_MDT To:RAN1, RAN2
=> Noted

R2-1914359 LS on energy efficiency (Orange)
=> Noted

6.12.2 MDT

The procedure, signaling and corresponding measurement quantities for MDT
Including outcome of the email discussion [107bis#84][NR MDT] MR DC related issue (Ericsson)
Including outcome of the email discussion [107bis#85][NR MDT] Mobility history (CATT)

Satge 2 runnign CR

R2-1915986 [107bis#82][NR MDT] 37.320 running CR CMCC, Nokia discussion Rel-16 NR_SON_MDT-Core
=> change the title 5.1.1.4 to “MDT context handling during handover and cell reselection”
=> clarify that in logged MDT, UE in NR idle or inactive state will not log measurements from UMTS and GSM.
=> with these changes, CR is endorsed as the baseline for running CR after this meeting.

R2-1915987 Leftovers for TS 37.320 to support NR MDT CMCC discussion Rel-16 NR_SON_MDT-Core

Agreements:
1 The number of inter RAT neighbouring cells to be logged if available, is up to 3 for NR (if non-serving) neighbouring cells.
2 For NR Logged MDT in IDLE and INACTIVE, no need is identified to transfer an MDT context (any related configuration information about measurement and reporting) between gNBs when handover.
3 MDT context is assumed to be released in the gNB when the UE is in IDLE.

MDT running CR

R2-1915850 Report of email discussion [107bis#83] MDT Huawei discussion Rel-16 NR_SON_MDT-Core Late

Agreements
1 Use IE name “commonLocationInfo”.

R2-1915851 Running 38.331 CR for introducing MDT 15.7.0 B NR_SON_MDT-Core Huawei, Ericsson draftCR Rel-16 38.331 Late
=> Endorsed as the latest running CR.

R2-1915852 Discussion on open issues for running 38.331 CR for MDT Rel-16 NR_SON_MDT-Core Huawei, HiSilicon discussion

Agreements:
1: For WLAN measurement configuration, reusing WLAN-NameList defined in LTE.
2: For Bluetooth measurement configuration, reusing BT-NameList defined in LTE.
3: For WLAN measurement report, re-use LTE definitions.
4: For Bluetooth measurement report, re-use LTE definitions.
5: agree on table 3 in R2-1915852 for location information request.
6: For the IEs tce-id and traceRecordingSessionRef, refer to TS 32.422. It should be confirmed by SA5. Send LS for this.
7: For bt-Name, it refers to LOCAL NAME and the reference spec is “Bluetooth Special Interest Group: "Bluetooth Core Specification v5.0", December 2016.”.
8: For bt-Addr and rttValue, the definitions refer to “3GPP TS 36.355: "LTE Positioning Protocol (LPP)".”.
9: For periodical logged measurements, it is proposed to introduce the flag anyCellSelectionDetected as defined in LTE.

=> draft LS to SA5 to check the agreement 6. (Offline#600, Huawei R2-1916416)

R2-1916416 **[DRAFT]** LS on trace related configurations for NR MDT NR_SON_MDT-Core To:SA5 Cc:RAN3 Huawei LS out Rel-16
=> Approved in R2-1916598

Out of coverage

R2-1915415 Clarification on out-of-coverage measurement and report discussion Rel-16 NR_SON_MDT-Core ZTE Corporation, Sanechips

Agreements:
1 For out-of-coverage event, logging interval is introduced. Whether a specific interval or the common interval as normal periodical logged MDT should be figured out through email discussion on the running stage3 CR.
2 Logging duration specified for periodical logging shall also applies to event triggered case, e.g., OOC.
3 Take LTE periodical logging as baseline, i.e., UE will continue to log if out-of-coverage happens in periodical logging.
4 For out-of-coverage measurement and report (included in each entry), location information is included if the information available.

R2-1915616 UE behaviour on Logged MDT configuration events discussion Rel-16 NR_SON_MDT-Core Nokia, Nokia Shanghai Bell
=> Noted

Agreement:
1 The UE doesn’t log its state indicator (RRC_IDLE / RRC_INACTIVE) in the logged measurement results.

MR DC:

R2-1915752 Report on Email discussion [107bis#84][NR MDT] MR DC related issue (Ericsson) discussion Rel-16 NR_SON_MDT-Core Ericsson

Agreements:
1 Only immediate MDT is supported for EN-DC scenario in R16 MDT
2 In signaling based immediate MDT, MME provides MDT configuration for both MN and SN towards MN including multi RAT SN configuration, specifically E-UTRA and NR MDT configuration. MN then forwards the NR MDT configuration towards SN (EN-DC scenario, SN is always NR).
3 In management-based immediate MDT, OAM provides the MDT configuration to both MN and SN independently. Inform other working group that Management based MDT should not overwrite signaling based MDT.
4 For immediate MDT configuration, MN and SN can independently configure and receive measurement from the UE.
5 UE follow the release 15 RRM behavior to report the triggered measurements for Immediate MDT.

=> RAN2 understand that X2 inter node signaling is the suitable place to introduce the forwarding of MDT configuration from MN to SN.

=> Draft LS to RAN3 and SA5 to inform our agreements on for introducing necessary work to support imm MDT in EN DC. (Offline#601, Ericsson R2-1916417). Good luck to RAN3.

R2-1916417 Draft LS on EN-DC related MDT configuration details Ericsson LS out Rel-16 NR_SON_MDT-Core To:RAN3, SA5
=> change to “RAN2 understand that X2 inter node signaling is the suitable place to introduce the forwarding of MDT configuration from MN to SN.”
=> with this change, LS is approved in R2-1916579.

Mobility history:

R2-1914507 Report on Email Discussion 107b#85 NRMDT Mobility History CATT discussion Rel-16 NR_SON_MDT-Core

Agreements:
1-1: Reuse LTE solution as the baseline for NR mobility history information.
1-2: In NR, UE can store the mobility history information for RRC_IDLE, RRC_INACTIVE and RRC_CONNECTED states and there is no need to differentiate the records among different RRC states.
1-2a: The enhancement for mobility history information should focus on NR, any enhancement for mobility history information for eLTE should be down-prioritised. It means no change needed for LTE
1-3: Enhance Visited Cell Information List in NR to record the information of both LTE cells and NR cells.
1-4: In NR, beam level records will not be introduced in mobility history information.
1-5: Not introduce PSCell change info in mobility history information in R16.
1-6: In NR, sensor information and location information is not included in the mobility history information.
2-1: Reuse LTE mobility state report solution as baseline for NR.

=> The mobility history part should be captured in the running MDT CR.

Logged MDT and accessibilty

R2-1915755 Leftover issues for Logged MDT in NR Ericsson discussion Rel-16 NR_SON_MDT-Core

Agreements:
1 For Logged MDT, the UE variable (i.e., VarLogMeasReport) to store the logged measurements information and its parameters are common for the both periodical logging and event-triggered logging.

2 For Logged MDT, the report IE for logged measurements (i.e., LogMeasReport) and its parameters are common for the both periodical logging and event-triggered logging.
3 The memory size of MDT logged measurements is 64K.
4 Introduce measurement quantity-based event A2 to NR logged MDT configuration. Only one type of events can be configured to a UE.

R2-1915853 Discussion on logging NR neighbour cell measurements for LTE MDT and SON Huawei, HiSilicon, CMCC discussion Rel-16 NR_SON_MDT-Core

Agreements
1: Introduce NR neighbour cell measurements in logged measurements for logged MDT, RLF report, and CEF report. The UE should log the measurements if available.
2: The maximum number of NR neighbour cell measurements is 3 for LTE MDT and SON.

=> Start running CR for 36.331 to introduce above agreements. (Huawei)

R2-1915855 Discussion on remaining aspects on logged MDT and Accessibility measurements in NR Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-1916093 Accessibility Measurements for NR MDT Samsung discussion NR_SON_MDT-Core
=> noted

Immediate MDT

R2-1915856 Discussion on remaining aspects on immediate MDT in NR Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core

Agreement:
1 UE reports the UL PDCP queuing delay value in the measResults of measurementReport
2 The UL PDCP queuing delay measurement configuration includes the reporting periods and measured DRB IDs. The reporting periods are configured per DRB. The results are reported per DRB.

FFS: For the SN terminated bearers, the SN configures the D1 measurement to the UE via SN RRC message (SRB3 or SRB1). The UE reports the D1 measurement results to the SN via SN RRC message if SRB3 is configured.
=> Postponed to the last meeting…

R2-1915413 Immediate MDT continuity upon handover procedure ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1913074
=> Noted

Capability

R2-1915208 UE capability for SON MDT WI CMCC discussion Rel-16 NR_SON_MDT-Core

Agreements:

Logged MDT:
1 Introduce loggedMeasurements Capability to indicate whether the UE supports logged measurements in RRC_IDLE and RRC_INACTIVE. A UE that supports logged measurements shall support both periodical logging and event-triggered logging.

Location related capability:

2 locationReport is mandatory supported without UE capability, i.e. if location information is available, UE shall include location information while performing MDT.

3 Reuse standaloneGNSS-Location capability to indicate whether the UE is equipped with a standalone GNSS receiver, same as LTE.
4 Reuse loggedMeasBT, loggedMeasWLAN, immMeasBT, immMeasWLAN capability to indicate whether UE support Bluetooth and WLAN measurements, same as LTE.
5 Introduce barometerMeasReport, speedMeasReport, orientationMeasReport capabilities to indicate whether UE supports sensor data reporting for MDT.

Packet Delay measurement:
6 Reuse ulPDCP-Delay capability to indicate whether the UE supports UL PDCP Packet delay measurement, same as LTE.

SON related capability:
7 CEF reporting and RLF reporting are mandatory supported without UE capability, same as LTE.
8 Reuse rach-Report capability to indicate whether the UE supports delivery of rachReport upon request from the network, same as LTE.
9 Reuse mobility history information storage capability and no need to report. It is optional for UE to support the storage of mobility history information and the reporting in UEInformationResponse message, same as LTE.

=> Based on the agreements above, start running 38.306 CR. (vivo)

R2-1915209 TS 38.306 CR on UE capabilities for SON MDT WI CMCC draftCR Rel-16 38.306 15.7.0 NR_SON_MDT-Core

Orientation

R2-1915214 Further discussion of the details of reporting UE orientation sensor data discussion Rel-16 NR_SON_MDT-Core CMCC,Huawei

=> Confirm the method in the current running CR on UE orientation sensor data reporting. No further filtering mechanism is introduced.

CEF report

R2-1915436 Open issues of CEF report Ericsson discussion Rel-16 NR_SON_MDT-Core
=> noted

SNPN on PLMN

R2-1915618 Impact of SNPN on PLMN check for MDT Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core R2-1913546

Agreement:
1 The same principles as LTE are adopted for NR for the PLMN check.

Let's wake up RAN4

R2-1915988 [DRAFT] LS on Logged Measurements CMCC LS out Rel-16 NR_SON_MDT-Core To:RAN4

=> Draft LS to RAN4 to trigger their work on MDT (Offline#666, CMCC, R2-1916418)

R2-1916418 [DRAFT] LS on Logged Measurements CMCC LS out Rel-16 NR_SON_MDT-Core To:RAN4
=> LS is approved in R2-1916588.

R2-1914500 Configuration of Out-of-coverage Logging CATT discussion Rel-16 NR_SON_MDT-Core R2-1912143
R2-1914501 Recording and Reporting of CEF CATT discussion Rel-16 NR_SON_MDT-Core
R2-1914502 Failure Indication about SCG CATT discussion Rel-16 NR_SON_MDT-Core
R2-1914946 Remaining issues for Logged MDT vivo discussion
R2-1914947 UE capability parameters for SON_MDT vivo discussion
R2-1914948 Running CR to 38.306 for NR_SON_MDT vivo discussion 38.306 NR_SON_MDT-Core
R2-1915043 Mobility state in RLF Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915045 RACH Failure information Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915046 Management Based Logged MDT Configuration for RRC_INACTIVE Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915048 Cross-RAT RLF report Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915049 Cross-system RLF report Qualcomm Incorporated discussion Rel-16
R2-1915050 Logged MDT Configuration and Reporting for MR-DC Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915411 Discussion on remaining issues of Immediate MDT ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-1915412 Discussion on remaining issues of Logged MDT ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-1915414 Restriction on MDT measurement and report ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-1915617 Avoiding conflicting MDT configurations in DC Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core
R2-1915732 Immediate MDT, inter-node aspects Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core
R2-1915733 Logged MDT, inter-node aspects (SN configuration) Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core Late
R2-1915734 MDT for early measurments (Logged, immediate) Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core
R2-1915753 Mobility history information reporting from the UE Ericsson discussion Rel-16 NR_SON_MDT-Core
R2-1915754 Logged MDT Configuration & Reporting handling in DC scenarios Ericsson discussion Rel-16 NR_SON_MDT-Core
R2-1915756 CR on introducing UE capability for MDT in NR Ericsson CR Rel-16 38.306 15.7.0 0206 - B NR_SON_MDT-Core
R2-1915757 UE Location Report capability indication for MDT Ericsson discussion Rel-16 NR_SON_MDT-Core
R2-1915854 Introduction of NR neighbour cell measurements for LTE MDT and SON Huawei, HiSilicon, CMCC draftCR Rel-16 36.331 15.7.0 B NR_SON_MDT-Core
R2-1915857 Discussion on remaining aspects on MDT and mobility history information in MR-DC Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-1915954 Consideration on the report of BWP information and on demand request failure information Beijing Xiaomi Mobile Software discussion Rel-16
R2-1916095 Further Logged Information in NR MDT Samsung discussion NR_SON_MDT-Core
R2-1916100 RLF Report Enhancement Samsung discussion NR_SON_MDT-Core
R2-1916102 On supporting Event-triggered Logged MDT Samsung discussion NR_SON_MDT-Core
R2-1916103 On Providing Mobility State and Mobility History Information in NR Samsung discussion NR_SON_MDT-Core

R2-1916171 MDT for DC LG Electronics France discussion NR_SON_MDT-Core

6.12.3 L2 measurements

Definition of L2 measurements in TS 38.314

R2-1915203 [107bis#86][NR L2 meas] running 38.314 CMCC draft TSRel-16 38.314 0.0.3 NR_SON_MDT-Core
=> endorsed

R2-1915204 Summary of open points on L2 Measurements CMCC discussion Rel-16 NR_SON_MDT-Core Late

Agreements:
1 A new measurement is introduced related to the received PRACH preambles per SSB.
2 Add value “0ms” to the enumerated of *delayThreshold* field in the UL delay configuration.
3 Include the fields of *drb-Id* and *averagePDCPQueuingDelay* in the UL delay measurement report.
4 The unit of the UL PDCP queuing delay reported by UE is ms.
5 The UL PDCP re-ordering delay is defined to the delay from the first part of an PDCP SDU is received to the PDCP SDU is sent to upper SAP.
6 The over-the-air UL delay in DU (i.e. D2.1), the RLC delay (i.e. D2.2), the F1 delay (i.e. D2.3) and the PDCP re-ordering delay (i.e. D2.4) should be measured per DRB per UE. Capture a simple sentence in 38.314.
7 Capture as a note that the total RAN part of UL packet delay measurement in TS 38.314, which is defined as sum of D1(PDCP queuing delay), D2.1(over-the-air delay), D2.2(RLC delay), D2.3(F1 delay) and D2.4(PDCP re-ordering delay).
8 The DL delay in gNB-DU (i.e. D1), the DL delay on F1-U (i.e. D2) and the DL delay in CU-UP (i.e. D3) are measured per DRB per UE.
9 gNB measurement M5 granularity is per UE.
10 The immediate MDT measurements (including Data Volume, Scheduled IP Throughput for MDT, Packet loss rate) for QoS verification, the granularity is per DRB per UE.
11 Adopt configuration trigger for the gNB measurement M5: Scheduled IP Throughput in TS37.320 to reflect one of the standardized gNB measurements for UE throughput in TS28.552 (i.e. Average DL/UL UE throughput in gNB).
12 Change ‘mapped 5QI’ to ‘DRB’ in 38.314. This can be confirmed in the next meeting.
13 Introduce a matric of Packet Loss Rate in the DL per mapped 5QI in TS 38.314, taking Packet Uu Loss Rate in the DL per QCI in TS 36.314 as baseline.

R2-1914503 Statistic of UL Delay Measurement in UE CATT discussion Rel-16 NR_SON_MDT-Core R2-1912145

R2-1914504 Uncertainty of L2 Measurement Result Related to URLLC CATT discussion Rel-16 NR_SON_MDT-Core R2-1912146

R2-1915205 Discussion and TP for Number of active UEs for CU/DU split scenario CMCC pCR Rel-16 38.314 0.0.3 NR_SON_MDT-Core

R2-1915206 Discussion and TP for End-to-End RAN Part of Packet Delay MeasurementCMCC pCR Rel-16 38.314 0.0.3 NR_SON_MDT-Core

R2-1915207 Remaining Issues on Supporting M1 to M9 in L2 measurements CMCC discussion Rel-16 NR_SON_MDT-Core

R2-1915416 Clarification on connected UE counting in CA ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core

R2-1915417 Further consideration on INACTIVE UE counting ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core

R2-1915418 Discussion on PRB usage of a cellZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1913081

R2-1915432 Open issues of L2 measurements in NR Ericsson discussion Rel-16 NR_SON_MDT-Core

R2-1915620 Scheduled IP Throughput configuration for NR MDT Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core

R2-1915858 Discussion on delay measurement and collection Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core

R2-1915859 Discussion on SA5 defined measurements for the immediate MDT Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core

R2-1915860 Discussion on the throughput measurements in MR-DC Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core

R2-1916150 Discussion on L2 measurement in EN-DC NTT DOCOMO INC. discussion Rel-16 NR_SON_MDT-Core R2-1913855

6.12.4 SON

UE reporting necessary to enhance the network configuration for MRO, MLB and RACH optimization

R2-1915437 107bis#87 email discussion report on running CR for SON Ericsson discussion Rel-16 NR_SON_MDT-Core

=> Address this in running SON CR discussion: whether approve the way of encoding chronological order of RACH attempts is as follows – Each list provided in the PerRACHSSBInfo, provides the detailed RACH information about all RACH attempts associated to a SSB index and the chronological order in which this SSB based random access resources are used is encoded in rachAttemptChronologicalOrder. Additionally, the field perRACHAttemptInfoList within PerRACHSSBInfo provides the details in chronological order of the random access attempts when the particular SSB is used.

=> Offline discussion #661(Ericsson, R2-1916419) on these topics:

Proposal 2 Best neighbor cells per frequency is included in the RLF report.
Proposal 3 RAN2 to discuss whether best neighbor per RSType in each frequency is included in the RLF report.
Proposal 4 RAN2 to discuss which measurement quantity is used for sorting the cells in order to select the best neighbor cells to be included in the RLF report.
Proposals in R2-1915433, R2-1914499 and R2-1915434

R2-1916419 RAN2-108#661 offline discussion on SON functions Ericsson

Agreements:
1 The way in which the chronological order of RACH attempt is captured in the running CR is agreed. FFS: rapporteur to check if the report size can be reduced.
2 At least locationAndBandwidth, subcarrierSpacing and absoluteFrequencyPointA should be included in one RACH report entry.RACH specific parameters associated to a specific BWP should be included in one RACH report entry. The details of which parameters are included can be discussed through running CR discussion.
3 The UE can store more than one RACH procedure related RACH report.

4 The UE shall store upto 8 RACH reports.
5 UE shall store the RACH report entry if these RACH report entries can’t be retrieved by the network immediately and then report the stored RACH report entries upon receiving the UEInformationRequest message with rach-ReportReq set to “true”.
6 The network cannot retrieve only parts of the stored list of RACH report.
7 UE shall store the RACH report(s) upon transitioning from RRC_Connected to RRC_Idle or RRC_Inactive states and reports to the network if the UE comes to RRC_Connected mode within a duration. The maximum duration is aligned with RLF report.
8 UE shall report the stored RACH report entries to any cell if the PLMN of the cell is RPLMN or EPLMN.
9 An identifier is included in each entry of the RACH report to identify the RACH scenario in which the RACH report entry is triggered.

10 There is no need to differentiate the RACH optimization content in RACH Report between "Initial access from RRC_IDLE"/"Transition from RRC_INACTIVE" use case and "MSG3 based SI request" use case.
11 CSI-RS based RACH access information is included in the RACH report.
12 BWP ID is not included in the RACH report.
13 For RLF report, include the available measure quantities and sort through the same RS type by depending on availability according to the following priority: RSRP, RSRQ, SINR. The sorting method can be checked during the running CR discussion.
14 The RACH attempts over different beams in chronological order is included in the RLF report if the cause for the RLF is random access problem.
15 The UE shall include whether the selected SSB is above or below the rsrp-ThresholdSSB threshold in the RLF report if the cause for the RLF is random access problem.

DRAFT LS to RAN3 to inform our agreements on MRO, RACH and RLF report. (offline#630, Ericsson, R2-1916420)

R2-1916420 [Draft] LS on RACH report and RLF report Ericsson LS out Rel-16 NR_SON_MDT-Core
To:RAN3, SA5
=> Remove SA5
=> Add the agreement on MRO
=> With these changes, LS is approved in R2-1906580

R2-1915621 Beam measurements linked to successful and failed handovers Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core R2-1910716
=> The successful HO Report is not supported in R16. Can be further discussed in future release.

R2-1916154 Discussion on UE location information in SCG failure report NTT DOCOMO INC. , Ericsson discussion Rel-16 NR_SON_MDT-Core R2-1913777

Agreements:
1 Include UE location information in SCGFailureInformationNR message in 36.331.
2 Include UE location information (i.e. commonLocationInfo and WLAN and BT information if available) in SCGFailureInformation message and SCGFailureInformationEUTRA message in 38.331.
FFS on the UE capability signalling and UE detailed location information.

R2-1915438 Running CR to 38.331 on NR SON Ericsson CR Rel-16 38.331 15.7.0 1373 - B NR_SON_MDT-Core
=> endorsed.

R2-1915433 Open issues related to RACH report Ericsson discussion Rel-16 NR_SON_MDT-Core
=> check the annexed text proposal in 38.321 to support providing the required information from MAC entity to the RRC layer.

R2-1914499 Leftover Issues for RACH Report Optimization CATT discussion Rel-16 NR_SON_MDT-Core

R2-1915434 Open issues related to RLF report Ericsson discussion Rel-16 NR_SON_MDT-Core

R2-1914508 Discussion on PRACH coordination CATT discussion Rel-16 NR_SON_MDT-Core revised to R2-1916299

R2-1916299 Discussion on PRACH coordination CATT discussion Rel-16 NR_SON_MDT-Core

R2-1914505 Consideration on Successful HO Report CATT discussion Rel-16 NR_SON_MDT-Core R2-1912151

R2-1914506 Supporting of Handover Type Indication in RLF Report CATT discussion Rel-16 NR_SON_MDT-Core

R2-1914509 Reply LS on PRACH configuration conflict detection CATT LS out Rel-16 NR_SON_MDT-Core To:RAN3 RAN1
R2-1915008 Discussion on RACH report SHARP discussion Rel-16 NR_SON_MDT-Core
R2-1915044 RACH Report Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915053 UE History Information Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915054 UE History Information Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core Late
R2-1915055 Discussion about Successful HO in MRO Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core
R2-1915211 Consideration of successful HO report CMCC discussion Rel-16 NR_SON_MDT-Core
R2-1915419 Further considerations on RACH optimization ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1913078
R2-1915420 Discussion on RLF report ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-1915435 Successful handover report in NR Ericsson discussion Rel-16 NR_SON_MDT-Core
R2-1915619 RACH report and its reporting procedure Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core
R2-1915622 Measurement event for interference-forced inter-RAT/inter-freq HO Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core R2-1913552
R2-1915861 Discussion on remaining aspects on SON Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core

6.12.5 Others

R2-1915735 Review of UE information in NR, alignment and harmonisation Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core Late

- **[108#42][NR/MDT] running 38.331 CR to support SON/MDT (Huawei and Ericsson)**
  Merged the endorsed running SON CR and MDT CR into one CR, also including mobility history reporting part
  Intended outcome: running CR
  Target to agree the CR next meeting
  Deadline: 2020-01-23

- **[108#91][NR/L2M] running 38.314 CR (CMCC)**
  Intended outcome: running CR
  Target to agree the CR next meeting
  Deadline: 2020-01-30

- **[108#43][NR/MDT] Running 36.331CR for MDT (Huawei)**
  Intended outcome: running 36.331 CR to introduce MDT neighbour cell measurements and SCG failure agreement if spec impact is figured out.
  Target to agree the running CR next meeting
  Deadline: 2020-01-23

- **[108#92][NR/MDT] Running 37.320 CR for MDT (CMCC, Nokia)**
  Intended outcome: running 37.320 CR to introduce NR MDT
  Target to agree the running CR next meeting
  Deadline: 2020-01-30

- **[108#93][NR/MDT] running 38.321 CR (Ericsson)**

Intended outcome: running CR to support SON/MDT
Target to agree the CR next meeting
Deadline: 2020-01-30

6.13 2-step RACH for NR

(NR_2step_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: RP-192330). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

6.13.1 General

Running CRs, Incoming LSs, Contributions in this AI are restricted for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

Including outcome of the email discussion [107bis#74][2step RACH] Running 38.300 CR for 2-step RACH (Nokia)

R2-1914311 Reply to LS on differentiating between MSG2 and MSGB (R1-1911656; contact: Nokia) RAN1
LS in Rel-16 NR_2step_RACH To:RAN2 Cc:RAN3, RAN4
=> Noted

R2-1914319 Reply to LS on RAN2 agreements related to 2-step RACH (R1-1911739; contact: Nokia) RAN1
LS in Rel-16 NR_2step_RACH To:RAN2
=> Noted

R2-1915889 Stage-2 running CR for 2-step RACH Nokia (rapporteur), Nokia Shanghai Bell draftCR Rel-16 38.300 15.7.0 B NR_2step_RACH-Core
=> The CR is endorsed

✉ **[108#40][2-step RA] Running 38.331 (Ericsson)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2#108
Deadline: 23/01/2020
Phase 2 :
Capture open issues from contribution from RAN2#108 and from CR implementation phase on all aspects related to RRC
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#82][NR/2-step RA] Running 38.321 (ZTE)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 13/02/2020

✉ **[108#83][2-step RA] Running 38.300 (Nokia)**
Outcome: Running CR for 38.300
Deadline: 13/02/2020

6.13.2 Other user plane stage-3 aspects

RA-RNTI design and open aspects of contention resolution. Including outcome of the email discussion [107bis#75][2step RACH] Running MAC CR for 2-step RACH (ZTE)

R2-1914798 Running MAC CR for 2-step RACH ZTE Corporation (email rapporteur) draftCR Rel-16 38.321 15.7.0 B NR_2step_RACH-Core
=> The CR is endorsed

R2-1914799 Summary of running MAC CR review issue list ZTE Corporation (email rapporteur) report
=> UE does not apply the backoff indication received during 2-step RA attempts when it switches to 4-step RA.
=> Noted

R2-1914430 Report of Email discussion 107bis#76- MSG B Format Design Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
On Proposal 2
- Oppo is concerned about forward compatibility. Samsung agrees that is the consequence but this is what we have agreed.
- Oppo asks if we have to put all successRAR together at the end. Samsung explains that there is no such restrictions agreed and it is up to the gNB.

=> Noted

Agreements on MSG B format design:
1 Include a 1 bit field in MAC subheader of SuccessRAR MAC subPDU to indicate presence/absence of SRB MAC subPDU(s) following successRAR MAC subPDU.
2 If the MAC subheader of SuccessRAR MAC subPDU indicates presence of SRB MAC subPDU(s):
- SRB MAC subPDU(s) are present immediately after the SuccessRAR MAC subPDU;
- the last SRB MAC subPDU is followed by padding MAC subPDU, if padding is present;
- padding MAC subPDU includes R/R/LCID padding subheader (as used to indicate padding in DL SCH MAC PDU).

3 1 bit E field is included in MAC subheader of SuccessRAR MAC subPDU, Backoff MAC subPDU and FallbackRAR MAC subPDU.
4 The E field is set to "1" to indicate at least another MAC subPDU (other than SRB MAC subPDU) follows. E field is set to "0" to indicate that the MAC subPDU including this MAC subheader is the last MAC subPDU (other than SRB MAC subPDU) in the MAC PDU.
5 1 bit T1 and 1 bit T2 field in MAC subheader are set as follows:
- MAC subheader in Backoff MAC subPDU : T1 = 0, T2 = 0
- MAC subheader in SuccessRAR MAC subPDU : T1 = 0, T2 = 1
- MAC subheader in FallbackRAR MAC subPDU: T1 = 1, T2 is not included.

6 Format in figure 10 of R2-1914430 as a baseline. The format can be further updated based on final outcome of discussions.

R2-1914431 MAC TP_MSGB Format Design Samsung Electronics Co., Ltd draftCR Rel-16 38.321 15.7.0 NR_2step_RACH-Core
- LG would like to have a single MAC PDU format. Samsung and Nokia explain that this is the consequence of the agreements. Samsung thinks that the E bit would be useless otherwise. Huawei explains that this is needed to identify the MAC SDU.

=> The TP is endorsed and will be included in the running MAC CR for further review after the meeting

RA-RNTI

R2-1914373 Differentiation Between Msg2 and MsgB by MsgB-RNTI vivo discussion
=> Noted

R2-1914433 2 Step RACH_RNTI for Receiving Network Response Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
=> Noted

R2-1916060 RNTI design for msgB Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core
=> Noted

R2-1915326 RNTI design for MsgB reception Nokia, Nokia Shanghai Bell discussion Rel-16 NR_2step_RACH-Core
=> Noted

R2-1915239 Applying un-used RNTIs for MsgB of 2-Step RACH Sony discussion Rel-16 NR_2step_RACH-Core
=> Noted

R2-1915607 msgB RNTI design for 2-step RA Ericsson discussion Rel-16 NR_2step_RACH-Core
=> Noted

Discussion on windows support (20ms, 40ms, 64ms)
- Qualcomm thinks 20ms is sufficient and Nokia would like to support 40 and 64ms.
- ZTE clarifies that we already agreed to not extend and if we do extend it should be similar values to NR-U (i.e. 40ms would be ok)
- Lenovo thinks 20ms is sufficient. Vivo supports Nokia's view. LG thinks that we should support 64ms similar to contention resolution timer.
- Huawei thinks that from network point of view it is simpler to extend to 40ms. Samsung would like up to 40ms. Qualcomm thinks 40ms goes beyond the 2-step RACH.

Discussion on RA-RNTI
Simple offset to extend the RA-RNTI space

Do we increase the RA-RNTI space?
- Sony indicates that there are solutions that don't increase and we should look into how to converge there. ZTE didn't see convergence between the different solutions and would like to adopt a simple solution.
- Google and Lenovo would like a simple solution as well. Ericsson thinks that the solution propose from them is quite simple and addresses the problem.
- CATT would like to avoid solutions that have RAN1 impact (e.g. DCI)
- ZTE thinks that the space unused that Ericsson and Sony has proposed will remain there for the future.
- Ericsson thinks that we can have a preamble ID offset. ZTE thinks that the preamble ID is only for the single ID and doesn't cover the multiplexed case.

Agreements
1 The RA response window is extended up to 40ms for 2-step RACH.
2 From RAN2 perspective, 2bit LSB of the SFN is included in the DCI scheduling msgB
3 A "fixed" offset is added to the RA-RNTI formula to extend the RA-RNTI space. The Rapporteur of MAC will included it in the MAC CR.

Contention resolution

R2-1914391 Contention resolution for 2-step RACH in C-RNTI MAC CE case OPPO discussion Rel-16 NR_2step_RACH-Core
Proposal 1 RAN2 confirms that for the case when 2-step RACH was triggered by UL data arrival while UL is non-sync or by handover, both UL grant and TA command are needed for contention resolution.
- Huawei confirms. LG doesn't think UL grant is needed for contention resolution. ZTE explains that UL grant is not useful unless there is a TAC, what is need that the TAC is minimum. If the network sends the TAC then the network has received msgA and it is up the network when it sends it. Nokia agrees with ZTE
- Vivo thinks that is more efficient that the network sends the UL grant and in NR-U case it would avoid COT.

- CATT would like to understand whether there is a performance difference between the two solutions.
- Qualcomm doesn't think it is needed either, there is subsequent DCIs where there can be included.
- Oppo clarifies that they want to introduce a new MAC CE to include the UL grant. Mediatek doesn't support a new MAC CE mechanism and there is implementation aspects to consider as well.

Proposal 2 RAN2 confirms that for the case when 2-step RACH was triggered beam failure recovery or PDCCH order when uplink is in-sync, only C-RNTI addressed PDCCH is needed for contention resolution, similar as legacy 4-step RACH.

=> Noted

Agreements:
1 When 2-step RACH was triggered by UL data arrival while UL is non-sync grant is not included in random access message (i.e. no change to current MAC running CR).
2 When 2-step RACH was triggered beam failure recovery or PDCCH order when uplink is in-sync, only C-RNTI addressed PDCCH on SPCell is needed for contention resolution

R2-1914421 On the remaining open issues of 2-step RACH CATT discussion Rel-16 NR_2step_RACH-Core

Proposal 5 RAN2 confirms that for the case of 2-step CBFR for BFR, UE considers Random Access Response reception successful upon reception in RAR a PDCCH addressed to the C-RNTI

- Huawei thinks that this is another case where the UE should stop monitoring msgB

=> Noted

BFR and RA type selection

R2-1914796 Remaining open issues for 2-step CBRA ZTE Corporation, Sanechips discussion

Proposal 1 If 4-step CFRA resource is configured in HO case, the UE should select 4-step RACH in "5.1.1 Random Access procedure initialization". And, if no qualified beam with 4-step CFRA resource can be found, the UE should fallback to 4-step CBRA.

- Samsung agrees and we should extend it to BFR case.

=> Noted

Discussion:
Can we configure both 2-step and 4-step CFRA at the same time?
- ZTE doesn't think we should be able to configure.

What happens if 4-step CFRA fails for initial transmission :
1. UE performs RACH type selection for CBRA
2. UE always selects the 4-step CBRA if configured
- Nokia and ZTE think that the specification becomes complicated if we start doing RACH type selection. We only do RA Type selection only once.
-

Proposal 3-a: If alternative 1 is selected, in case 2-step CBRA is configured, the NW shall be allowed to disable the use of 2-step CBRA for the BFR case. (i.e. one 2-step CBRA indicator shall be introduced to indicate whether the 2-step CBRA can be used for BFR).

- Nokia thinks that we should wait on eMIMO

=> BFR impacts can be addressed after eMIMO discussion are completed and the MAC rapporteur can try to identify potential MAC impact.

Agreements:
1. If 4-step CFRA resource is configured, the UE should select 4-step RACH in "5.1.1 Random Access procedure initialization".

2. If no qualified beam with 4-step CFRA resource can be found, the UE should fallback to 4-step CBRA. Assumption: 2-step CFRA and 4-step CFRA are not configured at the same time
3. For random access initiated by PDCCH order, if PDCCH order includes non-zero RA preamble index, UE selects 4 step RA i.e. UE will perform legacy CFRA

R2-1914432 Legacy CFRA and Selection between 2 step and 4 step RA Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
=> Noted

RA prioritization for MPS

R2-1915005 RA Prioritization for MPS for 2-step RACH Perspecta Labs, ECD, AT&T, T-Mobile, Sprint, Ericsson, Qualcomm discussion Rel-16 38.321 NR_2step_RACH-Core
=> Revised R2-1916269

R2-1916269 RA Prioritization for MPS for 2-step RACH Perspecta Labs, CISA ECD, AT&T, T-Mobile, Sprint, Verizon, Ericsson, Qualcomm discussion Rel-16 38.321 NR_2step_RACH-Core
Proposal 1. RA prioritization for MPS should be applicable for both 2-step and 4-step RACH procedures.
Proposal 2. RA prioritization parameters for MPS for both 2-step and 4-step RACH procedures are obtained from the SIB1 ra-PrioritizationForAccessIdentity field as defined in TS 38.321 Subclause 5.1.1.
- CMCC would like to consider prioritization for the access category. Perspecta explains that in main session we considered only this case and if we want to consider other cases they can be brought up separately.

=> Noted

Agreements
1 RA prioritization for MCS and MPS should be applicable for both 2-step and 4-step RACH procedures.
2 RA prioritization parameters for MCS and MPS for both 2-step and 4-step RACH procedures are obtained from the SIB1 ra-PrioritizationForAccessIdentity field as defined in TS 38.321 Subclause 5.1.1, as agreed in main session for 4-step RA.
3 Same mechanism as 4-step RA will be applied for 2-step RA

Msg3 RV and format retx

R2-1915602 RA type switch and fallback in 2-step RA Ericsson discussion Rel-16 NR_2step_RACH-Core
Proposal 1 The redundancy version of msg3 scheduled by fallbackRAR is configured in fallbackRAR.
- LG asks if RAN1 decided to support soft combining of msg3. Ericsson thinks this is the assumption. Nokia doesn't think this is useful in all cases. Huawei explains that the network hasn't identified the UE so it is not useful. Ericsson asks what do you do without soft combining.
- ZTE thinks that we can also fix the soft combining in the specs and this is simpler.
- Vivo agrees with this proposal. Qualcomm thinks this is useful.

=> RAN1 should discuss this and provide guidance to RAN2
Proposal 3 When the maximum number of msgA transmissions is reached, a 2-step Random Access problem is reported to upper layers.
- Nokia doesn't think this is needed for the general case.

=> Noted

Agreements
1 Allow configurations where switching to 4-step RA is not supported even when 2-step RA and 4-step RA are configured in the BWP.
2 HARQ process ID 0 is used for MsgA PUSCH transmission

R2-1914376 Remaining Issues on MsgA Transmission and Fallback vivo discussion

Proposal 2: The Msg3 transmission after fallback can be processed as the retransmission of MsgA PUSCH.

- Lenovo thinks this is a modelling issue

Proposal 4: Separate power ramping counters can be used for MsgA PRACH and MsgA PUSCH (i.e. PREAMBLE_POWER_RAMPING_COUNTER and MsgAPUSCH_POWER_RAMPING_COUNTER).

- ZTE thinks we need more input from RAN1

=> Noted

Not treated

R2-1915240	Differentiating MsgB with and without RRC messages	Sony	discussion	Rel-16	NR_2step_RACH-Core		
R2-1914375	Contention Resolution of 2-step RACH Triggered by Uplink Data Arrival Without Valid TA	vivo	discussion				
R2-1914377	Resource Selection for 2-step RACH	vivo	discussion	R2-1912189			
R2-1914378	Discussion on the BFR-initiated 2-step RACH	vivo	discussion				
R2-1914388	Remaining open issues for 2-step RACH	OPPO	discussion	Rel-16	NR_2step_RACH-Core		
R2-1914389	Draft TP for msgB MAC PDU format	OPPO	draftCR	Rel-16	38.321	15.7.0	B
	NR_2step_RACH-Core						
R2-1914396	[Draft] LS on preamble group for 2-step RACH	OPPO	LS out	Rel-16	NR_2step_RACH-Core	To:RAN1	
R2-1914423	Consideration on msgB-RNTI	CATT	discussion	Rel-16	NR_2step_RACH-Core		
R2-1914424	RA Type Selection between Legacy CFRA and 2-step CBRA	CATT	discussion	Rel-16	NR_2step_RACH-Core	R2-1912225	
R2-1914617	Discussion on 2-step RACH for BFR	Asia Pacific Telecom co. Ltd	discussion				
	NR_2step_RACH-Core						
R2-1914797	Consideration on the MsgB RA-RNTI calculation	ZTE Corporation, Sanechips	discussion				
R2-1914842	Other User Plane Stage-3 issues on 2-Step RACH	Intel Corporation	discussion	Rel-16	NR_2step_RACH-Core		
R2-1914843	Remaining issues on PUSCH resource unit selection for 2-step RACH	Intel Corporation					
	discussion	Rel-16	NR_2step_RACH-Core				
R2-1915001	Considerations on MsgB reception	Fujitsu	discussion	Rel-16	NR_2step_RACH	R2-1913168	
R2-1915069	RA variables for 2-step RACH fallback procedure	ITRI	discussion	NR_2step_RACH-Core			
R2-1915215	Discussion on the new RA-RNTI for MsgB	CMCC	discussion	Rel-16			
R2-1915225	TA handling in 2-step RACH	Samsung	discussion	Rel-16	NR_2step_RACH-Core	R2-1912478	
R2-1915255	Consideration on the variables for 2-step RACH	ZTE Corporation, Sanechips	discussion				
	Withdrawn						
R2-1915327	2-step RACH only BWP	Nokia, Nokia Shanghai Bell	discussion	Rel-16			
	NR_2step_RACH-Core						
R2-1915328	HARQ ACK resources for successRAR	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_2step_RACH-Core		
R2-1915329	Draft LS on HARQ ACK resources for successRAR	Nokia, Nokia Shanghai Bell	LS out	Rel-16	NR_2step_RACH-Core	To:TSG RAN WG1	
R2-1915603	New msgB format for 2-step RA	Ericsson	discussion	Rel-16	NR_2step_RACH-Core		
R2-1915928	RAN1 Impact on MsgB Design	Apple	discussion	Rel-16	NR_2step_RACH-Core		

R2-1916006 Remaining issues on user plane aspects LG Electronics discussion NR_2step_RACH-Core
R2-1916013 Remaining issues on PDU format for MsgB Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core
R2-1916014 MsgA resource configuration and selection Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core
R2-1916015 Remaining issues on MsgB reception Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core
R2-1916016 Discussion on MsgB-RNTI design Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core
R2-1916018 Further Discussions on Fallback Procedure for 2-step RACH Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core
R2-1916024 RNTI for msgB LG Electronics discussion NR_2step_RACH-Core
R2-1916027 Draft LS to RAN1 on RNTI for msgB LG Electronics LS out NR_2step_RACH-Core To:RAN1
R2-1916062 Contention resolution for msgA with C-RNTI Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core
R2-1916064 msgB MAC PDU format Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core
R2-1916065 Remaining issue on 2-step RACH fall back procedure Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core
R2-1916083 Discussion on MSGB-RNTI design Google discussion
R2-1916084 Discussion on msgB HARQ process Google discussion
R2-1916163 Discussion on indication for presence of RRC messages LG Electronics Polska discussion Rel-16 NR_2step_RACH-Core

6.13.3 RRC stage-3 related aspects

Including outcome of the email discussion [107bis#77][2-step RACH] RRC details and Running CR (Ericsson)

R2-1915786 2-step RA 38.331 Running CR Ericsson (Email disc rapporteur) draftCR Rel-16 38.331 15.7.0 B NR_2step_RACH-Core
=> The CR is endorsed

R2-1915787 Report on email [107bis#77][2-step RACH] RRC details and running RRC CR (Ericsson) Ericsson (Email disc rapporteur) discussion Rel-16 NR_2step_RACH-Core
=> Confirm that the 2-step configuration is part of SIB1 in the current running CR.
=> Noted

R2-1914422 Load Balancing between RACH Types CATT, OPPO, vivo, Spreadtrum, Panasonic, Xiaomi discussion Rel-16 NR_2step_RACH-Core
Proposal 1 *RAN2 to further discuss and confirm the motivations of further addressing the load balancing between 2-step and 4-step RACH.*
Proposal 2 *RAN2 to discuss and finalize the following mechanism*
o "RACH type selection factor(in SIB)-based" solution, as proposed in reference [2][5], or the solution with modifications based on consensus.
- Huawei sees benefits to doing this. Ericsson thinks that the network can just configure more resources. Nokia explains that if we do anything we need to do something more dynamic.
- Sony agrees with Nokia that more dynamic parameters need to be used
- Rapporteur feels that the situation hasn't changed since last time and is concerned with the completion of the WI

=> This will not be supported for Rel-16

Not treated

R2-1916017 Remaining issues on the msgA transmission Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core

R2-1914390 Remaining issues on 2-step RACH configuration without 4-step resources OPPO discussion Rel-16 NR_2step_RACH-Core

R2-1914434 2 Step RA_RACH Configuration Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core

R2-1915450 Loading Control in the RACH Type Selection PANASONIC R&D Center Germany discussion R2-1912692

R2-1915604 Preamble group handling for 2-step RA Ericsson discussion Rel-16 NR_2step_RACH-Core

R2-1915606 Beam-specific 2-step RA support Ericsson discussion Rel-16 NR_2step_RACH-Core

6.13.4 Other

CFRA for 2-step RACH for HO if time permits as per plenary guidance.
ZTE will summarize the proposals and open issues and provide possible way forward for online discussions. Companies are encouraged to work together towards a converged solution.

R2-1914800 Support of CFRA with 2-step RACH ZTE Corporation, Sanechips, Vivo, Oppo, Fujitsu, Qualcomm, InterDigital, Intel discussion
=> Noted

Proposal 1: For HO (i.e. reconfiguration with synch) with 2-step CFRA, the UE will monitor the PDCCH of the target cell for the response from the gNB identified by the C-RNTI while the msgB-ResponseWindow is running. The RA procedure is considered successful upon reception of a transmission addressed to the C-RNTI containing at least the 12 bit TAC MAC CE.
- Intel asks if this includes other cases than just HO (e.g. CG addition). ZTE clarifies that this is for reconfiguration with synch
- Huawei thinks that we should stick to HO only. Nokia agrees. Ericsson would like to avoid using HO in MAC and refer to reconfiguration with synch as in RRC.

Proposal 2: RAN2 to discuss and agree one of the following options:
Option 1: Rebuilding is NOT supported: This means the CFRA payload size matches one of the payload sizes for CBRA and UE includes C-RNTI in MSGA for CFRA
Option 2: Rebuilding is supported:
- Vivo thinks that we need to support option 2 as the sizes are different. Nokia doesn't want to support rebuilding. Interdigital also doesn't think we should support rebuilding and we should keep the same behaviour from 2-step to 4-step.

Proposal 5: Both SSB and CSI-RS based 2-step CFRA will be supported
- Nokia has some concerned if CSI-RS impacts RAN1, but maybe we can agree to both.

Proposal 6: The PUSCH resource for 2-step CFRA associated with the dedicated preamble will be configured to the UE via dedicated signalling (i.e. will not be included in SIB1).
- Huawei would like to understand how the UE releases.

Proposal 8: NW configures 2-step CFRA resource only on BWP with a CBRA resource – either 2-step CBRA or 4-step CBRA (i.e. for HO, 2-step CFRA can be configured to be used on the firstActiveBWP only if the BWP has either 2-step CBRA resource or 4-step CBRA resource)
- Samsung doesn't want to link the two and follow the legacy approach where 2-step CBRA configuration is always there. Oppo agrees with Samsung.

=> Noted

Agreements for HO 2-step RA:
1 2-step CFRA and 4-step CFRA cannot be configured simultaneously for a BWP
2 For HO 2-step CFRA, the UE will monitor the PDCCH of the target cell for the response from the gNB identified by the C-RNTI while the msgB-ResponseWindow is running. The RA

procedure is considered successful upon reception of a transmission addressed to the C-RNTI containing at least the 12 bit TAC MAC CE.
3 Rebuilding is NOT supported: This means the CFRA payload size matches one of the payload sizes for CBRA and UE includes C-RNTI in MSGA for CFRA
4 In case of 2-step CFRA, once MSGA is transmitted the UE monitors MSGB-RNTI (in addition to C-RNTI – i.e. same as CBRA)
5 The initial RA type is always determined to be 2-step RA if 2-step CFRA is configured in HO
6 Similar to 4-step RA, the UE then searches for a suitable CFRA beam with configured 2-step CFRA resources
7 RAN2 assumes that SSB and CSI-RS based 2-step CFRA can be supported. We assume that if there are RAN1 impact then CSI-RS configuration will not be supported.
8 The PUSCH resource for 2-step CFRA associated with the dedicated preamble will be configured to the UE via dedicated signalling (i.e. will not be included in SIB1). FFS how and when the PUSCH resources is releases
9 2-step CFRA is configured only on BWP where 2-step CBRA is configured

Not treated

R2-1914374 Discussion on the 2-step CFRA vivo discussion
R2-1914392 Contention free 2-step RACH OPPO discussion Rel-16 NR_2step_RACH-Core
R2-1914435 Open issues for supporting 2 step CFRA Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
R2-1914862 UE capability for 2-step RACH Intel Corporation discussion Rel-16 NR_2step_RACH-Core
R2-1915002 On open questions to 2-step CF-RACH Fujitsu discussion Rel-16 NR_2step_RACH R2-1913169
R2-1915216 Discussion on 2-step CFRA CMCC discussion Rel-16
R2-1915231 Fallback to 4-step RACH with BI Sony discussion Rel-16 NR_2step_RACH-Core
R2-1915268 Draft CR for 2-step CFRA ZTE Corporation, Sanechips draftCR Rel-16 38.321 15.7.0 B NR_2step_RACH-Core
R2-1915330 CFRA for 2-step RACH Nokia, Nokia Shanghai Bell discussion Rel-16 NR_2step_RACH-Core
R2-1915605 CFRA in 2-step RA Ericsson discussion Rel-16 NR_2step_RACH-Core
R2-1915929 2-Step CFRA Apple discussion Rel-16 NR_2step_RACH-Core
R2-1916028 Consideration on 2-step CFRA LG Electronics discussion NR_2step_RACH-Core R2-1913879
R2-1916029 Logical channel based RA type selection LG Electronics Inc. discussion Rel-16 NR_2step_RACH-Core R2-1913877

6.14 Single Radio Voice Call Continuity from 5G to 3G

(SRVCC_NR_to_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: RP-190713). Documents in this agenda item will be handled in a break out session
Time budget: 0.5 TU
Tdoc Limitation: 2 tdocs

6.14.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc

R2-1914646 Running CR for introduction of SRVCC from 5G to 3G Ericsson draftCR Rel-15 38.300 15.7.0 B SRVCC_NR_to_UMTS-Core
⇨ Endorsed as running CR

R2-1915125 Running CR for the introduction of SRVCC from 5G to 3G Huawei, HiSilicon, China Unicom draftCR Rel-16 38.331 15.7.0 B SRVCC_NR_to_UMTS-Core
⇨ Revised in R2-1916272

R2-1916272 Running CR for the introduction of SRVCC from 5G to 3G Huawei, HiSilicon, China Unicom draftCR Rel-16 38.331 15.7.0 B SRVCC_NR_to_UMTS-Core
- ZTE would like to support cell individual offset as supported in E-UTRA inter-RAT measurements
- Huawei and Ericsson see no strong reason but have no problem to have it.
⇨ Check offline on the support cell individual offset and come back on Friday.
⇨ Change UTRA to UTRA-FDD
⇨ Offline discussion 204 (Huawei). Revised CR to incorporate comment above on UTRA-FDD and also reflecting the decision on support cell individual offset.

R2-1916333 Running CR for the introduction of SRVCC from 5G to 3G Huawei, HiSilicon, China Unicom draftCR Rel-16 38.331 15.7.0 B SRVCC_NR_to_UMTS-Core
- Lenovo wonders about CIO, for which they don't see the need
⇨ Endorsed as running CR

R2-1916117 Running CR for the introduction of SRVCC from 5G to 3G China Unicom, Huawei, HiSilicon draftCR Rel-16 38.306 15.7.0 B SRVCC_NR_to_UMTS-Core
- Ericsson wonders whether we need FR1/FR2 differentiation and also whether we need FDD/TDD. Huawei explains FDD/TDD refers to the source NR cell.
- Companies are ok to consider FR1/FR2 differentiation.
- Nokia thinks the coverpage needs updated
⇨ We agree to have TDD/FDD differentiation.
⇨ We agree to have FR1/FR2 differentiation
- Lenovo thinks we should link the capability to the support of voice over NR
⇨ Add the condition related to the support of voice over NR.
⇨ Offline discussion 205 (Huawei). Revised CR based on the agreements

R2-1916334 Running CR for the introduction of SRVCC from 5G to 3G China Unicom, Huawei, HiSilicon draftCR Rel-16 38.306 15.7.0 B SRVCC_NR_to_UMTS-Core
⇨ Endorsed as running CR

6.14.2 Inter RAT handover to UTRAN for SRVCC

UE capabilities

R2-1914644 UE capabilities for SRVCC from 5G to 3G Ericsson discussion SRVCC_NR_to_UMTS-Core

R2-1915124 Discussion on SRVCC capability Huawei, HiSilicon, China Unicom discussion Rel-16 SRVCC_NR_to_UMTS-Core

Other remaining issues

R2-1914912 Remaining issues for UTRAN measurement ZTE Corporation, Sanechips discussion Rel-16 SRVCC_NR_to_UMTS-Core

R2-1915123 Discussion on leftover issues of Inter-RAT measurement Huawei, HiSilicon, China Unicom discussion Rel-16 SRVCC_NR_to_UMTS-Core

6.14.3 Other

37.340 impacts

R2-1914645 Introduction of SRVCC from 5G to 3G Ericsson CR Rel-16 37.340 15.7.0 0165 - B SRVCC_NR_to_UMTS-Core
- Intel thinks the row on 'NR' is also impacted
- VC thinks the note could be reworded to further clarify that only SRVCC is supported
- Huawei thinks that more than one RAN4 table is affected. Maybe it's better to refer to the section of the spec only.
⇨ Offline discussion 206 (Ericsson). Revised CR taking comments above into account

R2-1916335 Introduction of SRVCC from 5G to 3G Ericsson, ZTE Corporation CR Rel-16
37.340 15.7.0 0165 - B SRVCC_NR_to_UMTS-Core
⇨ Endorsed as running CR

6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR

(NR_CLI_RIM; leading WG: RAN1; REL-16; started: Dec 18; target; Dec 19; WID: RP-191997) Documents in this agenda item will be handled in a break out session.
Time budget: 0 TU
Tdoc Limitation: 1 tdoc

6.15.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc
Including output of email discussion [107bis#57][CLI] Running RRC CR (LG)
Including output of email discussion [107bis#58][CLI] CLI measurements UE capabilities (Qualcomm)

Incoming LS

R2-1914333 LS on CLI measurement reporting range (R4-1911416; contact: LGE) RAN4 LS in Rel-16 NR_CLI_RIM-Core To:RAN2
⇨ Noted

Stage 2 CR
(according to the Tdoc list, R2-1915882 should be a discussion paper on 'Leftover issues on CLI' but it actually contains the Stage 2 CR)

R2-1915882 Introduction of cross link interfernce management Huawei, HiSilicon CR Rel-16
38.300 15.7.0 0180 - B NR_CLI_RIM
⇨ Offline discussion 203 (Huawei). Revise the 38.300 CR in R2-1916331. Also prepare a draft CR to 37.340 to reflect the agreement on support of CLI measurements for NR-DC and other architectural options.

R2-1916331 Introduction of cross link interfernce management Huawei, HiSilicon CR Rel-16
38.300 15.7.0 0180 1 B NR_CLI_RIM
⇨ RAN2 reconfirms that CLI measurements can be configured to be applicable for SpCell and Scells without the need to mention this in Stage 2
⇨ Remove the last sentence
⇨ Revised into R2-1916347

R2-1916347 Introduction of cross link interfernce management Huawei, HiSilicon CR Rel-16
38.300 15.7.0 0180 2 B NR_CLI_RIM
⇨ Endorsed unseen as running CR

R2-1916340 Introduction of cross link interfernce management Huawei, HiSilicon, ZTE Corporation (Rapporteur) draftCR Rel-16 37.340 15.7.0 B NR_CLI_RIM-Core
⇨ Endorsed as running CR

UE capabilies

R2-1915715 Report of [107bis#58]CLI measurements UE capabilities Qualcomm Incorporated discussion Rel-16 NR_CLI_RIM-Core Late
- Ericsson and Huawei wonder whether we need to send an LS to RAN1
- Qualcomm and LG think we should inform RAN1 that UE capabilities to indicate the maximum number of CLI measurement resources the UE supports are needed
- QC also wants to ask clarification to RAN1 on different SCS for CLI RSSI as they think RAN1 decision on this is not clear.

- Companies agree that there is no problem for SRS RSRP
- VC thinks we could send an LS to ask questions
- Huawei thinks we could send an LS to RAN1 asking questions, not to say that RAN2 took any decision on whether UE needs to be able to indicate the maximum number of CLI measurement resources it supports

⇨ Send an LS to RAN1 asking whether the UE needs to be able to indicate the maximum number of CLI measurement resources it supports (separately for SRS-RSRP and CLI-RSSI). Also ask whether a UE capability is needed to indicate UE supports CLI RSSI measurement with a configured reference SCS different from that of the active BWP. Include also agreements below

Agreements:
1. FR1/FR2 diff should be “Yes” in general for all CLI capabilities.
2. Endorse 38.306 running CR in R2-1915716.
3. UE shall prioritize the DL transmission in case DL signal/channel and SRS RSRP resources are FDMed for UEs indicating the FDMed reception is not supported.
4. UE shall prioritize the DL transmission in case DL signal/channel and CLI RSSI resources are FDMed for UEs indicating the FDMed reception is not supported.

R2-1915716 Introduction of Cross Link Interference (CLI) handling and Remote Interference Management (RIM) Qualcomm Incorporated draftCR Rel-16 38.306 15.7.0 B NR_CLI_RIM-Core R2-1913535
⇨ Endorsed as running CR

R2-1916258 [DRAFT] LS on CLI measurements UE capabilities Qualcomm Incorporated LS out Rel-16 NR_CLI_RIM-Core To:RAN1 Late
⇨ Offline discussion 201. Revised LS to RAN1 (QC). Add RAN4 in CC as well

R2-1916332 [DRAFT] LS on CLI measurements UE capabilities Qualcomm Incorporated LS out Rel-16 NR_CLI_RIM-Core To:RAN1 Cc:RAN4
⇨Change last part of the 1st question to "whether to introduce/reuse any capability(ies)".
⇨ Revised into R2-1916348

R2-1916348 LS on CLI measurements UE capabilities Qualcomm Incorporated LS out Rel-16 NR_CLI_RIM-Core To:RAN1 Cc:RAN4
⇨ Approved unseen

RRC CR

R2-1916211 Introduction of Cross Link Interference (CLI) handling and Remote Interference Management (RIM) LG Electronics Inc CR Rel-16 38.331 15.7.0 1423 - B NR_CLI_RIM-Core Late
- Samsung thinks SRS resource IE in measObjectCLI does not include any frequency info and wonders whether this is ok
- LG thinks that additional information is not needed
- Nokia also wants to have a clarification in the field description for *nrofSymbols*, removing references to BWP

=> Offline discussion 202. Revised CR (LG) to address the comments above and other possible issues. Also consider the agreement on support of CLI measurements for NR-DC and other architectural options.

R2-1916558 Report of offline discussion #202 LG Electronics Inc discussion Rel-16 NR_CLI_RIM-Core
⇨ Agree to have a RAN2 email discussion to clarify the issues raised in the discussion

✉ **[108#17][NR] Additional frequency information for CLI (LG)**
Intended outcome: Clarify the issue raised in the discussion and decide whether there is anything to further check with RAN1. Possible outcome is to send an LS to RAN1

Deadline: 2019-12-13
=> LSout in R2-1916645

R2-1916645 LS on clarification of CLI resource configuration RAN2 LS out Rel-16 NR_CLI_RIM
To:RAN1
=> Approved

R2-1916559 [DRAFT] LS on remaining CLI issues LG Electronics Inc discussion LS out Rel-16 NR_CLI_RIM-Core To:RAN1
⇨ Noted

R2-1916338 Introduction of Cross Link Interference (CLI) handling and Remote Interference Management (RIM) LG Electronics Inc CR Rel-16 38.331 15.7.0 1423 1 B NR_CLI_RIM-Core
=> Email discussion to allow companies to check

✉ **[108#30][CLI] RRC running CR (LG)**
Intended outcome: Endorsed RRC running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916639

6.15.2 Remaining issues

CLI measurements in NR-DC

R2-1916128 Remaining issues on CLI measurement ZTE Corporation, Sanechips discussion Rel-16 NR_CLI_RIM
- Oppo wonders whether CLI measurements can be configured in (NG)EN-DC and NE-DC
⇨ We reconfirm that CLI measurements can be configured in (NG)EN-DC and NE-DC
- Ericsson wonders whether to support proposal 2, proposal 4 is the only thing we need to do.
- Huawei and Nokia support proposal 2.
- QC wonders if this requires additional capabilities.
- Nokia/LG do not think we need additional capabilities

Agreements:
1. CLI measurements can be configured in NR-DC (and NR CA). No additional RAN3 work is expected for this.
2. In NR-DC, both MN and SN can configure CLI measurement at the same time. Network ensures the CLI measurements configured by MN and SN do not go beyond UE's capability.
3. For CLI measurement coordination, MN informs SN in CG-ConfigInfo:
• Maximum number of SRS RSRP resources that can be configured by SN;
• Maximum number of CLI-RSSI resources that can be configured by SN.

R2-1914590 UE CLI Measurements for Multiconnectivity Nokia, Nokia Shanghai Bell discussion Rel-16
(according to the Tdoc list, R2-1915881 should be a Stage 2 CR on 'Introduction of cross link interfernce management ' but it actually contains a discussion paper)
R2-1915881 Leftover issues on CLI Huawei, HiSilicon discussion Rel-16 NR_CLI_RIM
R2-1916246 Remaining issues on CLI Ericsson discussion Rel-16 NR_CLI_RIM

Too strong interference

R2-1915714 Too strong interference during CLI-RSSI measurement Qualcomm Incorporated discussion Rel-16 NR_CLI_RIM-Core R2-1913393

Other issues

R2-1914554 Open issues for CLI measurment OPPO discussion Rel-16 NR_CLI_RIM
R2-1914568 Draft LS on configuration exchange for CLI measurement OPPO LS out Rel-16 NR_CLI_RIM
To:RAN3
R2-1914591 Remaning Issues for UE-CLI Nokia, Nokia Shanghai Bell discussion Rel-16

6.16 Enhancements on MIMO for NR

(NR_eMIMO-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192271). Documents in this agenda item will be handled in a break out session.
Time budget: 0.5 TU
Tdoc Limitation: 3 tdocs

6.16.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc

R2-1914308 LS on simultaneous TCI state activation and spatial relation update across multiple CCs/BWPs by MAC-CE (R1-1911617; contact: LGE) RAN1 LS in Rel-16 NR_eMIMO-Core
To:RAN2
⇨ Noted

R2-1914309 LS on SCell BFR (R1-1911619; contact: Apple) RAN1 LS in Rel-16 NR_eMIMO-Core
To:RAN2
⇨ Noted

6.16.2 RRC aspects

RRC aspects for both single-PDCCH and Multi-PDCCH mTRP operation
Including output of email discussion [107bis#60][NR eMIMO] RRC CR (Ericsson)

Working Assumption from RAN2#107bis::
1. mPDCCH mTRP operation is modelled as a single cell/single HARQ entity operation. This does not mean that RAN1 has to do anything to support retransmission between TRPs

R2-1914716 Running RRC CR for Introduction of NR eMIMO Ericsson draftCR Rel-16 38.331 15.7.0 B NR_eMIMO-Core Late
⇨ Offline discussion 209 (Ericsson). Collect further comments (if any) also regarding a possible merge with the proposals in R2-1914438 on SCell BFR aspects. If possible submit a revised CR in R2-1916339

R2-1916339 Running RRC CR for Introduction of NR eMIMO Ericsson draftCR Rel-16 38.331 15.7.0 B NR_eMIMO-Core Late
- On BFR configuration Nokia thinks that there are Scells without uplink and suggest to move the configuration to BWP-Downlink. Intel sympathizes with this.
⇨ Add BFR configuration in BWP-DownlinkDedicated
⇨ Delete second sentence in field description of candidateBeamRSSCellList
- OPPO/ZTE wonder why servingCellId is needed in BeamFailureSCellRecoverySCellConfig. Ericsson think it comes from RAN1.
⇨ Check whether this is actually reflecting any RAN1 agreements
- Nokia thinks we only need to discuss about critical and non critical extensions
⇨ Revised in R2-1916343 to remove changes on changes

R2-1916343 Running RRC CR for Introduction of NR eMIMO Ericsson draftCR Rel-16 38.331 15.7.0 B NR_eMIMO-Core Late
⇨ Baseline for further email discussion

✉ **[108#36][NR eMIMO] Running RRC CR (Ericsson)**

Intended outcome: List of agreeable proposals regarding the issues identified in the previous email discussion (and any newly identified issues) and corresponding updated running CR.
Deadline: 2020-01-23

R2-1914709 Discussion on the mTRP modelling vivo discussion Rel-16 NR_eMIMO-Core
R2-1914675 RRC signalling for MIMO enhancements Huawei, HiSilicon discussion Rel-16 NR_eMIMO-Core Late

6.16.3 DL MAC CE design

DL MAC CE design to activate/deactivate TCI states for both single-PDCCH and multi-PDCCH mTRP operation
Including output of email discussion [107bis#59][NR][eMIMO] MAC CE design (Vivo)

TCI states activation MAC CE for single-PDCCH mTRP operation

R2-1914710 Email discussion summy on eMIMO MAC CE vivo (rapporteur) discussion Rel-16 NR_eMIMO-Core

Agreements:
1. A new MAC CE (i.e. by allocating a new LCID) is used to indicate whether a TCI codepoint corresponds to 1 or 2 TCI states.
2. The MAC CE indicates 1 or 2 explicit TCI state IDs for each TCI codepoint.
3. Endorse TP from R2-1914710 removing any reference to TRP

R2-1914387 Draft CR for MAC CE format to indicate up to two TCI states OPPO draftCR Rel-16 38.321 15.7.0 NR_eMIMO-Core
R2-1914674 MAC CE signaling enhancement for TCI indication of single-PDCCH based multi-TRP transmission Huawei, HiSilicon discussion Rel-16 NR_eMIMO-Core
R2-1915247 MAC CE design for support of multiple beam indication for single PDCCH-based multiple TRPs Samsung discussion Rel-16 NR_eMIMO-Core R2-1912514
R2-1916066 Enhanced TCI States Activation/Deactivation PDSCH MAC CE for Multi-TRP Qualcomm Incorporated discussion Rel-16 NR_eMIMO-Core R2-1913407

TCI states activation MAC CE for multi-PDCCH mTRP operation
Possible questions:
1. *Can a MAC CE for TCI states activation sent by TRPx activate TCI states for TRPy?*
2. *Can a MAC CE for TCI states activation activate TCI states for both TRPs?*

R2-1916070 The remaining issues on mPDCCH mTRP transmission ZTE Corporation, Sanechips discussion Rel-16 NR_eMIMO-Core
- Regarding proposal 1 Samsung thinks that there is no decision from RAN1.
⇨ Wait for RAN1 feedback to our previous LS first for a final decision.

Working assumptions (unless different information is received from RAN1):
1. Network can send the TCI states activation MAC CE from any TRP and the UE does not need to know from which TRP this comes from

Other DL MAC CEs for eMIMO (some papers moved here from other sub-AIs)

R2-1915248 Reduction of signaling and latency for beam managements Samsung discussion Rel-16 NR_eMIMO-Core
- Ericsson thinks there are other MAC CEs being discussed in RAN1 and wonder whether we need to focus on these. In any case, if we do this, it would be better to follow a MAC approach.
- Vivo thinks we can avoid any MAC impacts.

- Ericsson thinks we should focus on the other MAC CEs: e.g. SRS MAC CE, PUCCH MAC CE, etc.
- Samsung thinks that RAN1 sent an email requesting to work on this and we should consider this as well

⇨ For now we don't exclude any MAC CEs and also don't exclude any option (RRC only, RRC + MAC or MAC only) for the simultaneous TCI state activation and spatial relation update across multiple CCs/BWPs by MAC-CE

✉ **[108#68][NR eMIMO] Design of DL MAC CEs (Oppo)**
Intended outcome: Identify possible solutions to take RAN1 requests into account for all the following new/modified MAC CEs:
1. PUCCH spatial relation Activation/Deactivation MAC CE
2. AP-SRS spatial relation and pathloss reference RS update MAC CE
3. SP-SRS pathloss reference RS update MAC CE
4. PUSCH pathloss reference RS update MAC CE
5. simultaneous PUCCH resource group spatial relation update/indication MAC CE
6. simultaneous multiple CCs/BWPs PDSCH TCI state IDs activation
7. simultaneous multiple CCs/BWPs PDCCH CORESET TCI state IDs activation
8. simultaneous multiple CCs/BWPs SP/AP SRS resource Spatial Relation activation

(at least for the MAC CEs 5 ~ 8 for simultaneous update/indication/activation discuss which approach to follow: 1. RRC configuration only, 2. RRC configuration plus MAC CE changes, 3. MAC CE changes only)
Deadline: 2020-01-30

R2-1914676 MAC CE signaling for multi-beam enhancement Huawei, HiSilicon discussion Rel-16 NR_eMIMO-Core
R2-1914711 Discussion on eMIMO MAC CE vivo discussion Rel-16 NR_eMIMO-Core
⇨ Revised in R2-1916259
R2-1916259 Discussion on eMIMO MAC CE vivo discussion Rel-16 NR_eMIMO-Core
R2-1914718 PUCCH MAC CE and SRS MAC CE Ericsson discussion Rel-16
R2-1915158 MAC CE design for eMIMO OPPO discussion Rel-16 NR_eMIMO-Core

6.16.4 General beam management enhancements

Including details of BFR procedure for Scell. Other aspects, if any, can also be covered here
Including output of email discussion [107bis#61][NR][eMIMO] Scell BFR / MAC CR (Nokia/Samsung)

Output of email discussion on Scell BFR and MAC CR

R2-1915331 Summary of email discussion [107bis#61][NR][eMIMO] Nokia, Nokia Shanghai Bell discussion Rel-16 NR_eMIMO-Core Late
- Oppo thinks we should modify P8 taking into account agreements in NR-U session.

Agreements:
1. beamFailureDetectionTimer and beamFailureInstanceMaxCount are configured cell specifically per each DL BWP configured.
2. Upon reconfiguration of beamFailureDetectionTimer, beamFailureInstanceMaxCount, or any of the reference signals used for beam failure detection by upper layers, BFI_COUNTER is set to 0 for the given Serving Cell.
3. When SCell BFR SR resource is not configured and SCell BFR MAC CE transmission triggers SCell BFR SR, Random Access procedure on SpCell is triggered to request UL resources to transmit the SCell BFR MAC CE (similarly to Rel-15 behaviour on SR).
4. when SCell BFR SR is triggered and the UE has an overlapping SR PUCCH resource with the SCell BFR SR PUCCH resource, the UE shall select the SCell BFR SR PUCCH resource for transmission.
5. Pending SR for SCell beam failure recovery triggered prior to the MAC PDU assembly shall be cancelled when the MAC PDU is transmitted and this PDU includes a SCell BFR MAC CE.

6. SCell BFR MAC CE can carry information of multiple failed SCells, ie., multiple entry format for SCell BFR MAC CE is defined.
7. For each SCell, the SCell BFR MAC CE indicates the following information:
   - information about the failed SCell index;
   - indication if a new candidate beam RS is detected or not;
   - new candidate beam RS index (if available).
8. SCell BFR MAC CE has higher priority at least than “data from any Logical Channel, except data from UL-CCCH” and LBT MAC CE, higher priority is FFS.

R2-1915254 MAC running CR for NR eMIMO B NR_eMIMO-Core Samsung CR Rel-16 38.321 15.7.0 0676 - Late

- Ericsson has some concerns on the text in 6.1.3.XX and think we can rather work on field descriptions.
- ZTE thinks that the description on how the BFR counter is reset was not agreed before. Nokia thinks RAN1 already agreed on this and it was also the common view in the email disc.
- Oppo think that at the condition for successful BFR are still open. Ericsson thinks that this reflects what RAN1 has already agreed. Nokia/ Samsung agree.

⇨ Baseline for further email discussion. Further changes are possible but preserving the described functionalities.

✉ **[108#69][NR eMIMO] MAC Running CR (Samsung)**
Intended outcome: Endorsed running CR including:
Phase 1 (until next week): meeting agreements and also the details of the MAC CEs as agreed from R2-1914710
Phase 2: possibly including the output of the email discussion on other DL MAC CEs.
Deadline: 2020-01-30

✉ **[108#70][NR eMIMO] BFR MAC CE (Samsung)**
Intended outcome: BFR MAC CE Design
Deadline: 2020-01-30

R2-1914438 RAN2 Aspects of SCell BFR NR_eMIMO-Core Samsung Electronics Co., Ltd discussion Rel-16

Open issues from the email discussion

R2-1914382 Remaining issues of Scell BFR CATT discussion Rel-16 NR_eMIMO-Core

- Nokia thinks that in NR-U we agreed not to send this on failed Scells. LG thinks the issue in different in NR-U: DL failure in one case, UL case in the other case. Lenovo/IDT agree in Nokia.
- Ericsson/Apple thinks we should keep it simple and respect the RAN1 agreement.
- QC thinks we could leave this to network implementation. Nokia wonders what this means: does it mean it is possible to send BFR SR even if there is a valid grant? QC thinks so.
- Ericsson thinks we should not leave it to UE implementation. ZTE think we could reuse what is being agreed for NR-U. Intel think we should discuss technical aspects first.

⇨ Noted

R2-1916069 The remaining issues on BFR on SCell ZTE Corporation, Sanechips discussion Rel-16 NR_eMIMO-Core

R2-1915934 SCell BFR Operation Apple discussion Rel-16 NR_eMIMO-Core

R2-1915640 Unresolved issues for BFR on SCell Ericsson discussion Rel-16 NR_eMIMO-Core

R2-1915332 Remaining details of SCell BFR NR_eMIMO-Core Nokia, Nokia Shanghai Bell discussion Rel-16

R2-1914712 Remaining issue of SCell BFR vivo discussion Rel-16 NR_eMIMO-Core

R2-1915109 Details of SCell Beam Failure Recovery Procedure Lenovo, Motorola Mobility discussion Rel-16 NR_eMIMO-Core
R2-1915157 SCell BFR MAC CE design OPPO discussion Rel-16 NR_eMIMO-Core
R2-1915922 Discussion on SCell BFR procedure LG Electronics Inc. discussion NR_eMIMO-Core Late

SpCell BFR

R2-1915641 BFR MAC CE for SpCell Ericsson discussion Rel-16 NR_eMIMO-Core
R2-1915935 PCell BFR Operation Apple discussion Rel-16 NR_eMIMO-Core

Other issues

R2-1916067 Procedures and MAC CE design for BFR for SCells Qualcomm Incorporated discussion Rel-16 NR_eMIMO-Core R2-1913833
R2-1914616 Discussion on SCell BFR procedure Asia Pacific Telecom co. Ltd discussion NR_eMIMO-Core
R2-1916037 Remaining issues of SCell BFR ASUSTeK discussion Rel-16 NR_eMIMO-Core

6.18 Private Network Support for NG-RAN

(NG_RAN_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; target; Mar 20; WID: RP-191563). Documents in this agenda item will be handled in a break out session.
Time budget: 0.5 TU
Tdoc Limitation: 3 tdocs

6.18.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc
Including output of email discussion [107bis#62][NR][PRN] Stage 2 running CR (Nokia)

Workplan

R2-1914598 NPN Work Plan Nokia, China Telecom (Rapporteurs) discussion Rel-16 NG_RAN_PRN-Core R2-1912841
⇨ Noted

Incoming LSs

R2-1914326 LS on NID structure and length (C4-194332; contact: Ericsson) CT4 LS in Rel-16 Vertical_LAN To:RAN2, RAN3, CT1, CT3 Cc:SA2
- Ericsson thinks that 52 bits could be too much and would prefer to reduce this.
- Nokia shares the same view.
- Lenovo agrees that a 52 bitstring would be too much but thinks there are ways to reduce it over the radio.
- ZTE/Samsung/Ericsson think we should not optimize in RAN2 and take what CT4 agrees

⇨ We send an LS to CT4 asking whether the length can be reduced
⇨ Offline discussion 207 (Ericsson). Draft LS to CT4

R2-1916336 [Draft] Reply LS on NID structure and length Ericsson LS out Rel-16 Vertical_LAN To:CT4
⇨ Add CT in cc
⇨ revised in R2-1916344

R2-1916344 Reply LS on NID structure and length Ericsson LS out Rel-16 Vertical_LAN To:CT4
⇨ Approved unseen

R2-1914351 Reply LS on NID structure and length (S2-1910784; contact: Ericsson) SA2 LS in Rel-15 Vertical_LAN To:RAN2, RAN3, CT1, CT4 Cc:CT3
⇨ Noted

R2-1914355 Reply LS on clarifications on Private Networks (S2-1910803; contact: Ericsson) SA2 LS in Rel-16 Vertical_LAN, NG_RAN_PRN To:RAN3, SA1 Cc:RAN2
⇨ Noted

R2-1916520 Reply LS on Sending CAG ID in NAS layer (R3-197591; contact: Ericsson) RAN2 LS in Rel-16 NG_RAN_PRN To: SA3, SA2, RAN2 Cc:CT1

Stage 2 CR

R2-1914599 NPN Stage 2 Draft CR Nokia (Rapporteur) draftCR Rel-16 38.300 15.7.0 B NG_RAN_PRN-Core
- Lenovo wonders about the term "SNPN members".
- Oppo suggest to correct the reference to the table
- Ericsson thinks we don't need the term "SNPN member cell" (as it is not defined in SA2)
⇨ Remove the SNPN member cell definition
- QC suggest to change CAG capable to CAG enabled or disabled. Nokia thinks we should stick to capable as this refers to the capability. QC thinks we need to have a definition of CAG capable then.
⇨ Change "CAG enabled" to "CAG capable" where needed.
⇨ Offline discussion 208 (Nokia). Revised CR taking comments above into account and other possible offline comments

R2-1916337 NPN Stage 2 Draft CR Nokia (Rapporteur) draftCR Rel-16 38.300 15.7.0 B NG_RAN_PRN-Core
⇨ Endorsed as running CR

✉ **[108#18][PRN] Stage 2 running CR (Nokia)**
Intended outcome: Endorsed running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916637

Outgoing LSs

R2-1914600 LS on Emergency Services in SNPN Nokia (Rapporteur) LS out Rel-16 NG_RAN_PRN-Core To:SA2
⇨ Noted

6.18.2 Cell selection and reselection

Including output of email discussion [107bis#63][PRN] RRC CR (Nokia)
Including output of email discussion [107bis#64][PRN] Suitable and acceptable NPN cells (Qualcomm)

38.331 CR

Working assumptions from RAN2#107bis:

1. *NPN information is outside PLMN-IdentityInfoList as a new Rel-16 IE for NPN-only cell and PLMN+NPN cell (the total number of network IDs is still 12)*
2. *Access attempts by Rel-15 UEs for emergency services on CAG-only cell could be allowed based on operator's preference*

R2-1915387 Report from Email Discussion [107bis#63] on SIB1 design Nokia (Rapporteur) discussion Rel-16 NG_RAN_PRN-Core
- Ericsson would like to have the Rel-16 IE replacing cellReservedForOtherUse to be on cell level. Samsung agrees. CATT thinks that for flexibility could be PLMN specific. Intel thinks it safer to keep it cell specific. QC shares CATT view. Ericsson thinks there is no clear use cases. ZTE agrees

Agreements:
1. Access attempts by Rel-15 UEs for emergency services on CAG cell could be allowed based on operator's preference
2. cellReservedForOtherUse is used to prevent Rel-15 UEs to access the cell.
3. NPN information is outside PLMN-IdentityInfoList as a new Rel-16 IE for NPN-only cell and PLMN+NPN cell (the total number of network IDs is still 12)

Working assumption:
1. The new Rel-16 IE with a role similar to role of cellReservedForOtherUse for Rel-15 UEs is cell specific.

R2-1915388 Draft RRC CR for NPN Nokia (Rapporteur) draftCR Rel-16 38.331 15.7.0 NG_RAN_PRN-Core Late

⇨ Take new WA on Rel-16 IE with a role similar to role of cellReservedForOtherUse (i.e. cell specific) into account
- Ericsson wonders about the size of CAG ID. Nokia confirms this has been agreed by CT4.
- Samsung thinks we did not discuss cellReservedForOperatorUse. Ericsson thinks it's nice to have to mimic existing behaviour. QC wonders if this is CAG ID specific or PLMN ID specific.

⇨ Endorsed as running CR

✉ **[108#37][PRN] RRC Running CR (Nokia)**
Intended outcome: Endorsable running CR for next meeting reflecting agreements and WAs from this meeting
Deadline: 2020-01-23

38.304 CR

R2-1915788 Report for email discussion [107bis#64][PRN] Suitable and acceptable NPN cells (Qualcomm) Qualcomm Incorporated report

- Oppo wonders if proposal 2 is consistent with 6.
- Regarding proposal 4 CATT thinks we can remove the last part but ZTE and OPPO think this is needed.
- Regarding proposal 6, Ericsson thinks that if SA1 says this is not needed then we don't need to define acceptable cells for SNPN.
- Nokia think we could also ask SA2 to confirm that, for Rel-16, emergency services are not supported in SNPNs. ZTE thinks this is already clear. Nokia would prefer to have a further clarification as it is not fully clear in SA2 specs.

⇨ Send a single LS to SA1 and SA2 (cc: CT1) regarding proposal 6 in the report (question to SA1) and also asking a confirmation that for Rel-16, emergency services are not supported in SNPNs (question to SA2)
⇨ On the support of hybrid cells we wait for feedback from other groups

- CATT wants to ask SA2 about manual selection in connected mode. Intel thinks we only support it in idle and it's not critical to change this. Nokia agrees and thinks there is no need for this enhancement. Ericsson thinks this mechanism is needed for camping and we don't need any changes.
- Vivo wonders whether we will support unlicensed spectrum. Nokia confirms this WI covers unlicensed as well

Agreements:
1. At least one of the following conditions must be satisfied for a cell to be considered as suitable by a Rel-16 UE not in SNPN AM:
   a. Cell is part of either the selected PLMN or the registered PLMN or PLMN of the Equivalent PLMN list of the UE for which the PLMN-ID is broadcast by the cell with no associated CAG-IDs and for which CAG-only indication is absent or false;
   b. Cell is part of either the selected PLMN or the registered PLMN or PLMN of the Equivalent PLMN list of the UE for which Allowed CAG list includes a CAG-ID broadcast by the cell.
2. Each SNPN-only cell is treated by Rel-16 UEs not in SNPN AM as if cell status is barred.

3. A CAG cell which is not considered as suitable can be an acceptable cell for a Rel-16 UE not in SNPN AM.
4. A PLMN-only cell or an SNPN+PLMN cell be an acceptable cell for a Rel-16 UE not in SNPN AM for which CAG-only indication is true for any PLMN-ID broadcast by the cell.
5. The following are necessary conditions for an SNPN cell to be considered as a suitable cell by a Rel-16 UE in SNPN AM:
   a. the cell is part of either the selected SNPN or the registered SNPN of the UE;
   b. the cell is part of at least one TA that is not part of the list of "Forbidden Tracking Areas" which belongs to either the selected SNPN or the registered SNPN of the UE
   c. the cell is not barred,
   d. the cell selection criteria in clause 5.2.3.2 are fulfilled.

⇨ Offline discussion 210 (Qualcomm). Draft LS to SA1/SA2

⇨ Offline discussion 211 (CATT). Discuss manual network selection and proposal 11 and attempt to reach consensus

R2-1916342 Report of offline 211 - Manual network selection and cell barring Issue CATT discussion Rel-16 NG_RAN_PRN-Core

- ZTE suggests to remove the second sentence of P4. Ericsson agrees. ZTE explains this is also related to the LS we send to SA1/SA2

Agreements:
1. Add the following note in TS 38.304 :

NOTE: UE is not required to support manual search and selection of PLMN or CAG or SNPN while in RRC CONNECTED state. The UE may use local release of RRC connection to perform manual search if it is not possible to perform the search while RRC connected.

2. In the UE on request of NAS, the AS shall scan all RF channels in the NR bands according to its capabilities to find available CAGs. On each carrier, the UE shall at least search for the strongest cell, read its system information and report available CAG ID(s) together with their HRNN (if broadcast) and PLMN(s) to the NAS. The search for available CAGs may be stopped on request of the NAS.
   If NAS has selected a CAG and provided this selection to AS, the UE shall search for an acceptable or suitable cell belonging to the selected CAG to camp on.
3. In the UE on request of NAS, the AS shall scan all RF channels in the NR bands according to its capabilities to find available SNPNs. On each carrier, the UE shall at least search for the strongest cell, read its system information and report available SNPN identifiers together with their HRNN (if broadcast) to the NAS. The search for available SNPNs may be stopped on request of the NAS."
4. All the R16 UEs will treat the cell as barred when the legacy IE cellReservedForOtherUse is set to "True" and this cell does not broadcast any CAG-IDs or NIDs.

R2-1916341 [Draft] LS on Emergency Services in SNPN Qualcomm LS out Rel-16 NG_RAN_PRN-Core To:SA1/SA2

⇨ Ok to add CT1 in cc
⇨ Change "kindly" into "respectfully"
⇨ Revised in R2-1916345

R2-1916345 LS on CMAS/ETWS and emergency services for SNPNs Qualcomm LS out Rel-16 NG_RAN_PRN-Core To:SA1/SA2 Cc:CT1

⇨ Approved unseen

R2-1915800 Running 38.304 CR for PRN Qualcomm Incorporated draftCR Rel-16 38.304 15.5.0 NG_RAN_PRN-Core

⇨ Baseline for further email discussion

✉ **[108#71][PRN] Running 38.304 CR (Qualcomm)**

Intended outcome: Endorsed running CR reflecting agreements from this meeting. Consider also proposals R2-1915384
Deadline: 2020-01-30

R2-1915384 Network and cell (re)selection in SNPN access mode Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core R2-1912656
⇨ Noted

Autonomous search function of CAG cells and relationship with dedicated priorities

R2-1914626 Cell Selection and Reselection aspects of NPN Ericsson discussion Rel-16 NG_RAN_PRN-Core
- QC/Nokia think that if we agree P6 we need to clarify the UE behaviour as in LTE, i.e. remain in the CAG frequency layer. Ericsson thinks this could be achieved by the network by setting the corresponding priority. Nokia agrees we should not go against dedicated priorities but we also need to consider that there is a timer associated to that.
- Samsung is generally fine with P6.
- CATT wonders what happens when timer expires. Nokia says that in this case there are no more dedicated priorities and what is broadcast applies

Agreements:
1. Allow autonomous cell search even in situations when frequency priorities are broadcast in system information.
2. UE follows dedicated frequency priorities as in legacy behaviour. If UE run autonomous cell search and at the same time have dedicated frequency priorities, the result from autonomous cell search should not go against that indicated by dedicated frequency priorities (when they are valid).

R2-1915807 Views on cell reselection for CAGs Qualcomm Incorporated discussion
R2-1915739 Further considerations on mobility for CAG Intel Corporation discussion Rel-16 NG_RAN_PRN-Core
R2-1915989 Cell selection and reselection for NPN CMCC discussion Rel-16 NG_RAN_PRN-Core

Support of PCI range/list for SNPN

R2-1915089 Consideration on the PCI Range ZTE Corporation, Sanechips discussion Rel-16 NG_RAN_PRN-Core
R2-1915386 Discussion on PCI list Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core

Details of PCI range/list for CAG

R2-1914439 Open Issues for Cell Selection and Reselection of NPN cell CATT discussion Rel-16 NG_RAN_PRN-Core
R2-1915236 Cell selection/reselection with NPN cells Sony discussion Rel-16 NG_RAN_PRN-Core
R2-1915957 General considerations on idle and inactive mode for NPN Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN

IFRI bit

R2-1916225 Cell Reselection remaining issues Samsung R&D Institute India discussion

Inactive State

R2-1914493 Open Issues on NPN for UE in Inactive CATT discussion Rel-16 NG_RAN_PRN-Core

Other

R2-1914492 Discussion on reselection between NPNs and public networks KDDI Corporation discussion R2-1913005
R2-1916097 Discussion on Network identifier for SNPN vivo discussion

R2-1916170 Access control for PRN LG Electronics France discussion NG_RAN_PRN-Core

6.18.3 Connected mode aspects

Connected mode specific aspects, also including CAG ID transmission related issues (i.e. transmission of CAG ID via NAS or AS, inclusion of CAG ID during Resume, etc).

CAG ID and SNPN ID in msg5

R2-1915743 RRC Connection establishment/resumption in SNPN and CAG Intel Corporation discussion Rel-16 NG_RAN_PRN-Core

- ZTE is not sure about P5. Nokia wonders why. ZTE thinks that in some case the UE has nothing to send.

Agreements:
1. From RAN2 point of view there is no requirement for CAG ID to be included in RRC signalling at RRC connection establishment.
2. For SNPN, include the SNPN ID in the RRCSetupComplete message. Stage 3 detalls are FFS
3. For SNPN, there is no need to include SNPN ID in the RRCResumeComplete message since the UE context is known to the network.
4. Send a LS to SA3 with Agreement#1 with SA2 and RAN3 in To.

R2-1915991 CAG ID transmission during both initial access and resume CMCC discussion Rel-16 NG_RAN_PRN-Core

R2-1915804 Draft Reply LS on Sending CAG ID in NAS layer Qualcomm Incorporated LS out To:SA3, SA2, RAN3 Cc:CT1
⇨ Revised in R2-1916346 according to the agreement#1 above

R2-1916346 Draft Reply LS on Sending CAG ID in NAS layer Qualcomm Incorporated LS out To:SA3, SA2, RAN3 Cc:CT1
⇨ Revised in R2-1916349

R2-1916349 Reply LS on Sending CAG ID in NAS layer Qualcomm Incorporated LS out To:SA3, SA2, RAN3 Cc:CT1
⇨ Approved unseen

R2-1915992 Draft Reply LS on CAG ID Transmission CMCC LS out Rel-16 NG_RAN_PRN-Core To:SA2 Cc:RAN3

Proximity indication for CAG and SNPN/CAG information in CGI Report

R2-1915990 Access and mobility control for NPN CMCC discussion Rel-16 NG_RAN_PRN-Core

R2-1914627 Connected mode aspects of NPN Ericsson discussion Rel-16 NG_RAN_PRN-Core

R2-1915958 General considerations on connected mode for NPN Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN

R2-1914440 Discussion on Connected mode aspects for NPN CATT discussion Rel-16 NG_RAN_PRN-Core

R2-1915090 Overview of the Connected State Issues ZTE Corporation, Sanechips discussion Rel-16 NG_RAN_PRN-Core

R2-1915385 RRC considerations to support SNPNs Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core R2-1912657

R2-1916098 Discussion on the proximity indication in CONNECTED mode vivo discussion

6.18.4 Other

Including HRNN (Human Readable Name) aspects and common idle and connected mode aspects (e.g. access control, etc.)

HRNN & Access Control

R2-1915091 Consideration on the HRNN and Access control ZTE Corporation, Sanechips discussion Rel-16 NG_RAN_PRN-Core

R2-1914732 Access Control for SNPN and CAG Intel Corporation discussion Rel-16 NG_RAN_PRN-Core

R2-1915156 Clarification on HRNN reporting OPPO discussion Rel-16 NG_RAN_PRN-Core

R2-1915805 Support for NPN HRNN broadcast Qualcomm Incorporated discussion R2-1913635

R2-1916048 Discussion on human-readable network name China Telecom, Huawei, HiSilicon discussion

SI validity checking

R2-1915959 Considerations on SI Validity Checking Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN

SIB1 design

R2-1914628 SIB1 design for NPN Ericsson discussion Rel-16 NG_RAN_PRN-Core

Scenarios

R2-1916063 Discussion on the deployment for CAG China Telecom, Huawei, HiSilicon discussion

Withdrawn

R2-1916003 Discussion on human-readable network name China Telecommunications discussion

6.19 Other NR Rel-16 WIs/SIs

This agenda item is to be used for LSs and documents relating to Rel-16 NR but for which there is no existing RAN WI/SI (e.g. LSs from CT/SA requesting RAN2 action) or for which there is no allocated RAN2 time (e.g. some RAN4 led WIs with no RAN2 time but might require introduction of UE capability signalling).
Time budget: 0.5 TU

LS in cc R2

R2-1914348 Reply LS on LS on maximum value of MDBV (S2-1910663; contact: Qualcomm) SA2 LS in Rel-15 5GS_Ph1 To:RAN3, CT4, CT3 Cc:RAN1, RAN2, SA1

⇒ **Noted**

R2-1914324 LS Reply on maximum value of MDBV (C3-194330; contact: Nokia) CT3 LS in Rel-16 5GS_Ph1 To:SA2 Cc:RAN1, RAN2, RAN3, CT4, SA1

⇒ **noted**

R2-1914328 LS to SA3 on False Base Station Detection (R3-196256; contact: Huawei) RAN3 LS in Rel-16 FS_5GFBS To:SA3 Cc:RAN2

⇒ **noted**

R2-1914358 Reply on QoE Measurement Collection (S4-191234; contact: Ericsson) SA4 LS in Rel-16 QOED To:SA5 Cc:CT1, RAN2, RAN3

⇒ **noted**

R2-1914359 LS on energy efficiency (S5-196771; contact: Orange) SA5 LS in Rel-16 EE_5G To:RAN3 Cc:RAN2, SA

⇒ **noted**

R2-1916290 LS on enhanced access control for IMS signalling (C1-199007; contact: NTT DOCOMO) CT1 LS in Rel-16 5GProtoc16, SAES16 To:SA1 Cc:RAN2

- Docomo had assumed on R2 spec impact

⇒ **noted**

R2-1916541 LS on UE capabilities and RRC signalling on Tx switching period delay (R4-1916083; contact: Apple) RAN4 LS in Rel-16 NR_RF_FR1 To:RAN2 Cc:RAN1

Discussions

Related to R2-1911499 LS on Recommended Bit Rate/Query for FLUS and MTSI (S4-191031; contact: Qualcomm)

R2-1915712 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated discussion Rel-16 E_FLUS R2-1913598

DISCUSSION

P1

- Huawei think this is for XR and wonder if this is Rel-16. QC indicate that the LS is for Rel-16. Huawei can agree P1.
- Ericsson agrees with the intention and are ok with P1.
- LG wonder if this is URLLC. QC clarifies it is not.

⇒ **RAN2 agrees to extend the bitrate range of Recommended bitrate MAC CE for both NR and LTE in Rel-16**

⇒ **Discuss solutions based on contributions next meeting.**

R2-1915713 [Draft] Reply LS on Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated LS out Rel-16 E_FLUS To:SA4

- Samsung wonder if we shall ask about value range (incl intermediate values).
- Ericsson would be ok with the LS as is but think also asking this question is ok.
- LG think we can consider to introduce a new table also so we should ask about value range and granularity.

⇒ **Approved in R2-1916516**

Related to R2-1916290 LS on enhanced access control for IMS signalling (C1-199007; contact: NTT DOCOMO)

R2-1916260 Access control differentiation for IMS registration related signaling Intel Corporation discussion Late

- Ericsson think this is a late document and would like to think more.

⇒ **Postpone**

Withdrawn

R2-1915631 Rel-16 RRC planning Ericsson discussion Rel-16 Withdrawn

6.20 NR TEI16 enhancements

Note R16 in-principle-agreed CRs shall be submitted for final agreement to R2#109. Small Technical Enhancements to NR. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see RP-191602 endorsed at RAN#84. No documents should be submitted to 6.20. Please submit to 6.20.x.

Time budget: 1 TU

Tdoc Limitation: No Limitation for Operators, 6 tdocs for others. NOTE for TEI, the tdoc limitation applies to new proposals, not to open proposals since previous meeting(s)

6.20.1 RAN2 led TEI16 enhancements - Control plane related

Including outcome of the email discussion [107bis#46][NR TEI16] Voice fallback (QC)
Including outcome of the email discussion [107bis#47][NR TEI16] Signalling design Overheating reporting in (NG)EN-DC (Huawei)

Open proposals

Need-for-gaps signalling

R2-1914914 Report of [107#81][NR TEI16] Need-for-Gaps signalling MediaTek Inc. discussion Rel-16 TEI16 R2-1913847
Proposal 1: RAN2 targets to define the NeedForGap signaling for the following scenarios
NR Inter-RAT measurement in LTE SA
NR Inter-Frequency measurement in NR SA
LTE Inter-RAT measurement in NR SA
FFS: NR Inter-RAT or Inter-Frequency measurement in (NG)EN-DC

⇒ **noted**

R2-1914915 Further discussion on NeedForGap MediaTek Inc. Huawei, HiSilicon discussion Rel-16 TEI16
DISCUSSION
P1
- QC think this should also be possible when UE is in LTE SA ..
- QC think that instead of removing the restriction, there should be a new band-list for NR.
- Intel think we avoided this due to size, and we should not go the QC way.

P2
- Nokia wonder if this is assumed to be reported per band-combination. MTK think this is dynamic based on current configuration.
- Nokia think e.g. mimo usage can not be taken into account.
- MTK think that with the Nokia approach the needforgap may be changed due to DCI. Nokia think this is unavoidable.

⇒ **noted**

R2-1916193 Discussion on NeedForGap signalling in NR SA before NE-DC or NR-DC configuration Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16

⇒ **noted**

R2-1914580 Measurement gap capability information for Rel-16 UE Intel Corporation discussion Rel-16 TEI16

DISCUSSION
P1
- ZTE support this and prefer RRC.
- Nokia think we should report needforgap in MAC CE.
- Intel think RRC is the default approach.
- Ericsson don't like this.
- Docomo think P1 is the same as was done for LTE, but think it was not used.
- DT think this is very important.

P2
- MTK think that needforgap is the most essential part and we should ony focus on that.

⇒ **For Release-16, if both the network and UE support such capability reporting, the measurement gap requirement information for NR target is reported back by the UE in the UE response to a NW configuration RRC message where this is reported based on the resultant configuration.**

⇒ **Assumption: UE report *NeedForGap* capability for supported NR bands**

✉ **[108#58][TEI16] NeedForGap Signaling (MTK)**
Scope: arrive at agreeable CRs
Intended outcome: Agreeable CRs, If remaining open issues also a report
Deadline: 2020-01-30

R2-1916191 CR on NeedForGap capability for each supported NR band before EN-DC configuration
Nokia, Nokia Shanghai Bell CR Rel-16 36.331 15.7.0 4179 - C TEI16

Second SMTC in Idle / Inactive

R2-1914338 Reply LS on second SMTC periodicity in idle mode (R4-1912744; contact: Orange) RAN4 LS in Rel-16 TEI16 To:RAN2 Cc:RAN1

⇒ **Noted**

R2-1914916 Dual SMTC in IDLE mode MediaTek Inc. discussion Rel-16 TEI16

⇒ **Noted**

R2-1915065 Multiple SMTC for Idle Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16

⇒ **Noted**

R2-1915288 A second SSB periodicity in Idle and Inactive mode Ericsson discussion Rel-16 NR_newRAT-Core

⇒ **Noted**

R2-1914774 UE impact of second SMTC periodicity Qualcomm Incorporated discussion
Proposal: The legacy behavior of single SMTC periodicity is kept in Rel-16.

⇒ **Noted**

DISCUSSION
- QC using longer SMTC for the new IE there is a system impact, because if legacy UEs cannot properly find and measure
- AT&T think this is configurable and think that for new bands there will not be any issues. Vodafone agrees.
- BT wonders if this would impact SFTD. QC think there is no problem as SFTD is only for connected mode.
- QC, MTK, Nokia are concerned about legacy UEs. A legacy UE may underestimate signal strength because the UE will attempt to measure non-existing transmission. Orange think that such cells have no traffic, and typical use case is for small cells.
- MTK think that R4 clearly indicate some concern on legacy UE performance, and MTK cannot agree now, and would like to postpone.
- QC wonder about low traffic etc, As UEs camp in Idle, how can it be ensured that RACH for such UEs don't interfere with Small Cell UEs.

⇒ **R2 assumes that with the Orange solution, a legacy UE may underestimate signal strength with SMTC2/longer periodicity because the UE will attempt to measure non-existing transmission.**

R2-1914660 Introduction of a second SMTC per frequency carrier in idle/inactive Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo Inc., Samsung, Ericsson CR Rel-16 38.331 15.7.0 1218 2 B TEI16 R2-1913258
- Nokia suggest to add the R2 assumption above to the CR cover-sheet.

⇒ **Add to the cover-sheet: A legacy UE in Idle/RRC_Inactive mode may underestimate signal strength with SMTC2/longer periodicity because the UE will attempt to measure non-existing transmission.**

⇒ **Agreed in principle, see the cover sheet change next meeting**

R2-1914661 Introduction of a second SMTC for inter-RAT cell reselection Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo Inc., Samsung, Ericsson CR Rel-16 36.331 15.7.0 4114 1 B TEI16 R2-1913269

⇒ **Add to the cover-sheet: A legacy UE in Idle/RRC_Inactive mode may underestimate signal strength with SMTC2/longer periodicity because the UE will attempt to measure non-existing transmission.**

⇒ **Agreed in principle, see the cover sheet change next meeting**

R2-1915051 CR on multiple SMTC for idle Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1282 1 F TEI16 R2-1912996

Voice fallback

R2-1915032 Summary of email discussion [107bis#46][NR TEI16] Voice fallback Qualcomm Incorporated report Rel-16 TEI16

DISCUSSION

P3

- Lenovo think that the use of the cause value is controlled by the network, by a flag in SIB2, so there are cases when this cannot be used.
- QC indicate that this is taken care of in the CR.

P2

- LG think this is normally for UE implementation
- Apple wonder if the time the UE shall attempt to select need to specified. QC think this has always been left for UE implementation.

⇒ **noted**

R2-1915033 Introduction of voice fallback indication Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson CR Rel-16 38.331 15.7.0 1312 1 C TEI16 R2-1913389

- Lenovo think this should also be added to mobility from NR command, and a Need code is mossing.
- Huawei wonder about UE cap. QC think this was discussed and it is not needed.

⇒ **Include also mobility from NR command, fix ASN.1 issue, and editorials (tab)**

⇒ **Agreed-in-principle, with comments, to be included in final version.**

R2-1915034 Introduction of voice fallback indication Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson CR Rel-16 36.331 15.7.0 4136 1 C TEI16 R2-1913390

⇒ **Agreed-in-principle**

R2-1915035 Draft LS on RRC establishment cause value in EPS fallback Qualcomm Incorporated LS out Rel-16 TEI16 To:CT1

- Nokia think NAS is aware so the text seems wrong. QC think that in this solution NAS is not aware and CT1 need to remove the restriction.

⇒ **Approved in R2-1916530**

Overheating

R2-1915259 Summary of email discussion [107bis#47][NR TEI16] Overheating discussion Huawei, Huawei Device Rel-16 TEI16 Late

DISCUSSION

P1

- ZTE prefer Option2, or would like both options. Intel would like to avoid two messages. QC think option 2 is future proof. Oppo prefer option 2.
- LG support P1

1b
- Intel wonder why UE cap would be needed. Samsung think this is optional. Nokia think there is no change to UE reporting. Samsung point out there are new fields.

⇒ **We use option 1**

Offline 54, progress all other things except P3 (Huawei), report in R2-1916596

R2-1916596 Offline 54 Huawei

⇒ **postpone**

R2-1915260 36.331 CR for addressing overheating issue in (NG)EN-DC Huawei, Huawei Device CR Rel-16 36.331 15.7.0 4176 - F TEI16 Late

R2-1915261 38.331 CR for addressing overheating issue in (NG)EN-DC Huawei, Huawei Device CR Rel-16 38.331 15.7.0 1413 - F TEI16 Late

MPC/MCS prioritisation

R2-1915006 PRACH prioritization parameters for MPS and MCS Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson CR Rel-16 38.331 15.7.0 1361 - B NR_newRAT-Core, TEI16
- CMCC think we can consider more cases in the future

⇒ **Agreed In principle**

R2-1915007 PRACH prioritization procedure for MPS and MCS Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson CR Rel-16 38.321 15.7.0 0675 - B NR_newRAT-Core, TEI16

⇒ **Agreed In principle**

EN-DC cell reselection (not agreed R2#107)

R2-1915219 Further consideration on EN-DC cell reselection CMCC, Huawei, vivo, ZTE, OPPO, xiaomi discussion Rel-16 R2-1913233

DISCUSSION
- Ericsson are ok with this, and think we should make the behaviour configurable rather then hardcoded, and base on Alt2
- LG think dedicated priority fixes this, and think the UE can anyway get a new configuration regularly. Ericsson think not.
- Nokia think dedicated priorities work but may require frequent reconfig / TAU. Nokia think it is more important to reduce system information.
- Vivo think broadcast would be sufficient.

⇒ **We attempt to converge, based on Alt2, see CRs next meeting.**

IDC is postponed to February:

R2-1914688 Introduction of NR IDC solution vivo CR Rel-16 38.331 15.7.0 1356 - F TEI16 R2-1912329

New Proposals

HO SA-ENDC

R2-1914511 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecommunications, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO, Mediatek, VIVO discussion Rel-16
- LG think we need to consider R2 and CT1 impact and think we need to consider NGEN-DC
- CATT support. QC support as well, Apple support as well.

P3
- Apple assume a UE cap is needed
- Samsung think we should discuss ipact to other groups.

⇒ **The NR SA to EN-DC handover shall be supported in Rel-16.**

⇒ **Assume a new UE capability is needed.**

R2-1914512 Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16 China Telecommunications, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO, Mediatek, VIVO draftCR Rel-16 37.340 15.7.0 B TEI16

Offline 55, review stage-2 CR, identify impact to other groups, DRAFT LS out if needed (China Telecom)
=> Revised in R2-1916548

R2-1916586 Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16 China Telecommunications, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO, Mediatek, VIVO draftCR Rel-16 37.340 15.7.0 B TEI16

⇒ **Agreed in principle**

R2-1916543 [DRAFT] LS on inter-RAT HO from SA to EN-DC China Telecom LS out Rel-16 TEI16
To:SA2
- Nokia wonder what we do if there is impact
- QC think the impact is small

⇒ **Approved in R2-1916600**

R2-1915010 Fast SN Activation in Handover to EN-DC Qualcomm Incorporated discussion
Not Treated

Release SUL

R2-1914671 Support of releasing UL configuration Huawei, HiSilicon, CMCC, China Telecom, MediaTek Inc., Vodafone, Orange, vivo, OPPO, Spreadtrum Communications, China Unicom CR Rel-16 38.331 15.7.0 1168 2 F TEI16 R2-1913272

⇒ **Agreed in principle**

DL segmentation

R2-1915762 Segmentation in DL Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, Verizon, KT, Sprint, Charter Communications, CMCC, TurkCell, OPPO, Kyocera discussion Rel-16 TEI16

DISCUSSION
- MTK think the UE processing delay will be increased. Ericsson think that can be discussed
- Nokia wonder about the max size. Ericsson are proposing 5 segments max to not impact the buffer in the UE.
- Docomo think indeed this size is problematic.
- LG wonder if segmentation of HO message will be allowed. Ericsson think it can be supported.
- ZTE think this is not needed.
- Huawei think it shall be optional for both UE and network
- MTK think RRC resume is not needed. Ericsson think this is needed. MTK think this is MSG4 in the RACH procedure, and the UE is still not in connected mode at this stage. Samsung also thin there is no real use case for RRC resume.
- Samsung proposes to do the CR work with RACS.

⇒ **Introduce mechanisms for RRC segmentation in DL, similar to that introduced in UL with the RACS feature (hard segmentation and a new DL DCCH message type, segment numbering FFS)**

⇒ **Add segmentation of RRCReconfiguration and RRCResume (FFS) as an optional feature in Rel-16.**

⇒ **Introduce the same segmentation possibilities in DL for both E-UTRAN & NR**

✉ **[108#59][TEI16] DL segmentation CRs (Ericsson)**
Intended outcome: Agreeable CRs
Deadline: 2020-01-30

ANR gaps

R2-1914949 Autonomous Gap capability for CGI reporting vivo, Ericsson, Huawei, HiSilicon discussion

DISCUSSION
- MTK think that R4 already discusses this and they will send an LS. QC has the same understanding. MTK think that R4 assumes this is done and is working on requirements.

⇒ **R2 assumes that autonomous gap is to be supported for CGI reading for: UE served by NR/LTE cell towards NR cell, UE served by NR cell towards LTE cell, expect to see CRs next meeting.**

R2-1914909 Consideration on DRX coordination in ANR ZTE Corporation, Sanechips, NEC discussion Rel-16 TEI16 R2-1912769

R2-1914672 DRX configuration coordination in (NG)EN-DC Huawei, HiSilicon discussion Rel-16 TEI16 R2-1913735

DISCUSSION
- NEC think autonomous gaps impact R4. Vivo think it has been pre-agreed for Rel-16.
- LG support aut gaps, and think this is simpler than DRX gaps.
- Nokia think it is not critical to do any of this. If anything need to be done Nokia support vivo.
- Huawei think that the motivation for the coordination is different
- MTK support in general both ways.
- Ericsson also support both.
- CMCC support the vivo proposal
- Samsung think ZTE motivation is not valid any more.
- Huawei think DRX coord is needed to avoid reconfiguration failure in some cases.
- LG are not sure this is needed.

Offline 56, allow time to check

⇒ **There is support to have this DRX coord**

✉ **[108#60][TEi16] DRX coord (Huawei)**
Intended outcome: Agreeable CR to 38331
Deadline: 2020-01-30

R2-1914910 Corrections on DRX coordination in ANR ZTE Corporation, Sanechips, NEC CR Rel-16 38.331 15.7.0 1275 1 F TEI16 R2-1912770

R2-1914950 [Draft] Reply LS on autonomous gap capability vivo LS out To:RAN4

Combined RRC proc, RRC reestablishment

R2-1914788 Updates to reestablishment procedure ZTE Corporation, Sanechips, Intel Corporation, CATT CR Rel-16 38.331 15.7.0 1143 3 C TEI16 R2-1912723

R2-1914651 On combined RRC procedures Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-16 TEI16 R2-1913110

R2-1914652 RRC processing delays for combined procedures Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 15.7.0 1288 1 F TEI16 R2-1913111

Max Data Rate for UP integrity protection

R2-1915201 Discussion on the flexible configuration of Maximum Data Rate Enumeration for UP Integrity ProtectionCMCC, Huawei, Hisilicon discussion Rel-16 R2-1913172

R2-1915444 Maximum Data Rate Enumeration for UP Integrity Protection Apple, ZTE Corporation, Sanechips discussion Rel-16 TEI16

R2-1915445 Draft LS on Maximum Data Rate Enumeration for UP Integrity Protection Apple LS out Rel-16 TEI16 To:CT1 Cc:SA3

Mobility state cell reselection

R2-1915202 Mobility-state-based cell reselection in NR for HSDN CMCC, MediaTek Inc discussion Rel-16 R2-1912944

Additional UE capability fintering

R2-1915249 Discussion on the additional UE capability filtering to limit the total number of carriers in NR Samsung discussion Rel-16 TEI16 R2-1912516

R2-1915250 Additional UE capability filtering to limit the total number of carriers in NR Samsung CR Rel-16 38.331 15.7.0 1363 - B TEI16

R2-1915251 Additional UE capability filtering to limit the total number of carriers in NR Samsung CR Rel-16 38.306 15.7.0 0197 - B TEI16

IFREQ and IRAT Bcast per PLMN

R2-1915220 Discussion on support of NR RAN sharing CMCC discussion Rel-16 R2-1913286

Other

R2-1915504 Missing reportAddNeighMeas in periodic measurement reporting Nokia, Nokia Shanghai Bell draftCR Rel-16 38.331 15.7.0 F TEI16 R2-1913159

R2-1916145 Allow fallback band combinations for reporting SRS-TxSwitch capability Qualcomm Incorporated CR Rel-16 38.306 15.7.0 0217 - C TEI16

R2-1915429 Triggering conditions for A1-A6 events in NR Ericsson discussion Rel-16 TEI16

R2-1915681 Returning multiple BC+FS in CG-Config Ericsson discussion

R2-1915200 Further consideration on PRACH prioritization CMCC discussion Rel-16 R2-1912942

R2-1915262 On the enhancement of SRS carrier switching capability Huawei, HiSilicon discussion Rel-16 TEI16

R2-1914892 CN Type Indication for Cell Reselection from NR to LTE MediaTek Inc. discussion R2-1913003

R2-1916078 Discussion on UE behaviours for access barring alleviation Google Inc. discussion TEI16

R2-1914556 Security algorithom update in RRC reestablishment message OPPO,Huawei discussion Rel-16 NR_newRAT-Core

R2-1914560 Discussion on Cached Data Handling for INACTIVE UE OPPO discussion Rel-16

R2-1914532 Signalling enhancement for Inactive state CATT discussion Rel-16 TEI16

R2-1915595 Enhancement of RRC_INACTIVE Google Inc. discussion

R2-1914533 Bearer type negotiation CATT discussion Rel-16 TEI16

R2-1914673 On the support of NG-based (i.e. via CN) handover based using CGI report Huawei, HiSilicon discussion Rel-16 TEI16

Positioning, Treated in parallel session

R2-1914471 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 36.355 15.5.0 0248 - B TEI16

ESA have a concern about the translation of the ICD to ASN.1; they see duplication in the ephemeris, clock models, etc.

Offline discussion to address any ASN.1 concerns. Offline discussion #505, CATT; update in R2-1916405.

⇨ Revised in R2-1916405

R2-1916405 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 36.355 15.5.0 0248 1 B TEI16

=> Not provided (email discussion needed)

✉ **[108#90][NR/TEI16] Introduction of B1C BDS signal (CATT)**
Intended outcome: Agreeable 36.355 CR for next meeting
Deadline: Thursday 2020-02-13

Beyond Tdoc Limitation

R2-1915430 CR to 38.331 on Triggering conditions for A1 to A6 events in NR Ericsson CR Rel-16 38.331 15.7.0 1372 - B TEI16

R2-1915431 CR to 38.306 on Triggering conditions for A1 to A6 events in NR Ericsson CR Rel-16 38.306 15.7.0 0198 - B TEI16

R2-1915680 Introducing multiple BC-FS Ericsson CR Rel-16 38.331 15.7.0 1401 - B TEI16

R2-1915760 Introduction of RRC Segmentation - Downlink Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 36.331 15.7.0 4165 - B TEI16

R2-1915761 Introduction of RRC Segmentation - Downlink Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 36.306 15.6.0 1722 - B TEI16

R2-1915763 Introduction of RRC Segmentation - Downlink Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 38.331 15.7.0 1408 - B TEI16

R2-1915764 Introduction of RRC Segmentation - Downlink Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 38.306 15.7.0 0207 - B TEI16

Not available

R2-1914476 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecommunications discussion Rel-16 Late
=> Withdrawn

R2-1914477 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecommunications discussion Rel-16 Late
=> Withdrawn

R2-1914478 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecommunications discussion Rel-16 Late
=> Withdrawn

R2-1914479 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecommunications discussion Rel-16 Late
=> Withdrawn

R2-1914480 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecommunications discussion Rel-16 Late
=> Withdrawn

R2-1914481 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecommunications discussion Rel-16 Late
=> Withdrawn

6.20.2 RAN2 led TEI16 enhancements - User plane related

Including outcome of the email discussion [107bis#48][NR TEI16] PRACH re-transmission for SRS carrier switching (Huawei)
Including outcome of the email discussion [107bis#49][NR TEI16] cDRX enhancement for CA (Ericsson)

Open Proposals

RACH retx SRS carrier switching

R2-1916011 Summary of [107bis#48][TEI16UP] Correction on PRACH re-transmission for SRS carrier switching Huawei, HiSilicon discussion Rel-16 TEI16

⇒ **Noted**

R2-1916012 Correction on autonomous RACH retransmission for SRS switching Huawei, HiSilicon draftCR Rel-16 38.321 15.7.0 F TEI16

- Ericsson think we sholdn't use the term "PUSCH-less uplink carrier", otherwise agreeable.
- LG wonder if the first change is needed as the handling of new RACH while RACH is ongoing is up to UE implementation.
- Vivo wonders if the note applies for CBRA as well, Samsung think that for the intended case the preamble will always be provided, CBRA is not applied.

⇒ **Agreed in principle, except for the terminology "PUSCH-less uplink carrier"**

cDRX enh for CA

R2-1915292 Email report [107bis#49][NR TEI16] cDRX enhancement for CA Ericsson report Rel-16 TEI16 Late

DISCUSSION

P1

- LG think that is the DRX groups are different we can have all timers different as other timers should be able to be configured. LG suggest to agree NEC proposal below.
- QC think the groups are not altogether independent as on-duration would start at the same time.
- Huawei think there may be impact to other WG, as there are other group functionality that is dependent on active time e.g. RLM. Ericsson think that the solution need to be kept simple ..
- ZTE think there is R3 impact.
- LG think there is no benefit to align on-duration timer. LG think that can be achieved also if we have completely separate configurations, and this would be the simplest.
- Samsung think the scheduling unit is different in FR1 and FR2 and think the simple proposal could work ok.
- Huawei still think we need to involve other groups. QC think that all other group functions depend only on DRX cycle and this would not be modified by this proposal. Huawei think there is more impact, e.g. R4 defines the interruption time for sleep-awake transition.
- Ericsson think we can ask questions to other groups, after having agreed on a simple solution.
- CATT think it is difficult to assess the impact without agreed solution
- Convida think that the second DRX is for a separate receiver and there shouldn't be any R4 impacts.

P2

- CATT think there may be reasons to link the active time in the different groups.
- Apple think the cross carrier case is not interesting, as DRX is about PDCCH monitoring. NEC agrees.
- Ericsson think this combination do not need to be supported at the same time. Samsung support

P3

- QC think we can stick to legacy behaviour and assume that CSI reporting for FRx depends on active time or onduration for FRx.
- Chair wonder if this is then the proposal: CSI reporting for FRx follows current MAC and depends on active time or onduration for FRx
- Samsung think that current behaviour is that CSI reporting is not done when not in active time
- LG think this proposal is different than current.
- Oppo wonders if this changes the definition of active time.
- Vivo think anyway that R1 need to be involved, as active time may be changed.
- QC think that is CSI reporting DRX group is not active when CSI reporting is triggered the CSI report can be delayed. CATT think this doesn't work, and we should then couple active times.
- LG wonders if this is really for TEI16.
- Verizon think this is very important.
- Convida think the QC way forward is workable.
- Huawei think that if we have restriction that FR2 timers are shorter and FR1 timers then the impact is minimized. Ericsson think this would be ok.

- LG think we can have different inactivity timers but we can still synchronize active time. Based on discussion Chair think that for P3, there seems to be two possibilities:
  X CSI reporting for FRx follows current MAC and depends on active time or onduration for FRx.
  X CSI reporting follows current MAC and assumes that active time = time when either grop1 or group 2 or both is in active time. Same for onduration.
- intel point out that we should indicate the limitation that DRX groups are for FR1 and FR2 respectively ..

Conditional on R1 acceptance:

⇒ **A separate *drx-InactivityTimer* and *drx-onDurationTimer* can be configured for the secondary DRX group. R2 understands that this has zero or almost zero impact in R1 and R4**

⇒ **The combination of cross-carrier scheduling and secondary DRX group is not supported**

⇒ **FFS if timers for FR2 DRX configuration are shorter than timers for FR1 DRX configuration.**

⇒ **The intention is to apply secondary DRX configuration to FR2 and existing DRX configuration to FR1**

⇒ **We send an LS to R1, ask whether there is impact, and if so whether the impact is acceptable.**

Offline 32, Draft LS to R1 (cc R4) in R2-1916509 (Ericsson, QC)

R2-1916509 [DRAFT] LS on secondary DRX group Ericsson LS out Rel-16 TEI16 To:RAN1 Cc:RAN4

⇒ **Approved in R2-1916597**

R2-1915289 cDRX enhancement for CA Ericsson, Qualcomm Inc., Samsung, Verizon, Deutsche Telekom discussion Rel-16 TEI16 R2-1913196

R2-1916152 Further Considerations on multiple C-DRX Samsung discussion

R2-1916187 General aspects on cDRX enhancement NEC discussion Rel-16 TEI16

R2-1915290 Introduction of secondary DRX group Ericsson draftCR Rel-16 38.321 15.7.0 C TEI16 Late

R2-1915291 Introduction of secondary DRX group Ericsson draftCR Rel-16 38.331 15.7.0 C TEI16 Late

LCID ext etc

R2-1915808 Extended MAC CE ID Qualcomm Incorporated discussion R2-1913647

R2-1915914 Extension of the LCID LG Electronics Inc. discussion TEI16 R2-1913846

New Proposals

R2-1914884 PDCP security issue about duplicate detection Samsung, LG Electronics Inc., Nokia, Nokia Shanghai Bell, LG Uplus discussion Rel-16 38.323 TEI16

R2-1914887 CR on PDCP security issue Samsung, LG Electronics Inc., Nokia, Nokia Shanghai Bell, LG Uplus CR Rel-16 38.323 15.6.0 0032 2 F TEI16 R2-1912523

R2-1914603 MDBV Enforcement Nokia, InterDigital, Nokia Shanghai Bell discussion Rel-16 TEI16 R2-1912847

R2-1914994 Adaptation of QoS Flow to DRB Mapping for MDBV Enforcement Futurewei discussion Rel-16 TEI16

R2-1916131 Retransmission of an RLC SDU with a poll after discard procedure LG Electronics Inc., Ericsson, NTT Docomo, LG Uplus discussion Rel-16 TEI16

R2-1914420 MAC upgrade for SR dropping in PHY CATT, Qualcomm Inc. discussion Rel-16 R2-1912221

R2-1916182 Enhancements to PHR in multi-beam operation Qualcomm Inc discussion Rel-16 R2-1911308

R2-1916077 Discussion on the ambiguity in calculation of RA-RNTI ZTE Corporation, Sanechips discussion Rel-16 TEI16 R2-1913051

R2-1915242 RNTI ambiguity for CFRA and CBRA of 4-Step RACH Sony discussion Rel-16 TEI16

R2-1915333 CFRA resource handling for BFR upon TAT expiry Nokia, Nokia Shanghai Bell, Apple discussion Rel-16 TEI16

R2-1916252 Power and signalling savings at TAT expiry and reaching sr-TransMax Ericsson, Nokia, Nokia Shanghai Bell discussion Rel-16

R2-1916147 Discussion of the PUCCH & SRS Resource Release Qualcomm Incorporated discussion Rel-16 TEI16

R2-1915485 Enhancement on BSR format for the one LCG case Huawei, HiSilicon CR Rel-16 38.321 15.7.0 0679 - F TEI16

R2-1915421 Enhancement on Msg1 based SI request ZTE Corporation, Sanechips CR Rel-16 38.321 15.7.0 0678 - F TEI16

R2-1915003 SR_COUNTER initialization due to RRC reconfiguration Fujitsu, LG Electronics Inc. discussion Rel-16 TEI16 R2-1913170

R2-1914713 New MAC CE for indicating spatial resource for PUCCH resources Ericsson CR Rel-16 38.321 15.7.0 0674 - B TEI16

R2-1915542 CA duplication using NR PDCP in EN-DC Ericsson discussion Rel-16 TEI16

R2-1915863 Handling of DRB integrity verification failure LG Electronics Inc. discussion Rel-16 TEI16

R2-1916113 Handling of bwp-InactivityTimer upon BWP switching LG Electronics Deutschland discussion Rel-16 TEI16 Late

R2-1914602 QoS Flow Handling Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16 R2-1912846

R2-1915643 New BSR trigger for EN-DC Ericsson discussion Rel-16 TEI16 R2-1913889

R2-1916181 Backoff indication in multi-beam operation Qualcomm Inc discussion Rel-16 R2-1911307

R2-1916010 Stopping ra-ResponseWindow for contention-free BFR Huawei, HiSilicon discussion Rel-16 TEI16

R2-1914902 Reduced PDCCH monitoring in CA LG Electronics Inc. discussion Rel-16 TEI16

R2-1916180 Cross cell group wakeup message in MR-DC Qualcomm Inc, Futurewei discussion Rel-16

R2-1915066 Unnecessary deciphering for duplicated PDUs Samsung discussion TEI16 R2-1912525

R2-1914386 Cell restriction for CA duplication OPPO discussion Rel-16 TEI16

R2-1914903 ON Duration adaptation LG Electronics Inc., LG Uplus, Vivo discussion Rel-16 TEI16

R2-1915937 Preamble Selection for RACH Procedure Apple discussion Rel-16 NR_newRAT-Core

Beyond tdoc limitation

R2-1916007 Open issue of uplink MDBV enforcement Huawei, HiSilicon discussion Rel-16 TEI16

R2-1915067 CR on unnecessary deciphering for duplicated PDU Samsung CR Rel-16 38.323 15.6.0 0034 2 F TEI16 R2-1912526

6.20.3 TEI16 enhancements led by other WGs

Documents submitted to this agenda item will only be treated after a decision on the TEI has been made by another group and an LS informing RAN2 of their decision has been received. Tdoc limitation does not apply.
Including outcome of the email discussion [107bis#50][NR TEI16] Adding CSI-RS information into inter-node msg (Huawei)

CSI-RS in Inter-Node msg

R2-1914332 Reply LS on CSI-RS configuration transfer (R3-196288; contact: China Telecom) RAN3 LS in Rel-16 TEI16 To:RAN2 Cc:RAN1

⇒ **Noted**

R2-1914668 Report of [107bis#50][NR TEI16] Adding CSI-RS information into inter-node msg Huawei, HiSilicon discussion Rel-16 TEI16

⇒ **CSI-RS measurements towards NR cells configured by E-UTRA are not supported for R16. And an LS will be sent to inform RAN3 of this agreement.**

⇒ **CSI-RS configuration is added to the *MeasurementTimingConfiguration*, which includes at least: CSI-RS subcarrier spacing *CSI-RS-CellMobility,* An indication of SSB used as timing reference**

R2-1914669 CR to 38.331 on CSI-RS inter-node message Huawei, HiSilicon CR Rel-16 38.331 15.7.0 1354 - C TEI16

⇒ **Agreed in principle**

R2-1914670 Reply LS on CSI-RS configuration transfer Huawei, HiSilicon LS out Rel-16 TEI16 To:RAN3

⇒ **Approved in R2-1916528**

beamSwitchTiming values of 224 and 336

R2-1914687 Correction on beamSwitchTiming values of 224 and 336 vivo, Huawei, Hisilicon CR Rel-16 38.306 15.7.0 0214 - F TEI16

⇒ **Agreed in principle**

n90

R2-1914629 On skipping supportedBandCombinations for band n90 Ericsson discussion Rel-16 TEI16 Late

⇒ **noted**

R2-1914996 Proposal for clarification and optimization of n90 UE capability KDDI Corporation discussion

⇒ **noted**

R2-1915029 Skipping supportedBandCombinationList of n90 KDDI Corporation CR Rel-16 38.306 15.7.0 0189 2 C NR_n41_LTE_41_coex R2-1914205

⇒ **Not Pursued**

R2-1915012 [Draft] LS on clarification and optimization of n90 UE Capability KDDI Corporation LS out To:RAN4

⇒ **Noted**

DISCUSSION

- Intel think Ericsson understanding is preferable, and it is not required that UE s support of one band doesn't need to mean the UE shall support the mirror band. MTK also think the signalling gain is very small and prefer the Ericsson solution.
- Intel think this is an optimization and it not needed.
- Samsung think there is no implication to testing, and think n41 and n90 are the same and R4 only defined different bands to overcome ASN.1 limitation. Samsung support the intention. QC support the intention but would ike to modify slightly.
- KDDI think the a UE support n90 shall also support requirements for n41. Ericsson think there is no requirement to support same BC or Feature sets.
- TMO think this is a bad way to go. This is a signalling optimization that might limit flexibility.
- Samsung wonder if a possible way forward could be that 1 bit indicates that the mirror band is supported. Intel think this would be ok.

⇒ **Not pursued**

Wrong Submission

R2-1914956 Consideration on the Consumers of AMF service on Event Exposure BUPT discussion

R2-1914957 Enhancement to the Namf_Communication_ AMFStatusChangeNotify service operation BUPT discussion

R2-1914970 Issue on the Namf_Communication_ AMFStatusChangeSubscribe service operation BUPT discussion

R2-1914971 Issue on the Namf_Communication_AMFStatusChangeUnSubscribe operation BUPT discussion

6.21 On demand SI in connected

On demand SI reception in RRC_CONNECTED may be relevant to several Rel-16 WIs (e.g. V2X, positioning, IIoT, etc). This agenda item is for the discussion of the generic procedure for on demand SI in RRC_CONNECTED; WI specific details of the SI content should be discussed within the appropriate AI for that WI.

Tdoc Limitation: 1 tdoc

Including outcome of the email discussion [107bis#07][NR R16] Running CR On-demand SI in RRC_CONNECTED (Ericsson)

R2-1915374 [107bis#07][NR R16] Running CR on 38.300 for on-demand SI procedure in RRC_CONNECTED Ericsson draftCR Rel-16 38.300 15.7.0 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core, LTE_NR_DC_CA_enh-Core Late

- CATT wonder why DCCA WI is indicated in the cover sheet. Samsung agrees.
- ZTE think the gNB can also broadcast the SIB an suggest to change to “may”

⇒ **Endorsed**

⇒ **Remove LTE_NR_DC_CA_enh-Core in next version**

R2-1915375 [107bis#07][NR R16] Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED Ericsson draftCR Rel-16 38.331 15.7.0 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core, LTE_NR_DC_CA_enh-Core Late

- Ericsson indicate that there are detailed comments.
- Chair ask for high level comments
- Lenovo think there may be case when gNB cannot respond, e.g. a R15 gNB. Ericsson has proposed configuration, but it was not agreed. NEC think this will not be a problem as R15 gNB will not trigger functionality that need this. MTK think that if only R16 SIBs can be delivered like this, then there is no problem. We should structure so that only certain SIBs can be requested.
- Apple has concerns that UE may get stuck waiting, but think it doesn’t need to be restricted to Rel-16. Ericsson also think this is applicable to Rel-15 SIBs.
- Ericsson point out that in current CR the UE waits for reply. Ericsson think network would always reply.
- Samsung think that there are not so many options, and the UE may need to try Bcast,
- Samsung think that there are two issues that need discussion, how to handle the possibility that Ue send this to R15 gNB, and whether gNB always need to reply. Intel think there are no protocol reasons for ack. MTK think we should also discuss if to have a new field or not.
- Nokia wonder if this is introduced for Rel-15. Chair think no.

Rel-15 SIBs or not

- ZTE think Rel-15 SIBs do not contain any info that is needed for on demand in Connected. Ericsson think we can keep it generic, and think we can add Rel-16 information in Rel-15 SIBs. Samsung and MTK think we don’t need to be able to request Rel15 SIBs. Apple would prefer the generic way.
- Nokia think that SIB9 is one example of a Rel-15 SIB that should be provided on demand. IIOT rapporteur confirms that this is the intention for IIOT reference time provisioning.
- Oppo also think that for early measurements for DCCA there are additional configurations added to Rel-15 SIBs that would be candidates.

⇒ **Remove LTE_NR_DC_CA_enh-Core in next version**

⇒ **It shall be possible to request Rel-16 SIBs by this method, FFS if any Rel-15 SIB shall be possible to request.**

Offline 47, discuss a) procedure aspects above b) whether to use a new field in the RRC reconfig, report in R2-1916522 (Ericsson)

R2-1916522 Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED Ericsson draftCR Rel-16 38.331 15.7.0 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core, LTE_NR_DC_CA_enh-Core

R2-1916591 Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED Ericsson draftCR Rel-16 38.331 15.7.0 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core, LTE_NR_DC_CA_enh-Core

⇒ **endorsed**

✉ **[108#61][R16] on-demand SI procedure in RRC_CONNECTED (Ericsson)**
Intended outcome: address remaining issues, agreeable draft CR
Deadline: 2020-01-30

R2-1915088 Remaining issues on SI request procedure in RRC_CONNECTED ZTE Corporation, Sanechips discussion Rel-16

P4

- CATT think we first need to discuss if rel-15 SIBs are possible to request.

⇒ **noted**

R2-1915597 Further discussion on-demand SI for RRC_CONNECTED UE Huawei, HiSilicon discussion Rel-16 Late

DISCUSSION

- Ericsson think P1 and P2 are already agreed. Ericsson think we agreed that rel-15 mechanism for SI change.
- ZTE point out that is there is no CSS then the network will provide SIB1 to the UE by dedicated signalling.

P4-6

- Nokia don't see a strong need. At least for non-positioning. Samsung think these are not needed. Intel agrees, unless a specific feature would need it.
- Vivo think there are some benefits with these proposals.
- Chair: no agreement now, can await positioning discussion.

⇒ **noted**

⇒ **P1-P3 not needed**

R2-1915373 Sending on-demand SIB(s) request over SRB3 Ericsson discussion Rel-16 NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core, LTE_NR_DC_CA_enh-Core

DISCUSSION

- Intel see no need. LG see no benefit
- Chair: no support

⇒ **Noted**

positioning

R2-1915936 Positioning SIB Acquisition in Connected Mode Apple discussion Rel-16 TEI16

6.22 Physical layer enhancements for NR ultra-reliable and low latency case (URLLC)

(NR_L1enh_URLLC-Core; leading WG: RAN1; REL-16; target; Mar 20; WID: RP-191584). Treated together with IIOT, AI 6.7. UL intra-UE prioritization and enhanced UL CG transmission should be discussed and addressed under RAN2 IIOT WI (do not submit under this AI), while the other objectives should be discussed under RAN2 eURLLC WI. This AI.

Time budget: 0.5 TU, will be treated together with IIOT.
Tdoc Limitation: 2 tdocs (for AI 6.22, or for 6.7 in addition to the tdoc limitation listed for 6.7)

6.22.1 Control Plane

R2-1916020 Running 38.331 CR for NR_L1enh_URLLC Huawei, HiSilicon draftCR Rel-16
38.331 15.7.0 B NR_L1enh_URLLC-Core
=> Revised in R2-1916266

R2-1916266 Running 38.331 CR for NR_L1enh_URLLC Huawei, HiSilicon draftCR Rel-16
38.331 15.7.0 B NR_L1enh_URLLC-Core
- Huawei has coordinated with IIOT RRC CR editor and think it is ok to have this CR.

⇒ **We will have such CR**

✉ **[108#112][URLLC] RRC running CR (Huawei)**
Intended outcome: Agreeable Running CR
Deadline: 2020-01-23

6.22.2 User Plane

R2-1916021 Overview of MAC impacts of URLLC enhancement Huawei, HiSilicon discussion
Rel-16 NR_L1enh_URLLC-Core

DISCSUSSION
- Ericsson generally agrees on the proposals but think we can resolve by discussing MAC running CR.
- On P1 LG has a different understanding. Chair

2a/b
- QC think that number of Rep is signalled by DCI, the wording provided to upper layer should be sufficient.
- Samsung think 2a/b is about DCI contents and thus in R1 scope, but agrees with them.

3/4
- LG think this is not needed.
- Samsung think P4 is acc to Rel-15 and agrees with it.

⇒ **noted**

⇒ **The MAC entity shall monitor CI-RNTI when in DRX Active Time.**

R2-1916022 Running 38.321 CR for NR_L1enh_URLLC Huawei, HiSilicon draftCR Rel-16
38.321 15.7.0 B NR_L1enh_URLLC-Core
- Huawei think we can have an email discussion.

✉ **[108#111][URLLC] MAC Running CR (Huawei)**
Intended outcome: Agreeable Running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916354

R2-1916023 Running 38.300 CR for NR_L1enh_URLLC Huawei, HiSilicon draftCR Rel-16 38.300 15.7.0 B NR_L1enh_URLLC-Core
- Nokia think a CR could be ok, but we need to change the contents.

⇒ **Expect updates next meeting**

R2-1916183 New values for RLC and PDCP timers Qualcomm Inc, LG Electronics discussion Rel-16
DISCSUSSION
- Samsung can agree P4 but not P2 and P3, as these are for RLC-AM. LG think we haven't excluded RLC-AM.
- Huawei think T-reassembly is for segments, is it really applicable to have such small values? Intel agrees that segmentation is unlikely for URLLC cases. LG think that if in-order delivery is used this timer impacts the whole latency. Samsung assumes that RLC and PDCP are not dependent so if inorder delivery is applied PDCP will anyway wait regardless T-reassembly timer
- QC think one transmission can be very very short.
- Samsung think T-reassembly additional values do not give any performance benefit
- P4: Huawei can agree min 1 ms. QC think 0.5 ms is based on SA1 requirement. Huawei think 1 ms is ok.
- QC and Nokia want to keep 0.5ms discard timer.
- Huawei think discard timer is mainly for buffer mgmt.
- Fujitsu think that some applications make use of delayed packets, and would be ok with min 1ms.
- LG think discard timer is linked with PDB.
- Apple think we need UE capabitlies for the lowest values.

⇒ **In Rel-16 NR, allow values {FFS0.5, 1, 2, 4, 6, 8} ms for the discard timer.**

⇒ **additional values for the T-StatusProhibit timer: 1, 2, 3 and 4ms.**

⇒ **additional values for the T-PollRetransmit timer: 1, 2, 3 and 4ms**

7 Rel-16 LTE Work Items

Documents in these agenda items will be handled in break out sessions

7.1 Additional MTC enhancements for LTE

(LTE_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-191356)
Time budget: 2.5 TU
Documents in this agenda item will be handled in a break out session
Some sub-items in 7.1 and 7.2 may be treated jointly.

7.1.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

Incoming LSs

R2-1914302 LS on channel quality report for LTE-MTC (R1-1911386; contact: Samsung) RAN1 LS in Rel-16 LTE_eMTC5-Core To:RAN2, RAN4

⇒ **Noted.**

R2-1914347 Reply LS on LTE-M identification in 5GC (S2-1910644; contact: Orange) SA2 LS in Rel-16 5G_CIoT To:RAN2, RAN3 Cc:RAN

⇒ **Noted.**

R2-1914356 Reply LS on Mobile-terminated Early Data Transmission (S2-1910804; contact: OPPO) SA2
LS in Rel-16 5G_CIoT To:RAN2, RAN3, RAN Cc:SA

⇒ **Noted.**

R2-1916268 Forwarding of Reply LS on GUTI allocation for 5G CIoT (C1-198560; contact: Qualcomm) CT1
LS in Rel-16 5G_CIoT To:SA2 Cc:RAN2, RAN3, CT4, SA3

- Ericsson wonders why allocation of a new 5G-GUTI is required for MT EDT for UP CIoT 5GS optimization. Huawei thinks this is security procedure related, so it is intended. Intel has the same understanding with Ericsson. Nokia thinks this is needed for both optimizations.
- QC thinks this should be discussed in SA3. Ericsson suggests sending an LS to SA3 to confirm if this was intended for UP optimization. QC thinks there is no need to send an LS, but companies can bring it up in the corresponding WGs.
- QC assumes that it may also be possible that the new GUTI can be sent in a NAS container in Msg4. Huawei and Ericsson disagree that the UE is required to be in connected mode.
- Sequans prefers to have a working assumption, but no strong view regarding sending an LS.
- Intel thinks it is acceptable to have a working assumption and prefers to send an LS.
- LG does not think working assumption is needed at this point.

⇒ **Noted.**

R2-1916289 LS on GUTI allocation for MT-EDT in 5G CIoT (C1-199005; contact: Huawei) CT1 LS in Rel-16 5G_CIoT To:SA2, RAN2, RAN3; Cc: SA3, CT4

- Huawei thinks this means that the UE needs to be in connected mode. Ericsson agrees.
- ZTE wonders if there were any concerns regarding MO-EDT.

⇒ **Noted.**

R2-1916292 LS on Extended NAS timers for Coverage Enhancement in 5GS (C1-199034; contact: Ericsson) CT1 LS in Rel-16 5G_CIoT To:RAN2; Cc: RAN3, SA2

- QC wonders about the RRC_INACTIVE case.

⇒ **Noted.**

⇒ **Send a LS reply which can be formulated in an email discussion after the meeting.**

✉ **[108#09][eMTC] Reply LS on extended NAS timers for CE in 5GC (Ericsson)**
To draft a reply LS regarding the extended NAS timers for coverage enhancement in 5GS
Intended outcome: approved LS in R2-1916360
Deadline: 2019-11-28
=> Approved in R2-1916623

R2-1916517 Reply LS on direct indication of ETWS/CMAS (R1-1913367; contact: Futurewei) RAN1
LS in Rel-16 LTE_eMTC5-Core To:RAN2

⇒ **Noted.**

Running CRs

R2-1914860 Introduction of Rel-16 eMTC enhancements Intel Corporation CR Rel-16
36.300 15.7.0 1251 2 B LTE_eMTC5-Core R2-1912864

✉ **[108#20][eMTC] Update 36.300 running CR (Intel)**
Update 36.300 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916361
Deadline: 2019-12-13
=> Endorsed in R2-1916361

✉ **[108#21][eMTC/NB-IoT] LS to RAN3 and cc RAN1 about Stage 2 CRs (Huawei)**
Inform RAN3 and RAN1 about Stage 2 CRs for both eMTC and NB-IoT.
Intended outcome: approved LS in R2-1916563
Deadline: 2019-12-13
=> Approved in R2-1916563

R2-1915393 Running CR on 36.321 for eMTC Ericsson draftCR Rel-16 36.321 15.7.0 B LTE_eMTC5-Core

✉ **[108#25][eMTC] Update 36.321 running CR (Ericsson)**
Update 36.321 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916362
Deadline: 2019-12-13
=> Endorsed in R2-1916362

R2-1915609 Introduction of additional enhancements for eMTC Qualcomm Incorporated CR Rel-16 38.300 15.7.0 0175 2 LTE_eMTC5-Core R2-1914037

✉ **[108#26][eMTC] Update 38.300 running CR (Qualcomm)**
Update 38.300 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916363
Deadline: 2019-12-13
=> Endorsed in R2-1916363

R2-1915717 Introduction of Rel-16 eMTC enhancements Qualcomm Incorporated draftCR Rel-16 36.331 15.7.0 B LTE_eMTC5-Core R2-1914038

✉ **[108#29][eMTC] Update 36.331 running CR (Qualcomm)**
Update 36.331 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916364
Deadline: 2019-12-13
=> Endorsed in R2-1916364

✉ **[108#23][eMTC] Update 36.304 running CR (Nokia)**
Update 36.304 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916365
Deadline: 2019-12-13
=> Endorsed in R2-1916365

✉ **[108#22][eMTC] Update 36.302 running CR (ZTE)**
Update 36.302 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916366
Deadline: 2019-12-13
=> Endorsed in R2-1916366

✉ **[108#24][eMTC] Update 36.306 running CR (Huawei)**
Update 36.306 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916562
Deadline: **2019-12-13**
=> Endorsed in R2-1916562

7.1.2 Mobile-terminated (MT) early data transmission (EDT)

MT Early Data transmission for MTC and NB-IoT is treated jointly under this AI.

R2-1915309 Discussion on remaining aspects of MT-EDT Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: MT-EDT is not supported for Control plane CIoT 5GS optimisation and User plane CIoT 5GS optimisation.

⇒ **This was discussed above within the context of the related LS.**

Proposal 2: If the UE supports MT-EDT for the CP solution, it shall also support MO-EDT for the CP solution.

Proposal 3: If the UE supports MT-EDT for the UP solution, it shall also support MO-EDT for the UP solution.

- For the proposals above;
- QC supports the proposals and wonders how these would be captured in the specifications.

Proposal 4: UE support of MT-EDT is optional at the UE, with capability reporting at NAS level only.

- Intel wonders if MME needs to know whether the UE supports MO-EDT.
- Ericsson states that this would work, but it would be better if we have AS capability.
- Thales thinks it would be good to phrase the proposal w r t UP and CP solutions.
- QC wonders if eNB would also need to know the category, e.g. M1 or M2.
- QC suggests to have separate NAS level capabilities for UP and CP.

Proposal 5: Ask SA2/RAN3 to provide also an indication on CP/UP solution in the S1 paging message for MT-EDT.

⇒ **FFS if UE category information, i.e., Cat-M2, Cat-NB2, is provided in the UE Radio Paging information container.**

R2-1915720 MT-EDT related Editor's Notes and FFSes in RRC running CR Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1915718 Discussion on reply LS from SA2 on MT-EDT Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core, 5G_CIoT

R2-1915719 [DRAFT] Reply LS on Mobile-terminated Early Data Transmission Qualcomm Incorporated LS out Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core, 5G_CIoT To:SA2 Cc:RAN3, CT1, RAN, SA

R2-1915947 Discussion on MT EDT support for 5G CIoT LG Electronics UK discussion Rel-16

R2-1915394 Remaining issues in Msg4-based MT EDT Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core Late

Agreements

- If the UE supports MT-EDT (optional) for the CP solution, it shall also support MO-EDT for the CP solution.
- If the UE supports MT-EDT (optional) for the UP solution, it shall also support MO-EDT for the UP solution.
- Support of MT-EDT is optional at the UE without AS capability.

- It should be possible for the UE to indicate separate capability for CP MT-EDT and UP MT-EDT at NAS level.
- Send a reply LS to SA2 and CT1 to inform about the agreement above.

[CB Offline #301] The draft LS can be provided in R2-1916357 with the intention to reply also to the LS in R2-1914356 (Qualcomm)

R2-1916357 [DRAFT] Reply LS on Mobile-terminated Early Data Transmission LS out Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core, 5G_CIoT To:SA2, CT1 Cc:RAN3, RAN, SA

✓ The LS is approved in R2-1916368.

7.1.3 UE-group wake-up signal (WUS)

UE-group wake-up signal (WUS) for MTC is treated jointly with NB-IoT under AI 7.2.3. Do not use this AI for any item that can be discussed jointly.

7.1.4 Transmission in preconfigured resources

Transmission in preconfigured resources for MTC is treated jointly with NB-IoT under AI 7.2.4. Do not use this AI for any item that can be discussed jointly.

7.1.5 Scheduling multiple DL/UL transport blocks

Scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast
Scheduling multiple DL/UL transport blocks for MTC and NB-IoT is treated jointly under this AI.

R2-1915314 Multiple TBs scheduling in NB-IoT Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: The working assumptions on the timer length of HARQ RTT timer and UL HARQ RTT timer for non-interleaved transmission are confirmed.

Proposal 2: For NB-IoT, for interleaved transmission:

a) Timer length of HARQ RTT timer is set to k+N+1+delta.

b) Timer length of UL HARQ RTT timer is set to 1+delta.

- Ericsson wonders whether it is assumed that HARQ ACK is bundled. Huawei explains that this is for both cases. QC notes that for the unbundled case, the timers can not be the same considering that ACKs can not be provided at the same time.

[CB Offline #303] To check whether the timer length would be same for both UL and DL for bundled and unbundled cases (Huawei). The outcome can be provided in R2-1916359.

R2-1916359 Summary of [CB Offline #303] on HARQ RTT timer length Huawei

Proposal 1: For NB-IoT, for interleaved transmission, timer length of UL HARQ RTT timer is set to 1+delta.

Proposal 2: For NB-IoT, for interleaved transmission:

- With bundled HARQ, timer length of HARQ RTT timer is set to k+2*N+1+delta.
- Without bundled HARQ, timer length of HARQ RTT timer is set to k+N+3+delta

Proposal 3: For eMTC:

- With bundled HARQ, timer length of HARQ RTT timer is set to 7+ N.
- Without bundled HARQ, timer length of HARQ RTT timer is set to 7+I*N

⇒ **For NB-IoT, for interleaved transmission, timer length of UL HARQ RTT timer is set to 1+delta**

⇒ **For NB-IoT, for interleaved transmission:**
- **Without bundled HARQ, timer length of HARQ RTT timer is set to k+2*N+1+delta.**
- **With bundled HARQ, timer length of HARQ RTT timer is set to k+N+3+delta**

⇒ **FFS: For eMTC:**
- **With bundled HARQ, timer length of HARQ RTT timer is set to 7+ N.**

Proposal 3: Reuse deltaPDCCH concept in legacy timer length for HARQ RTT timers.

Proposal 4: Adopt above TP for timer length of HARQ RTT timer and UL HARQ RTT timer in multiple TBs scheduling for NB-IoT.

Proposal 5: Introduce a new list sc-mtch-InfoListMultiTB-v16xy in SCPTMConfiguration-NB message to signal scheduling information for the SC-MTCH using multiple TBs transmission.

R2-1915395 Scheduling enhancements for LTE-MTC and NB-IoT Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

Proposal 1 To support scheduling of up to 8 TBs with a single DCI, HARQ RTT timer is 7 + l*N for LTE-M.

- Huawei wonders whether HARQ bundling has been considered. Ericsson thinks this should be OK for the unbundled case, but it would be good to check the bundled case.

⇒ **This can be checked as part of [CB Offline #303]**

- QC wonders why up to 8 TBs considering that eMTC UE can support up to 10 HARQ processes. Huawei and Ericsson explain that this was a RAN1 agreement.

Proposal 2 For multi-TB scheduling in LTE-M, the drx-InactivityTimer value is dynamically adjusted based on the number of TBs being scheduled by the DCI.

- Huawei wonders whether this is needed if the timer is started in the last TB. Ericsson thinks this would be an alternative.
- Intel thinks this is not needed assuming that existing mechanism works. Ericsson wonders thow the timer length would be configured in that case since the network would need to accommodate both cases. Intel thinks this is not the case, but a change may be needed only for the UL case.
- QC wonders why there is a need to link the timer length to the number of HARQ processes.

Proposal 3 RAN2 waits until RAN1 progresses further with scheduling gaps configuration for multi-TB multicast.

R2-1916043 Buffer status indicated by BSR in multi-TB scheduling ASUSTeK discussion Rel-16 LTE_eMTC5-Core R2-1913774

Proposal: in case of UL multi-TB scheduling to schedule multiple MAC PDUs, how the UE determines the buffer status indicated by BSR(s) should be specified.

- Huawei thinks there seems to be no difference to how this is typically handled. Intel and QC agree.

⇒ **Noted.**

Agreements

- For NB-IoT; the length of HARQ RTT timer is set to k+2*N+1+delta.
- For NB-IoT; the length of UL HARQ RTT timer is set to 1+delta.

- Use deltaPDCCH concept (same as in legacy timer length) for both HARQ RTT timers.
- For NB-IoT; introduce a new IE, i.e., *sc-mtch-InfoListMultiTB-v16xy* in *SCPTMConfiguration-NB* message to signal scheduling information for SC-MTCH using multiple TBs transmission.
- For eMTC; the length of HARQ RTT timer is set to 7+I*N for unbundled HARQ ACK.
- For NB-IoT, for interleaved transmission, timer length of UL HARQ RTT timer is set to 1+delta
- For NB-IoT, for interleaved transmission:
  - Without bundled HARQ, timer length of HARQ RTT timer is set to k+2*N+1+delta.
  - With bundled HARQ, timer length of HARQ RTT timer is set to k+N+3+delta

7.1.6 Quality report in Msg3

R2-1915531 Remaining issues of DL quality report Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core

Proposal 1: DL quality in Msg3 in connected mode is not supported.

Proposal2: Send LS to inform RAN1 that RAN2 agreed to use R+F2+E for 2-bit DL quality report with up to 4 reported values and the 4 values don't need to include "no measurement".

- Intel supports the proposal.
- Ericsson wonders if 2 bit report is needed and suggest to remove it. Nokia agrees. QC disagrees considering that network may allocate a larger grant for 8 bit report which would have an impact to UE power consumption. Huawei thinks this has been already discussed and agreed so there is no need to revisit the agreement.
- QC thinks only two bits are needed, which would mean that the codepoint for "no measurement" needs to be included. Intel disagrees.
- Ericsson, ZTE, and Nokia think 2 bit report is not benefical and can be removed. Intel agrees if only R+F2 are used. Huawei and QC disagree and state that this has already been agreed in RAN1 and RAN2.
- QC and ZTE have a different understanding of the following agreement "For non-EDT, R+F2+E MAC subheader is used for 2-bit DL quality report." The assumption is that this was not to finalize but to capture the potential solutions.

Proposal3: When DL quality report is enabled then the 8 bit report is always enabled.

[CB Offline #304] To agree on the way forward (Qualcomm)

- QC reports that there was no progress from this comeback. QC would like to check whether the report needs to be in the last MAC header.

✉ **[108#72][eMTC] To finalize the 2 bit Quality report (Qualcomm)**
Whether 2 bit Quality Report is supported, and if yes how.
Intended outcome: Email discussion report to be provided in R2-1916370
Deadline: 2020-01-30

R2-1915532 DRAFT LS on channel quality report for LTE-MTC Huawei, HiSilicon LS out Rel-16 LTE_eMTC4-Core To:RAN1, RAN4

R2-1915611 Proposal for 2-bit downlink channel quality reporting in MSG3 for eMTC Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core
=> Revised in R2-1916267

R2-1916267 Proposal for 2-bit downlink channel quality reporting in MSG3 for eMTC Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core

R2-1915648 Quality Report in eMTC Remaining Issues Ericsson discussion

Agreements

- DL quality in Msg3 in connected mode is not supported.

7.1.7 MPDCCH performance improvement using CRS

R2-1915396 MPDCCH performance improvement for LTE-M Ericsson discussion LTE_eMTC5-Core

Proposal 1 If a dedicated configuration is not provided, the UE reuses the broadcasted configuration.

Proposal 2 When transmitted in SIB2, CRS-ChEstMPDCCH-Config shall contain the power-ratio and the CRS configuration to be applied to IDLE.

Proposal 3 When transmitted in RadioResourceConfigDedicated, CRS-ChEstMPDCCH-Config shall contain the CRS configuration to be applied only for CONNECTED mode.

R2-1915533 MPDCCH performance improvement using CRS Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core

Proposal1: The UE in connected mode only follows the dedicated configuration. If there is no dedicated configuration, the UE will not use the broadcast one.

Proposal2: When UE is suspended, the dedicated configuration is not released and the UE shall use broadcast configuration. When the RRC connection is resumed, the stored dedicated configuration is resumed.

Discussion below for the Tdocs above

- QC prefers that the UE uses broadcasted configuration if dedicated configuration is not provided.
- Intel wonders whether the dedicated configuration would be different than the broadcasted one. Huawei thinks not.
- QC thinks it would be good to be able to release the dedicated configuration. Ericsson agrees.
- Intel wonders if this is mandatory for the UE. Ericsson thinks not, it is up to the UE.

Agreements

- If a dedicated configuration is not provided, the UE uses the broadcasted configuration.
- When UE is suspended, dedicated configuration is released.

7.1.8 Improvements for non-BL UEs

CE mode A and B improvements for non-BL UEs among "enhancements to idle mode mobility", "UE demodulation performance requirements for 2 RX antennas and full duplex FDD", "Dual layer DL reception", "Feedback based on CSI-RS", "ETWS/CMAS in connected mode"

Idle mode mobility

R2-1915883 Improvements for non-BL UEs camping in CE Mode Apple (UK) Limited discussion Rel-16 LTE_eMTC5-Core

Proposal 1: The current (pre-REL16) CE mode behavior should be carried over for REL16, wherein a REL16 non-BL UE should be allowed to camp in a cell in BR mode, even if it satisfies the S criteria for normal coverage.

R2-1915536 Enhancements to idle mode mobility for non-BL UEs Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core
Proposal1: Non-BL UEs with S criterion in normal coverage fulfilled are allowed to (may) camp in coverage enhancement mode.
Proposal2: Non-BL UEs can report their preference of camping on CE mode even when S criterion in normal coverage is fulfilled.
Proposal3: There should be no requirement for UE to operate in either NC mode or CE mode in IDLE mode after cell selection, but if the UE reports a preference for camping in CE mode then it must behave according to the indicated preference (i.e. be required to camp in CE mode).
Proposal4: RAN2 confirms that UE can acquire both versions of SIB, after cell selection, in order to achieve the switching between NC mode and CE mode without re-acquiring the SIB in IDLE mode.
Proposal5: When the non-BL UE camps in CE mode, UE updates both EC and NC versions of the SIB when SI change notification is received.

R2-1915400 S-Criterion interpretation for non-BL UEs Ericsson discussion LTE_eMTC5-Core
Proposal 1 Non-BL UE shall camp in enhanced coverage only if S-criterion for normal coverage is not fulfilled, i.e., S-criterion for enhanced coverage is fulfilled.

Discussion below for the Tdocs above

- Intel supports Apple's proposal and proposals 1, 2 and 3 from Huawei, but disagrees with the rest of the proposals from Huawei and Ericsson's proposal.
- QC thinks this would create additional load on the channels. Ericsson agrees. Thales also agrees and states that if "normal" category UEs camp using these limited channel, it would have an impact on the performance. Sierra Wireless and LG also agree.
- Nokia can accept to specify such behaviour but would like to have a network control. Apple thinks this would mean that the feature will be disabled.
- ZTE thinks it may only be acceptable to them if there is netwrok control. QC thinks, even with network control this would introduce complexity in the specifications. Huawei does not agree and thinks that it would not be complicated.

R2-1915679 Network control for non-BL UE in BR mode ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core R2-1912908

R2-1914861 Non-BL UE in normal and enhanced coverage Intel Corporation discussion Rel-16 LTE_eMTC5-Core R2-1912867

ETWS/CMAS in connected mode

R2-1915613 RNTI for ETWS/CMAS indication in connected mode for non-BL UEs Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core
Proposal 1: Use same RNTI to minimize time to deliver ETWS/CMAS indication to all UEs on a specific search space.

- Ericsson agrees that future compatibility is important, but with the LS received from RAN1, it seems future compatibility will be maintained if SI-RNTI is used.
- Intel thinks that the question is whether SI-RNTI is used or a new RNTI is defined. Ericsson agrees.
- Intel wonders if SI update notification is introduced which RNTI would be used.
- Huawei prefers to use SI-RNTI. Ericsson and Nokia agree.
- LG prefers to define a new RNTI.

- QC wonders if 8 bits are available in the DCI format agreed in RAN1 for both CE Mode A and CE Mode B. Ericsson confirms that this is the case for both CE Mode A and B.

Proposal 2: Define ETWS/CMAS specific RNTI (e.g. pws-RNTI) for ETWS/CMAS indication in RRC connected state.

Proposal 3: ETWS/CMAS specific RNTI (e.g. pws-RNTI) assigned to UE via dedicated signaling.

Proposal 4: The changes proposed for ETWS/CMAS RNTI indication be captured in the eMTC RRC running CR.

Proposal 5: The reception types for ETWS/CMAS RNTI be captured in TS 36.302.

R2-1915534 ETWS/CMAS in connected mode Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core

R2-1915535 DRAFT LS to RAN1 on the use of SI-RNTI for the ETWS/CMAS notification Huawei, HiSilicon LS out Rel-16 LTE_eMTC4-Core To:RAN1

R2-1915398 UE capabilities for enhancements for non-BL UEs Ericsson discussion LTE_eMTC5-Core

⇒ **Noted**

R2-1915769 Reception type for ETWS/CMAS for non-BL UE in CE in RRC_CONNECTED Ericsson draftCR Rel-16 36.302 15.2.0 B LTE_eMTC5-Core

R2-1916249 TP for TS36.302 on ETSW/CMAS in connected mode for non-BL UE in CE Huawei Tech.(UK) Co., Ltd draftCR Rel-16 36.302 15.2.0 B LTE_eMTC5-Core

R2-1915397 Remaining issues for ETWS/CMAS notification delivery in connected mode for non-BL UEs Ericsson discussion LTE_eMTC5-Core

R2-1915399 Reception type for ETWS/CMAS for non-BL UE in CE in RRC_CONNECTED Ericsson discussion Rel-16 36.302 LTE_eMTC5-Core Withdrawn

Agreements

- Use SI-RNTI for ETWS/CMAS notification.
- UE is enabled to monitor for ETWS/CMAS notification via dedicated signalling.
- The reception types for SI-RNTI for ETWS/CMAS notification is captured in TS 36.302.
- For feedback based on CSI-RS, capability bit is introduced only for CE Mode A.

7.1.9 Stand-alone deployment

Enable the use of LTE control channel region for DL transmission (MPDCCH/PDSCH) to BL/CE UEs

R2-1914859 Non-BL UE operation in standalone deployment Intel Corporation discussion Rel-16 LTE_eMTC5-Core R2-1912863

R2-1915401 Cell Reselection improvement for LTE-M Standalone cells Ericsson discussion LTE_eMTC5-Core R2-1913117

7.1.10 Mobility Enhancements

Improving the DL RSRP and, RSRQ measurement accuracy, through use of RSS, relaxation of RRM measurements for serving cell for UEs using WUS for at least low mobility UEs

R2-1915537 Use of RSS for measurement improvements Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core

Proposal 1: Signalling should allow per cell configuration for parameters duration, periodicity and powerBoost. If a cell specific value is not present for a cell supporting RSS then the UE should apply the carrier specific value, if provided. If neither the cell specific nor the carrier specific value is present for a cell supporting RSS then the UE should apply the serving cell values.

- QC wonders about the difference between the cell and the serving cell in the context above. Huawei explains that cell specific refers to the neighbouring cell related information provided in the serving cell whereas serving cell is the cell UE is camped in.
- Ericsson thinks RAN1 is still working on this issue and thus suggests to have an email discussion to take the RAN1 agreements into consideration. Huawei thinks an email discussion is not needed.

Proposal 2: Consider whether to introduce a new SIB for signalling RSS measurement parameters.

✉ **[108#73][eMTC] TPs for RSS (Ericsson)**
To draft TPs for running CRs based on RAN1 agreements
Intended outcome: Report with TPs for running CRs in R2-1916367
Deadline: 2020-01-30

R2-1915649	RSS Signalling Configuration	Ericsson	discussion
R2-1915646	Use case and Signaling for RSS	Ericsson	discussion

7.1.11 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of MTC with NR

R2-1915402	Coexistence with NR for LTE-M	Ericsson	discussion	LTE_eMTC5-Core

7.1.12 Connection to 5GC (eDRX, EDT, UP optimisation, RRC_INACTIVE and other MTC specific topics)

Support of eDRX in CM-IDLE, UP optimisation, and EDT for MTC and NB-IoT are treated jointly under this AI.
Including outcome of the email discussion [107bis#65][eMTC R16] UE identifier pros and cons (LG)

RRC_INACTIVE

R2-1914803 PTW support for RRC_INACTIVE state with short eDRX Qualcomm Incorporated discussion
Rel-16 LTE_eMTC5-Core R2-1912850

Proposal 1. Introduce pagingTimeWindow IE in RRC Connection Release message to specify short eDRX operation in CM-CONNECTED, RRC_INACTIVE state.

Proposal 2. During PTW of RRC_INACTIVE with short eDRX cycle, UE can wake up multiple times as function of short ran-PagingCycle values.

Proposal 3. PTW values of 1.28, 2.56, 3.84 Sec to be supported for RRC_INACTIVE with short eDRX cycles

- Intel thinks there is no need to introduce PTW considering the possible values, which are quite short w r t the eDRX cycles supported for RRC_INACTIVE. Ericsson agrees.
- Huawei thinks this is not needed. ZTE and Sony agree.
- Apple thinks this can be handled with proper network configuration.

⇒ **PTW is not introduced for RRC_INACTIVE state with short eDRX.**

R2-1915315 Discussion on paging of RRC_INACTIVE for eMTC connected to 5GC Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: If configured with eDRX cycle in CM-IDLE, eMTC UEs in RRC_INACTIVE monitor CN paging during the CM-IDLE PTW according to the cell paging cycle or UE specific DRX if configured.

⇒ **FFS: If configured with eDRX cycle in CM-IDLE, eMTC UEs in RRC_INACTIVE monitor paging occasions (POs) during CM-IDLE PTW according to the cell paging cycle or UE specific DRX if configured.**

Proposal 2: eMTC UEs in RRC_INACTIVE monitor RAN paging according to the RAN paging cycle.

⇒ **FFS: if "short eDRX for RRC-INACTIVE" is configured, eMTC UEs in RRC_INACTIVE monitor paging occasions (POs) according to the RAN paging cycle, i.e. 5.12sec, 10.24sec, for RRC_INACTIVE.**

⇒ **FFS: if "short eDRX for RRC-INACTIVE", i.e. 5.12sec, 10.24sec, is not configured, eMTC UEs in RRC_INACTIVE monitor paging occasions (POs) according to the min {UE specific DRX cycle, default DRX cycle, RAN paging cycle}.**

Proposal 3: No PTW is defined for RAN paging.

⇒ **This proposal has already been discussed.**

Proposal 4: Rel-15 WUS and Rel-16 Group WUS are not supported for eMTC UEs in RRC_INACTIVE.

⇒ **Rel-15 WUS and Rel-16 Group WUS are not supported for eMTC UEs in RRC_INACTIVE.**

R2-1914856 Remaning issues on the support of 5GCN connectivity Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1915403 eDRX in RRC_INACTIVE for LTE-M Ericsson discussion LTE_eMTC5-Core

R2-1914857 Use of extended DRX in RRC inactive state Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1914722 Remaining issues of supporting short eDRX for eMTC connection to 5GC ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core

Proposal 1: 5G-S-TMSI is used for PO, PF and PNB calculation for both RAN initiated paging and CN initiated paging when eMTC UE connected to 5GC.

⇒ **This proposal was discussed earlier.**

Proposal 1a: 5G-S-TMSI mod 524288 is used as the UE_ID for PO calculation for eMTC UE connection to 5GC.

⇒ **This proposal was discussed earlier.**

Proposal 2: In RRC_INACTIVE state, within PTW of eDRX or in the case that eDRX is not configured, UE would selects the shortest value among the RAN paging cycle, the UE specific paging cycle, and the default paging cycle, if allocated by upper layers as the paging DRX cycle "T" to monitor both CN initiated paging and RAN initiated paging.

Proposal 3: In RRC_INACTIVE state, outside the PTW of eDRX (if configured), UE only needs to monitor the RAN initiated paging by using the RAN paging cycle.

⇒ **Noted.**

UE identifier

R2-1915949 Report of Email discussion [106#65][R16 eMTC] UE identifier pros and cons LG Electronics UK discussion Rel-16 Late

- Huawei thinks it would be good to evaluate based on the system level impact.
- QC wonders how to differentiate if resumeID is adopted. Ericsson assumed there needs to be an indication, i.e. spare bit.
- Huawei thinks without a bit it would not work as intended due to the impact in RAN3. QC agrees.
- Nokia thinks the bit is not needed since the information can be extracted from resumeID. Huawei wonders how the network would know if it weas resumeID or I-RNTI to start with. QC also thinks it would not be straight forward for the context to be fetched over different interfaces.
- ZTE thinks this should be up to RAN3 to discuss.
- Intel thinks, there is an impact in RAN3 if resumeID is adopted and it is late in the release at this point.
- Ericsson states that this weas actually discussed in RAN3 and the outcome was not to do anything. ZTE thinks this was not discussed explicitly in RAN3.
- T-mobile thinks it would not be beneficial to use the spare bit. Huawei, Sony, and QC agree.
- Ericsson proposes to agree on I-RNTI and send an LS to RAN3 to inform them about the discussion in RAN2.
- QC wonders how the spare bit used to indicate considerring the frame of the exisiting RRC message in Msg3.
- Two possible alternatives are:
    - resumeID with the indication using the spare bit
    - I-RNTI
-

⇒ **I-RNTI is used as the UE identifier for UP CIoT 5GS Optimization.**

⇒ **Send a LS to RAN3 to inform them about the agreements in RAN2.**

[CB Offline #302] To draft the LS to RAN3 based on the agreement above. The draft can be provided in R2-1916358. (LG)

⇒ **I-RNTI is used as the UE identifier for UP CIoT 5GS Optimization for both eMTC and NB-IoT.**

R2-1916358 LS on UE identifier for UP CIoT 5GS Optimisation LG Electronics UK LS out Rel-16
To:RAN3

⇒ **Remove the agreement from RAN2#107bis**

⇒ **Replace "I-RNTI is used as the UE identifier for UP CIoT 5GS Optimization" with "I-RNTI is used as the UE identifier for UP CIoT 5GS Optimization for both eMTC and NB-IoT."**

⇒ **Update the date for the next meetings.**

✓ The LS is approved with the changes above in R2-1916369

Proposal 1. If resumeID is adopted, considering signalling overhead, RAN2 is asked to discuss whether the CN type indication is needed in RRCConnectionResumeRequest for the UE context retrieval in the RAN node.

Proposal 2. RAN2 is asked to discuss which one is more beneficial: Unified identifier for the same CN type or the same RRC state.

Proposal 3. RAN2 is asked to discuss whether or not reusing existing UP CIoT EPS Optimisation for UP CIoT 5GS Optimisation is beneficial (i.e., no change in RRCConnectionRelease).

Proposal 4. RAN2 is asked to decide which UE identifier is used for UP CIoT 5GS Optimisation.

Proposal 5. Send an LS to RAN3 regarding RAN2 decision.

R2-1914802 UE identity for CIoT/5GC UP Optimization and RRC indication to upper layers Qualcomm India Pvt Ltd discussion Rel-16 LTE_eMTC5-Core R2-1912854

R2-1915948 RRC message for UP CIoT 5GS Optimisation LG Electronics UK discussion Rel-16 Late

R2-1915950 Draft LS on UE Identifier in UP CIoT 5GS Optimisation LG Electronics UK LS out Rel-16 Late

Other

R2-1915612 LTE-M indication discussion paper Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core

Proposal 1: RAN2 clarify in TS 36.306 that a UE signalling Cat M1 and optionally Cat M2 shall not signal any other UE category.

- Intel wonders whether this means even category 1 to 5 shall not be signalled. QC explains that the intention is optional categories, not mandatory ones.

⇒ **RAN2 understands that a UE signalling Cat M1 and optionally Cat M2 shall not signal any other optional UE category.**

Proposal 2: UE signalling category M1 shall set the LTE-M indication in RRCConnectionSetupComplete message.
Proposal 3: Introduce 'LTE-M Indication enumerated (TRUE) optional' in RRCConnectionSetupComplete message.
Proposal 4: The LTE-M indication in RRCConnectionSetupComplete message only sent when UE selected 5GC or is registered on 5GC.

Agreements

- PTW is not introduced for RRC_INACTIVE state with short eDRX.
- Rel-15 WUS and Rel-16 Group WUS are not supported for eMTC UEs in RRC_INACTIVE.
- I-RNTI is used as the UE identifier for UP CIoT 5GS Optimization for both eMTC and NB-IoT.
- Send a LS to RAN3 to inform them about the agreements in RAN2.
- UE signaling category M1 shall set the LTE-M indication in *RRCConnectionSetupComplete* message.
- Introduce '*LTE-M Indication enumerated {TRUE} optional*' in *RRCConnectionSetupComplete* message.
- LTE-M indication in *RRCConnectionSetupComplete* message is only sent when UE selects 5GC.

✉ **[108#19][eMTC NB-IoT] When to resume DRBs in UP optimization for 5GC (Ericsson)**
To agree on when to resume DRBs in UP optimization for 5GC
Intended outcome: Email discussion report in R2-1916564
Deadline: Thursday 2019-12-05
=> Noted in R2-1916564

7.1.13 Other

R2-1914474 CE Mode Threshold Adjustments for non-BL and BL UE NTT DOCOMO INC. discussion Rel-16 R2-1912229

7.2 Additional enhancements for NB-IoT

(NB_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192313)
Time budget: 2.5 TU
Documents in this agenda item will be handled in a break out session
Some sub-items in 7.1 and 7.2 may be treated jointly.

7.2.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc
Including outcome of the email discussion [107bis#24][NB-IoT R16] Running CR on 36.304 (Nokia)

Incoming LSs

R2-1914304 LS on PUR transmission for NB-IoT/eMTC (R1-1911399; contact: Futurewei) RAN1 LS in Rel-16 NB_IOTenh3, LTE_eMTC5 To:RAN2 Cc:RAN4
- presented by session chair
- Huawei point out we need to reply by Thursday as RAN1 need to conclude this week.
- QC point out that RAN2 made earlier agreements which are contrary to the RAN1 agreements. Also RAN2 may not have any answer to these questions.
- Sierra Wireless think the questions are impossible to answer, but the second part of what is asked is worthwhile.

⇒ **Will try to reply earlier than Friday**

⇒ **noted**

R2-1914339 LS on thresholds for serving cell RSRP change based TA validation in PUR (R4-1912782; contact: Huawei) RAN4 LS in Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core To:RAN2 Cc:RAN1
- QC indicate they have a paper on this.

⇒ **noted**

R2-1914346 Reply LS on assistance indication for WUS (S2-1910549; contact: Qualcomm) SA2 LS in Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:RAN2, CT1, RAN3

⇒ **Will try to reply earlier than Friday**

⇒ **noted**

R2-1914354 Reply LS on RRC Connection Reestablishment for CP for NB-IoT connected to 5GC (S2-1910789; contact: Huawei) SA2 LS in Rel-16 5G_CIoT To:RAN2, CT4, SA3 Cc:CT1, RAN3

⇒ **noted**

Agreements Summary

R2-1915257 RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC Document Rapporteur (BlackBerry) other LTE_eMTC5-Core, NB_IOTenh3-Core

⇒ **noted**

✉ **[108#104][NB-IoT eMTC R16] Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC (Blackberry)**
Intended outcome: endorsed document in R2-1916424
Deadline: 2019-11-28

Running CRs

R2-1914593 Running CR for 36.304 for Rel-16 NB-IoT Enhancements Nokia, Nokia Shanghai Bell draftCR Rel-16 36.304 15.4.0 B NB_IOTenh33-Core

R2-1915298 Introduction of additional enhancements for NB-IoT in TS 36.331 Huawei draftCR Rel-16 36.331 15.7.0 B NB_IOTenh3-Core R2-1914101

R2-1915299 Introduction of additional enhancements for NB-IoT Huawei draftCR Rel-16 36.300 15.7.0 B NB_IOTenh3-Core R2-1914094

R2-1915307 Addressing Editor's Notes and FFSs in 36.300 running CR for NB-IoT Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

R2-1915404 Running CR on 36.321 for NB-IoT Ericsson draftCR Rel-16 36.321 15.7.0 B NB_IOTenh3-Core

R2-1915449 Introduction to additional enhancements NB-IoT Rel-16 BlackBerry UK Limited draftCR Rel-16 36.306 15.6.0 B LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1915608 Introduction of additional enhancements for NB-IoT Qualcomm Incorporated discussion Rel-16 38.300 NB_IOTenh3-Core R2-1914093

✉ **[108#105][NB-IoT] Update 36.304 CR (Nokia)**
Intended outcome: Endorsed running CR in R2-1916565
Deadline: 2019-12-13
=> Endorsed in R2-1916565

✉ **[108#109][NB-IoT] Update 36.331 CR (Huawei)**
Intended outcome: Endorsed running CR in R2-1916566
Deadline: 2019-12-13
=> Endorsed in R2-1916566

✉ **[108#106][NB-IoT] Update 36.300 CR (Huawei)**
Intended outcome: Endorsed running CR in R2-1916567
Deadline: 2019-12-13
=> Endorsed in R2-1916567

✉ **[108#107][NB-IoT] Update 36.321 CR (Ericsson)**
Intended outcome: Endorsed running CR in R2-1916568
Deadline: 2019-12-13
=> Endorsed in R2-1916568

✉ **[108#110][NB-IoT] Update 36.306 CR (Blackberry)**
Intended outcome: Endorsed running CR in R2-1916569
Deadline: 2019-12-13
=> Endorsed in R2-1916569

✉ **[108#108][NB-IoT] Update 38.300 CR (Qualcomm)**
Intended outcome: Endorsed running CR in R2-1916570
Deadline: 2019-12-13=> Endorsed in R2-1916570

7.2.2 Mobile-terminated (MT) early data transmission (EDT)

Mobile-terminated Early Data transmission for NB-IoT is treated jointly with MTC under AI 7.1.2. Do not use this AI for any item that can be discussed jointly.

7.2.3 UE-group wake-up signal (WUS)

UE group wake Up signal for MTC and NB-IoT is treated jointly under this Agenda Item.
SA2 LS

R2-1914472 Discussion on WUS assistance indication LS from SA2 and Rel-15 WUS NTT DOCOMO INC. discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: Reply to SA2 LS indicating that the MME should also be aware of WUS in Rel-15.

- HW thinks we sent the LS a few meetings ago on R15 WUS awareness and we need to reply about mobility.

- QC agree in general with the discussion and there should be a R15 solution for MME to know whether UE is using WUS. Also it would be better for NW to have control over when the UE uses WUS in the mobility case.
- Ericsson thinks we have 2 issues to solve.
- QC thinks that in Rel-15 there is no way to make WUS beneficial for UEs, so we either need to make MME aware of WUS support, or UEs won't use Rel-15 WUS. HW think that MME being aware of WUS use in a cell could be enough.
- DoCoMo think MME needs to take into account the WUS use, maybe per cell is enough. QC don't think per cell is good enough because e.g. voice-centric UE reachability may be impacted.
- HW think it is too late to change NAS for Rel-15.
- ZTE thinks MME needs to be aware of the eNB and UE support of WUS, then it can act accordingly but this can also be left to implementation rather than having signalling changes.
- Ericsson thinks neither eNB nor UE support needs to be known to the MME.
- Intel is fine with the proposal because Rel-15 was not considered after the previous LS.
- Huawei think there is an indication agreed in NAS which tells the MME whether the UE supports grouping or not, it doesn't indicate Rel-15 capability. If the UE doesn't indicate this then a probability can't be assigned.
- QC wonder whether it should be possible on a per-UE basis to disable WUS? ZTE thinks not.

R2-1915319 Discussion on SA2 reply LS on WUS assistance information Huawei, HiSilicon
discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: From RAN2 point of view, the negative impact from highly mobile UEs in multiple cells due to paging escalation can be avoided by only using WUS in the "last connected cell".

Proposal 2: WUS is only used in the "last connected cell" in Rel-15 and Rel-16.

- QC wonder how NW knows whether or not to use WUS, if UE moves then WUS cannot be used. HW think the MME has a container indicating the last cell visited, then WUS can be used only on that cell for that UE.
- Ericsson thinks that certain UEs could be put in a separate group to avoid impacting all UEs.
- Intel thinks there is a backwards compatibility issue. Also Intel wonders why there is no issue for stationary UEs.
- Sony wonders what the highly mobile UE is and whether this would mean WUS is only supported for stationary UEs. HW thinks there is a trade-off between mobile UE being able to benefit from WUS, and impacting other stationary UEs being woken because of that. QC agree that the main issue is not the UEs being paged, but the other UEs being woken due to that.

⇒ **Offline discussion #701 (Qualcomm) To conclude whether to include in the SA2 LS that the MME should also be aware of WUS in Rel-15, and how to address use of WUS with mobility. Draft the LS.**

R2-1916429 Report from Offline discussion #701 Qualcomm discussion

Proposal 1: Inform SA2 that RAN2 recognise the issue created by a mobile UE using WUS but RAN2 could not conclude a solution. RAN2 recognise for R16 the proposed NAS signalling for WUS allows for network to disable WUS usage by a UE.

- HW don't think we should say this, we have discussed solutions. The last sentence should be removed. QC thinks the last sentence just states we know this mechanism exists. Ericsson agree with HW, the proposal is misleading. Nokia thinks the second sentence is not clear.
- ZTE thinks it would be more accurate to say that we are discussing rather than couldn't conclude.

⇒ **Inform SA2 that RAN2 recognise the issue created by a mobile UE using WUS but RAN2 has not yet concluded on a solution**

Proposal 2: RAN2 re-discussed the issue of lack of MME awareness of WUS usage in R15 and the negative impact it will have on other UEs using WUS, RAN2 ask SA2 to consider introducing WUS awareness in MME from Release 15.

- ZTE thinks we already indicated this in the previous LS. HW thinks the wording doesn't represent what was discussed. DoCoMo thinks we didn't ask them this, we just informed there may be an issue, so supports this proposal.

- Nokia thinks this is needed per UE. HW thinks per cell is enough. QC thinks SA2 can decide on whether it is needed per cell or UE.
- Ericsson thinks that whether there is an issue depends on MME paging strategy, that is why we said there “may” be an issue, in the previous LS. Ericsson assume this was already considered in SA2.
- Huawei think we should refer to the paging strategy if we reply with this. QC thinks we should not mention this and leave to SA2. HW thinks the negative impact is directly related to this.

⇒ **Ask SA2 to consider introducing WUS awareness in MME from Release 15**

R2-1915614 [DRAFT] Reply LS on assistance indication for WUS Qualcomm Incorporated LS out Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:SA2, CT1, RAN3

⇒ **Revised in R2-1916433**

R2-1916433 [DRAFT] Reply LS on assistance indication for WUS Qualcomm Incorporated LS out Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:SA2, CT1, RAN3

- Ericsson can’t agree with the last part. HW can’t agree as it is currently worded.
- ZTE prefer not to have this last part.
- Ericsson think that the only wording we can agree is what was agreed, the current wording is too strong.

⇒ **Update the LS according to the agreements above (R2-1916429 Report from Offline discussion #701)**

⇒ **Revised in R2-1916436**

R2-1916436 [DRAFT] Reply LS on assistance indication for WUS Qualcomm Incorporated LS out Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:SA2, CT1, RAN3

- Ericsson think that the only wording we can agree is what was agreed, as commented before. Also wonder why SA needs to be cc.
- QC thinks that there is nothing currently clearly specified that WUS can have a negative impact.
- VF thinks the benefit of WUS relies on paging escalation. Also for multi-vendor NW this is important.
- Thales thinks that WUS should not have negative impact on devices, so should solve this..

⇒ **Work offline on the wording of the last sentence**

⇒ **Revised in R2-1916438**

R2-1916438 [DRAFT] Reply LS on assistance indication for WUS Qualcomm Incorporated LS out Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:SA2, CT1, RAN3

⇒ **LS is approved in R2-1916440**

R2-1915320 [Draft] Reply LS on WUS assistance information Huawei LS out Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core To:SA2, RAN3,

R2-1914473 [DRAFT] Reply LS on assistance indication for WUS NTT DOCOMO INC. LS out Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core To:SA2, CT1, RAN3

Others

R2-1915610 Proposals for WUS group open issues Qualcomm Incorporated discussion Rel-16 NB_IOTenh3-Core

Proposal 1: *numPOs same for all WUS resources.*

- HW supports. ZTE thinks this is anyway applied to WUS group, but if numPOs is the same for all then there may be additional delay, so should be configured per group. Nokia thinks that the efficiency is improved in Rel-16 so we can think of having more POs in Rel-16. QC thinks increasing the number of POs doesn’t help much, and increases the paging delay. HW thinks it doesn’t make sense to have number of POs configured per group, and we need to think about the trade-off between flexibility and signalling as it has to be a broadcast configuration.
- Intel thinks we should kee it simple so agree with the proposal Gemalto agree.

Proposal 2: *UEs with low paging probability and UEs with no paging probability or very high paging probability should not map to the same WUS group.*

- HW agrees with the intention, but don't see what we can specify. Similar for p3, 4.

Proposal 3: *UEs with low paging probability and UEs with high paging probability should not map to the same WUS resource.*

- Ericsson wonder why this would not be possible.

Proposal 4: *Common WUS group should be used with extreme care to avoid demising the benefit WSU grouping.*

Proposal 5: *For optimal usage of network resources allow different number of WUS resources for each gap type.*

- Huawei thinks there is no other way. Sony agree, and think RAN1 agreed this too.

Proposal 6: *Each GAP type can have different paging probability to WUS group mapping*

Proposal 7: *Each WUS resource can have different number of WUS groups*

- Intel thinks this is stage 3 signalling details.

Proposal 8: *For NB-IoT and eMTC WUS resource pattern number is sufficient to define both the number of WUS resources and their layout.*

Proposal 9: *eNB paging probability granularity of ~10% is sufficient (i.e. 3-bits for paging probability grouping).*

Proposal 10: *Up to 4 (NB-IoT) and 8 (eMTC) WUS groups can be assigned to each paging probability range.*

Proposal 11: *For NB-IoT and eMTC, example signalling is used as a baseline.*

Agreements
- numPOs is the same for all WUS resources
- Allow configuration of different number of WUS resources for each gap type

Offline discussion #702 (Qualcomm) To discuss the configuration details, and agree way forward.

R2-1916430 Report from Offline discussion #702 Qualcomm discussion

- HW thinks we should clarify that any of these configuration options are possible.
-

Agreements

- **The signalling allows configuration of any of the following:**
  - **eNB configures all WUS groups for UE ID based grouping.**
  - **eNB configures all WUS groups for paging probability based grouping. In this case WUS group(s) corresponding to the highest probability are used for UEs without paging probability configured.**
  - **Combination of above two configurations; some WUS groups for paging probability based grouping and some WUS groups for UE ID based grouping.**
  - **If more than one WUS group corresponds to the UE's configured probability then UE ID is used to determine a WUS group.**
- **Number and value of paging probability thresholds be the same for all gap types.**
- **Each gap type can have different number of WUS groups for each probability threshold.**
- **For each paging probability threshold there shall be at least 1 WUS group**
- **WA: Maximum number probability thresholds is 3 giving 4 group.**

✉ **[108#94][NB-IoT/eMTC R16] Finalise the WUS signalling (Qualcomm)**
Scope: finalise the WUS signalling both for eMTC and NB-IoT using the signalling in section 2 of R2-1916430 as the base line, taking into account RAN1 parameters list.
Intended outcome: TP submitted to next meeting
Deadline: 2020-02-06

R2-1915801 Group WUS Ericsson discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1915310 Discussion on configuration for WUS grouping Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1914594 GWUS Configuration and Resource mapping Nokia, Nokia Shanghai Bell discussion Rel-16

R2-1915136 Paging probability information based UE grouping Lenovo, Motorola Mobility discussion Rel-16 R2-1912916

R2-1915137 Consideration on WUS configuration Lenovo, Motorola Mobility discussion Rel-16 R2-1912917

R2-1915235 UE-group wake-up signal for MTC/NB-IoT Sony discussion Rel-16 NB_IOTenh3-Core

R2-1915638 Formula for mapping UE to WUS group ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1915639 Configuration details for WUS grouping ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

7.2.4 Transmission in preconfigured resources

Including support for transmission in preconfigured resources in idle and/or connected mode based on SC-FDMA waveform for UEs with a valid timing advance.

Transmission in preconfigured resources for MTC and NB-IoT is treated jointly under this Agenda Item.

Including outcome of the email discussion [107bis#90][NB-IoT eMTC R16] Further details on "m" operation for PUR (Qualcomm)

Email discussion

R2-1916228 Email discussion report [107bis#90] Further details on "m" operation for PUR Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core Late

Proposal 1. UE shall increase 'm' when (1) PUR occasion is not used while UE is in RRC_IDLE and (2) PUR occasion is used in RRC_IDLE but no response (none of HARQ ACK/NACK, L1 ACK or L2/L3 response) is received.

- ZTE thinks there can be more enhancement to deal with UE/NW mismatch

Proposal 2. RAN2 notes RAN1#96 agreement "After data transmission on PUR, if nothing is received by the UE in a time period, the UE shall fallback to legacy RACH/EDT procedure." contradicts with RAN2#107 agreement. RAN2 reconfirms the RAN2#107 agreement "Fallback after D-PUR transmission is not successful is not specified i.e. it is up to UE implementation to initiate legacy RA, MO-EDT or wait for next D-PUR occasion".

Proposal 3. Discuss whether above agreement should be informed to RAN1 with LS.

- QC, Sierra Wireless, Nokia, LG think an LS would be useful.

⇒ **Will send an LS**

Proposal 4. Network shall increase 'm' when no response corresponding to a PUR occasion (none of HARQ ACK/NACK, L1 ACK or L2/L3 response) is sent by the network.

Proposal 5. 'm' is not increased (neither by UE nor eNB) while UE is in RRC_CONNECTED.

Proposal 6. Counter 'm' is reset to zero after successful communication between UE and eNB using PUR.

Proposal 7. Discuss whether counter 'm' is reset to zero after successful communication between UE (with a valid PUR configuration) and eNB in RRC_CONNECTED.

- HW thinks we shouldn't reset, it adds complexity to the UE. Ericsson, Nokia, Gemalto, ZTE agrees.
- Sierra Wireless thinks we should reset. LG agrees, it is more simple. Intel agrees.

Proposal 8. Discuss whether existing access barring methods are referenced from 5.3.3.2 in TS 36.331 are also applicable for PUR.

- QC and HW think they should apply. HW indicates the CN may be congested so in this case UE should not send the data.

Proposal 9. 'm' is increased if PUR is skipped due to access barring (i.e., no special handling).

Proposal 10. 'm' is increased if PUR is skipped due to UE being in extendedWaitTime (i.e., no special handling).

- Intel wonders why not – NW knows the extended wait time so knows the UE would skip. QC indicates it is just simpler not to have special handling.
- LG thinks the UE can request a new PUR configuration at any time regardless of the value of m.

Proposal 11. Discuss whether to support synchronizing current value of 'm' when UE (with a valid PUR configuration) is in RRC_CONNECTED e.g. using RRC Connection Release message.

- HW think it isn't needed. NW can provide a new configuration, this would reset. Sequans agree. Sierra wireless think this isn't necessary.

Proposal 12. *Configurable value of m = {2, 3, 4, 8}.*

- HW, LG, Ericsson think we should have value 1. Ericsson indicates it is up to NW to configure.
- QC, Intel, Nokia, Sequans, Vivo, Gemalto think 1 should be avoided. Sierra Wireless doesn't see a lot of value either. Sequans think higher values would be more useful. Apple agrees with Sequans and think 2, 4, 8, 16 would be more convenient.

Agreements

- UE shall increase 'm' when (1) PUR occasion is not used while UE is in RRC_IDLE and (2) PUR occasion is used in RRC_IDLE but no response (none of explicit HARQ ACK/NACK, L1 ACK or L2/L3 response) is received.
- RAN2 notes RAN1#96 agreement "After data transmission on PUR, if nothing is received by the UE in a time period, the UE shall fallback to legacy RACH/EDT procedure." contradicts with RAN2#107 agreement. RAN2 reconfirms the RAN2#107 agreement "Fallback after D-PUR transmission is not successful is not specified i.e. it is up to UE implementation to initiate legacy RA, MO-EDT or wait for next D-PUR occasion".
- Network shall increase 'm' when no response corresponding to a PUR occasion (none of explicit HARQ ACK/NACK, L1 ACK or L2/L3 response) is sent by the network.
- 'm' is not increased (neither by UE nor eNB) while UE is in RRC_CONNECTED.
- Counter 'm' is reset to zero after successful communication between UE and eNB using PUR.
- Counter 'm' is not reset to zero after successful communication between UE (with a valid PUR configuration) and eNB in RRC_CONNECTED
- Existing access barring methods referenced from 5.3.3.2 in TS 36.331, except per-RSRP barring, are applicable for PUR
- 'm' is increased if PUR is skipped due to access barring (i.e., no special handling).
- 'm' is increased if PUR is skipped due to UE being in extendedWaitTime (i.e., no special handling).
- Configurable value of m = {2, 4, 8, spare}.

Offline discussion #703 (Qualcomm) – draft an LS on PUR failure handling in RRC to RAN1 in R2-1916425

R2-1916425 LS on PUR Fallback Qualcomm LS out NB_IOTenh3-Core, LTE_eMTC5-Core
To:RAN1

⇒ **Remove the first sentence "RAN2 thanks RAN1 for their LS….."**

- Ericsson thinks we could also mention the TA. Huawei thinks we should have only one mechanism so could mention this. QC thinks this is not a contradicting agreement but rather complementing. Ericsson thinks we should not define 2 mechanisms for the same thing so we should provide this as feedback to RAN1. Nokia thinks there is a benefit in the L1 mechanism. QC agree. LG agree with Ericsson and Huawei.

⇒ **Revise the LS to include TA, update title to "Feedback on RAN1 agreements on PUR"**
Revised in R2-1916434

R2-1916434 Feedback on RAN1 agreements on PUR Qualcomm LS out NB_IOTenh3-Core, LTE_eMTC5-Core
To:RAN1

⇒ **LS is approved in R2-1916437**

L1 ACK

R2-1915408 On the need for PUR L1 ACK application layer response Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

Proposal 1 *'PUR L1 ACK for an application layer response' is not introduced in Rel-16.*

- Sierra Wireless thinks there is some value to have a power saving gap. Ericsson think that RAN2 don't really know the typical times or how often it happens, so difficult to reply to the questions.
- QC agree with Ericsson's intention, the discussion we had earlier was never about application layer response. HW agree with QC and Ericsson, we don't know the timing of the application layer response so would be very hard to configure.
- Sony thinks we need a mechanism to handle the application layer response so agree with Sierra Wireless.

- Intel agree with Ericsson, but also Sony. Intel thinks the observation 5 in this paper is one possibility.
- LG, ZTE agrees with Sierra Wireless and Sony.
- Gemalto thinks the application layer response time is so varied it is hard to find a suitable value to configure. Sequans thinks it is hard to configure but the DRX proposal could be a good alternative. Sierra Wireless thinks that even if we set the gap to the wrong value there is still a chance to save power.
- QC thinks that we previously agreed the L1 ACK terminates the PUR procedure, and the application layer response is not something we intended.
- Ericsson thinks there are plenty of things still to discuss on PUR and this would complicate matters somewhat. We had a similar discussion for EDT and ended up not doing anything specifically doe this due to the complexity.
- HW thinks that in a previous meeting we confirmed that the L1 ACK was sent after confirming there was no data from MME in the DL, this new RAN1 proposal is not really feasible.
- Nokia think as an optional feature this could be OK.
- Ericsson wonders how this would be configured and what the length of the gap is. Even if it is short it restricts the network when to send the response.
- QC suggest this could be included in the contradicting agreements LS.
- Sierra Wireless suggests 300ms gap.
-

Agreements
- After L1 ACK the PUR procedure is terminated and UE is not required to continue monitoring PDCCH after this (as per previous agreements).
- L1 ACK is not intended for application layer response

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R2-1915409 Draft LS reply PUR transmission for NB-IoT/eMTC Ericsson LS out NB_IOTenh3-Core, LTE_eMTC5-Core To:RAN1 Cc:RAN4

⇒ **Revised in R2-1916426**

Offline discussion #704 (Ericsson) update the reply LS based on above agreements.

R2-1916426 Draft LS reply PUR transmission for NB-IoT/eMTC Ericsson LS out NB_IOTenh3-Core, LTE_eMTC5-Core To:RAN1 Cc:RAN4

⇒ **LS is approved in R2-1916435**

R2-1915241 PUR L1 ACK and application layer response Sony discussion Rel-16 NB_IOTenh3-Core

CP solution

R2-1915312 Handling of D-PUR configuration for CP solution Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1912610

R2-1915313 [Draft] LS on handling of D-PUR configuration for the CP solution Huawei LS out Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1912611 To:RAN3

R2-1914596 PUR for control plane solution Nokia, Nokia Shanghai Bell discussion Rel-16

R2-1914717 Issue of D-PUR reconfiguration and release for CP solution ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Others

R2-1915407 PUR - Remaining open issues Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

R2-1915311 FFSes on D-PUR Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1915721 PUR related Editor's Notes and FFSes in RRC running CR Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Offline discussion #705 (Ericsson) discuss the above 3 papers and produce some agreeable proposals.

R2-1916431 Report from Offline discussion #705 Ericsson discussion

Non-controversial proposals (consensus or no opposition):

Proposal 1 BSR can be included in PUR transmission. AS RAI details are being discussed further. FFS on whether used in PUR transmission.

- ZTE thinks the DPR MAC CE can be used for the BSR. HW and QC think it is already clear for NB-IoT.
- Intel thinks this is only for UP solution. HW doesn't think so. Intel, QC are not sure how to calculate the BSR for CP case.
- Ericsson thinks we don't need to restrict any legacy behaviour so BSR should be allowed.

Proposal 4 resumeID is set to the stored resumeIdentity when transmitting the RRCConnectionResumeRequest message using PUR.

Proposal 5 RRCEarlyDataComplete message is not used to release D-PUR configuration

Proposal 7 PUR configuration contains "Time offset", i.e. time of the first PUR transmission. FFS on stage-3 details.

- Thales thinks this is also part of request information. QC agree.

Proposal 8 PUR configuration contains "Timer for PUR response", i.e. the length of the window during which the UE monitors for PUR response.

- Ericsson and QC think this is anyway a RAN1 agreement. Ericsson thinks this should be captured in MAC. Nokia thinks the details are not agreed in RAN1.
- Intel thinks we should consider further the unit of time.

Proposal 9 PUR configuration request can include "Time offset". FFS on stage-3 details.

- ZTE thinks this is not enough we also need a tolerance range to allow NW to distribute UEs.
- LG wonders where the UE gets this information.
-

Proposal 14 TA timer for PUR is maintained in MAC.

Proposal 15 TA timer is restarted every time TA is updated.

- Ericsson thinks this is anyway already agreed, the FFS is whether it is restarted on successful PUR.

Proposal 16 For initiating transmission using PUR, the interaction with NAS is up to UE implementation.

- Ericsson clarify this is similar to EDT

Proposal 18 For PURConfigurationRequest, in A.6, all entries (P, A-I, A-C) are '-'.

Proposal 19 Periodic TAU timer should be restarted upon PUR transmission. Details are not up to RAN2.

Proposals with clear majority (e.g. 1 or 2 disagree)

Proposal 2 For UP solution, UE can segment and transmit part of the data in initial PUR transmission.

Proposal 3 Security is re-activated for PUR even in the is sent without any UL data, no separate indication is needed to separate legacy and PUR cases.

Proposal 6 For CP solution, eNB stores part of the PUR configuration needed to receive the PUR transmission. FFS whether full configuration is kept in eNB or part of it in MME.

Proposal 10 PUR configuration request doesn't differentiate between whether the request is for CP or UP.

Proposal 11 No PUR blacklisting is introduced (from RAN2 point of view).

Proposal 12 Confirm the working assumption from RAN2#107bis on flag in SIB2.

Proposal 13 Separate pur-Enabled flag in SIB2(-NB) for UP and CP are not needed.

- QC, Sierra Wireless have some concern that there might be IOT issues if we have only 1 bit.

Proposal 17 It is up to UE implementation how the UE determines whether the UL data is suitable for transmission using PUR. Capture as NOTE in 5.3.3.1x.

- LG asks if everything is really up to UE implementation. QC thinks it is.

Proposal 20 If paging and PUR transmission opportunity collide, PUR transmission is prioritized.

- ZTE thinks that paging should be priroitised

Proposal 21 Discuss whether UE assistance information procedure should be used instead of PUR configuration request.

- Ericsson and HW think it is more convenient to re-used the existing message.

Agreements

- BSR for eMTC and DPR for NB-IoT can be included in PUR transmission for UP solution.
  - FFS CP solution.
  - FFS AS RAI.
- *resumeID* is set to the stored resumeIdentity when transmitting the *RRCConnectionResumeRequest* message using PUR
- *RRCEarlyDataComplete* message is not used to release D-PUR configuration
- PUR configuration request may contain a time offset request, i.e. requested time of the first PUR transmission. *Details FFS.*
- PUR configuration may contain a time offset, i.e. time of the first PUR transmission. *Details FFS.*

- Timer for PUR response is configurable, i.e. the length of the window during which the UE monitors for PUR response. *Details FFS*.
- TA timer for PUR is maintained in MAC.
- TA timer is restarted every time TA is received or explicitly re-validated (i.e. successful PUR transmission alone does not restart the timer).
- For initiating transmission using PUR, the interaction with NAS is up to UE implementation.
- For PURConfigurationRequest, in A.6, all entries (P, A-I, A-C) are '-'.
- RAN2 assumes Periodic TAU timer is restarted upon successful PUR transmission. (same as EDT)
- For UP solution, UE can segment and transmit part of the data in initial PUR transmission.
- Security is re-activated for PUR even when RRC Connection Resume is sent without any UL data, no separate indication is needed to separate legacy and PUR cases.
- For CP solution, eNB stores part of the PUR configuration needed to receive the PUR transmission. FFS whether full configuration is kept in eNB or part of it in MME.
- PUR configuration request doesn't differentiate between whether the request is for CP or UP.
- No PUR blacklisting is introduced (from RAN2 point of view).
- Confirm the working assumption from RAN2#107bis on flag in SIB2.
- Will have separate pur-Enabled flag in SIB2(-NB) for UP and CP.
- It is up to UE implementation how the UE determines whether the UL data is suitable for transmission using PUR. Capture as NOTE in 5.3.3.1x.
- If paging and PUR transmission opportunity collide, PUR transmission is prioritized.
- No mechanism to prevent UEs from sending configuration requests in close succession.

R2-1914595 Remaining Issues for PUR Nokia, Nokia Shanghai Bell discussion Rel-16

R2-1914720 Remaining issues for D-PUR in IDLE ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1915036 Discussion on RAN1 agreements related to PUR Nokia Solutions & Networks (I) discussion Rel-16 NB_IOTenh3

R2-1915405 PUR periodicity and UE multiplexing Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

R2-1914858 Additional issues in D-PUR in RRC_IDLE Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1915553 Further D-PUR configuration aspects Gemalto N.V. discussion R2-1903933

R2-1915751 Further Pre-configured UL Resources Design Considerations Sierra Wireless, S.A. discussion Rel-16

R2-1915951 Discussion on D-PUR request and TA validity check LG Electronics UK discussion Rel-16 R2-1913682

R2-1915952 Paging response usign D-PUR LG Electronics UK discussion Rel-16 R2-1913683

R2-1915953 Support for S-PUR LG Electronics UK discussion Rel-16 R2-1913684

R2-1916041 Handling D-PUR configuration in RRC_CONNECTED state ASUSTeK discussion Rel-16 NB_IOTenh3-Core

R2-1916042 Remaining issues of D-PUR TA timer ASUSTeK discussion Rel-16 NB_IOTenh3-Core R2-1913775

R2-1916247 DRX considerations and RAN paging for PUR Sequans Communications discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1912894

R2-1916251 Enhancements for PUR Sequans Communications discussion LTE_eMTC5-Core, NB_IOTenh3-Core

TPs

R2-1916229 TP for TA validation based on serving cell RSRP change (related to RAN4 LSes) Qualcomm Incorporated draftCR Rel-16 36.331 15.7.0 LTE_eMTC5-Core, NB_IOTenh3-Core

Late/Withdrawn

R2-1915406 PUR with DCI scheduling Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core Withdrawn

R2-1916427 Alternative TP for TA validation based on serving cell RSRP change (related to RAN4 LSes)Sierra Wireless draftCR Rel-16 36.331 15.7.0 LTE_eMTC5-Core, NB_IOTenh3-Core

7.2.5 Scheduling multiple DL/UL transport blocks

Including scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast

Scheduling multiple DL/UL transport blocks for NB-IoT is treated jointly with MTC under AI 7.1.5. Do not use this AI for any item that can be discussed jointly.

7.2.6 Network management tool enhancement

Including SON support for ANR, Random access performance and RLF report

ANR

R2-1915650 Remaining Issues for ANR measurements Ericsson discussion

R2-1915138 Remaining issue on ANR reporting Lenovo, Motorola Mobility discussion Rel-16

R2-1915300 Discussion on SON ANR remaining open issues Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

RACH/RLF

R2-1915301 Discussion on SON RACH and RLF remaining open issues Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

✉ **[108#95][NB-IoT] Finalise SON ANR and RLF (Huawei)**
Intended outcome: report to next meeting
Deadline: 2020-02-06

7.2.7 Improved multi-carrier operation

Including support of Msg3 quality reporting for non-anchor access.

Including signalling to indicate on a non-anchor carrier for paging a set of subframes which will contain NRS even when no paging NPDCCH is transmitted.

7.2.8 Inter-RAT cell selection

Including power efficient NB-IoT mechanism which would assist idle mode inter-RAT cell selection for NB-IoT to and from LTE, LTE-MTC and GERAN

R2-1916234 On Inter-RAT assistance information for NB-IoT and LTE(-eMTC) Sequans Communications discussion Rel-16 NB_IOTenh3-Core R2-1913626

Proposal 1: Use an EARFCN offset for delta between NB-IoT and LTE EARFCN (omitted when already known to UE)

Proposal 2: Consider existing raster offset constraints for anchor carriers

Proposal 3: Optimized LTE carrier signaling also indicates there is an underlying cell (with samePCI) to the serving NB-IoT cell, which is synchronized with the NB-IoT cell and may be used for resync

- QC thinks proposal 3 is complex for UE.
- QC thinks the offset in p1 is similar to p2
- Nokia thinks some signalling optimisations can be considered.

⇒ **No support**

7.2.9 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of NB-IoT with NR

R2-1915410 Coexistence with NR for NB-IoT Ericsson discussion NB_IOTenh3-Core

7.2.10 Connection to 5GC (Other common aspects, NB-IoT specific aspects)

Common aspects for MTC and NB-IoT not listed in 7.1.12 are treated jointly under this AI.
Including outcome of the email discussion [107bis#89][NB-IoT R16] Open issues on UAC in NB-IoT (Huawei)

UAC

R2-1915317 Report of email discussion [107bis#89][NB-IoT R16] Open issues on UAC in NB-IoT
Huawei report Rel-16 NB_IOTenh3-Core Late

Proposal 1: Introduce barring factor for Access identity 0 for UAC in NB-IoT.

Proposal 2: Introduce barring timer with barring factor for Access identity 0 for UAC in NB-IoT

- *HW wonder what has changed since Rel-13 on the NB-IoT requirements, so are not really happy with this proposal. QC thinks the barring timer is there in LTE. HW thnks there is no barring timer in AS or NAS in NB-IoT so this is new.*

Proposal 3: Access barring bitmap for access identities is signalled common to access categories for UAC in NB-IoT.

Proposal 4: Access barring parameters are provided directly per access category. Barring info sets are not introduced for UAC in NB-IoT.

Proposal 5: Access barring parameters are provided directly per PLMN for UAC in NB-IoT.

Proposal 6: RAN2 to discuss whether to reuse SIB14-NB or introduce a new SIB for UAC in NB-IoT.

- QC thinks the same SIB impacts EPC UEs if 5GC needs to be barred. HW doesn't think this changes anything if we have the barring indication separately in MIB. SIB-14 also allows re-use of per-RSRP barring. Intel thinks SIB-14 is fine but we should also have direct indication.
- Huawei thinks there is no benefit of a new SIB and parameters would have to be duplicated.
- Ericsson thinks SIB-14 can be re-used.

Proposal 7a: Introduce a one bit indication in the MIB-NB when access barring is enabled in 5GC.

Proposal 7b: RAN2 to discuss the details of SIB update mechanism and then decide if additional mechanisms are needed, e.g.:

- If a new SIB, does it follows the generic system information update mechanism as SIB25 in eLTE or can it be updated at any time and does not affect the VT as in Rel-15 NB-IoT.

- If a new SIB following the generic system information update mechanism, how to support NRSRP barring

Proposal 8: NB-IoT UEs in RRC_CONNECTED mode performs access barring check based on the latest UAC parameters acquired prior to entering RRC_CONNECTED.

- Ericsson wonders whether UE has to acquire the parameters just before entering connected. HW thinks UE would just behave as today, and then store and use these parameters in connected.

Agreements:

- Introduce barring factor for Access identity 0 for UAC in NB-IoT.
- Introduce barring timer with barring factor for Access identity 0 for UAC in NB-IoT
- Access barring bitmap for access identities is signalled common to access categories for UAC in NB-IoT.
- Access barring parameters are provided directly per access category. Barring info sets are not introduced for UAC in NB-IoT.
- Access barring parameters are provided directly per PLMN for UAC in NB-IoT.
- NB-IoT UEs in RRC_CONNECTED mode performs access barring check based on the latest UAC parameters acquired prior to entering RRC_CONNECTED.

Offline discussion #706 (Huawei) whether to re-use SIB14-NB or have new SIB for UAC

R2-1916432 Report from Offline discussion #706 Huawei discussion

***Proposal**: RAN2 to select one of the two options below:*

***Option 1**: Reuse SIB14-NB for 5GC and introduce a new indication in MIB for 5GC barring*

***Option 2**:*

- *Introduce a new SIB carrying only the 5GC barring parameters and following the generic system information update mechanism.*
- *per-NRSRP barring parameters in SIB14-NB apply to 5GC. per-NRSRP barring for 5GC is introduce a new indication in MIB*

- Sierra wireless, Ericsson think SIB14 can be re-used
- QC thinks a new SIB as per eLTE.

Option1: 6
Option2: 2

Agreements:
- Reuse SIB14-NB for 5GC and introduce a new indication in MIB for 5GC barring

R2-1914801 UAC information change indication in 5GC Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1912853

R2-1915042 Further consideration on access control aspect III discussion Rel-16

RAI

R2-1915772 RRC release assistance for Control and User Plane CIoT EPS optimizations Ericsson discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1913757

- HW wonders why this talks about EPC only when we haven't agreed all the details for 5GC. Ericsson clarify this is for both EPC/5GC. LG thinks this RAI is duplicated information in EPC for CP solution, but are OK for UP solution. Intel prefers not to have this for EPC. QC thinks we can have a unified solution for EPC/5GC.
- QC thinks that for Msg3 the grant may not always be enough. HW thinks only EDT needs this for Msg3.
- QC thinks in EPC we should avoid having both the legacy and new mechanisms configured. HW agree.

Proposal 1 *Introduce a MAC mechanism with 2 bits for RAI when connected to EPC.*

Proposal 2 *AS RAI informs the network whether a) no subsequent DL and UL data transmission is expected; or, b) a single subsequent DL transmission is expected; or c) multiple subsequent data transmissions are expected in the DL and/or UL.*

- HW thinks that c is not needed. Ericsson think this option is mainly for EDT. Huawei thinks a generic mechanism is preferable for MAC. Intel thinks options a and b are sufficient. QC thinks c is not necessary. Ericsson thinks c is needed if we do not have capability reporting, to differentiate no support/support. HW thinks a capability is needed especially for EPC, to avoid NW configuring both the existing mechanism and this one. Blackberry thinks only a and b are useful.

Proposal 3 *Introduce AS RAI for UP and CP CIoT optimizations, EDT and UP-PUR.*

- HW thinks it should be supported for all. Intel thinks CP solution doesn't need this. Huawei think we discussed this for 5GC and concluded it can be supported for CP solution. Blackberry think it is useful for CP solution. LG thinks for CP solution in EPC the information is not useful.

Proposal 4 *AS RAI is provided in a MAC CE shared with the quality report.*

Proposal 5 *For EPS, introduce indication in SIB2 (SIB2-NB) if AS RAI is configured in the cell.*

Proposal 6 *For 5GS, AS RAI is always enabled for UEs (NB-IoT or LTE-M) connected to 5GC.*

- QC thinks we need to discuss whether this should be discussed for PUR.

Proposal 7 *It is optional for a UE to support AS RAI without capability reporting.*

- HW think it is better for EPC to have capability report and configuration in dedicated signalling. Ericsson agree. QC wonder why capability is needed. HW think it is useful for avoiding configuring the legacy mechanism at the same time.
- Intel wonder if this can be linked to support of quality report. HW, Blackberry thinks the features can be independently supported even though the same MAC CE would be used.

Agreements:
- Introduce a MAC mechanism with 2 bits for RAI when connected to EPC, including CP and UP optimisations (same mechanism as for 5GC). FFS whether any feature is excluded (e.g. PUR, etc)
- The AS RAI informs the network whether a) no subsequent DL and UL data transmission is expected; or, b) a single subsequent DL transmission is expected;
- For EPS it is optional for a UE to support AS RAI, with capability reporting.
- For EPS, introduce indication in SIB2 (SIB2-NB) if AS RAI is configured in the cell
- For 5GS, AS RAI is always enabled for UEs (NB-IoT or LTE-M) connected to 5GC.

✉ **[108#96][NB-IoT/eMTC R16] Finalise details on RAI (Ericsson)**
Intended outcome: email discussion report.
Deadline: 2020-02-06

R2-1915316 Access Stratum Release Assistance Indicator for eMTC and NB-IoT connected to 5GC
Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Connection Re-establishment

R2-1915318 Support of RRC connection Re-establishment for the Control plane for NB-IoT connected to 5GC
Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

Proposal 1*: RRC Connection re-establishment for the control plane for NB-IoT connected to 5GC is supported.*

- Ericsson wonders if there is still a security issue being discussed in SA3. QC thinks there is no issue but the work is ongoing. HW thinks the SA3 concern is a general concern about system information. HW would prefer to remove something from the running CR as it will be more work otherwise. Intel wonders whether the parameters are provided in NAS. HW doesn't think so.

Proposal 2*: RRC Connection re-establishment for the control plane for NB-IoT UEs connected to 5GC is optional, without capability reporting.*

Proposal 3*: The values 'n' and 'm' for the truncation of the 5G-S-TMSI are signalled per PLMN in SystemInformationBlockType2-NB. They are an implicit indication of eNB and AMF support.*

- Vodafone thinks these are PLMN wide, so wonders why we need to broadcast. QC thinks this is for a UE performing re-establishment on a new cell, if the cell doesn't broadcast then UE knows this is not supported.

Proposal 4: *For NB-IoT connected to 5GC, create a critical version of RRCConnectionResumeRequest-NB message for CP CIoT 5GS optimisation, including the ue-Identity, re-establishmentCause, and cqi-NPDCCH (short).*

Proposal 5: *For NB-IoT connected to 5GC, define a new IE ReestabUE-Identity-CP-5GC-NB in RRCConnectionReestablishmentRequest-NB message, including truncated5G-S-TMSI (40 bits), ul-NAS-MAC (16 bits) and ul-NAS-Count (5 bits).*

Proposal 6: *For NB-IoT, the UE goes to RRC_IDLE and initiates NAS recovery procedure when the UE switches between CN types at RRC Connection re-establishment for the control plane.*

Agreements

- RRC Connection re-establishment for the control plane for NB-IoT connected to 5GC is supported.
- RRC Connection re-establishment for the control plane for NB-IoT UEs connected to 5GC is optional, without capability reporting.
- **Working assumption:** The values 'n' and 'm' for the truncation of the 5G-S-TMSI are signalled per PLMN in SystemInformationBlockType2-NB. They are an implicit indication of eNB and AMF support.
- Create a critical version of *RRCConnectionResumeRequest-NB* message for CP CIoT 5GS optimisation, including the *ue-Identity*, *re-establishmentCause*, and *cqi-NPDCCH* (short).
- Define a new IE *ReestabUE-Identity-CP-5GC-NB* in *RRCConnectionReestablishmentRequest-NB* message, including *truncated5G-S-TMSI* (40 bits), *ul-NAS-MAC* (16 bits) and *ul-NAS-Count* (5 bits).
- The UE goes to RRC_IDLE and initiates NAS recovery procedure when the UE switches between CN types at RRC Connection re-establishment for the control plane.

PO calculation

R2-1914723 Consideration on UE ID of PO calculation for NB-IoT connection to 5GC ZTE Corporation, Sanechips discussion Rel-16 NB_IOTenh3-Core

Proposal 1: 5G-S-TMSI is used for PO determination for NB-IoT UE connection to 5GC.

Proposal 1a: 5G-S-TMSI mod 1048536 is used as the UE_ID for PO calculation for NB-IoT UE connection to 5GC.

- QC and Intel think P1 is OK but not P1a. Intel thinks there may be an issue exposing the UE ID. HW also don't see the motivation for P1a. Ericsson agree that P1 is OK but not clear what the issue is with the current number so don't agree with P1a.

- ZTE think that 5G-S-TMSI doesn't have the same issue as IMSI in terms of exposure. ZTE thinks the motivation is the limitation on NW configuration.

Agreements:
- 5G-S-TMSI is used for PO determination for eMTC and NB-IoT UE connection to 5GC
- 5G-S-TMSI mod 16384 is used as the UE_ID for PO calculation for eMTC and NB-IoT UE connection to 5GC

Cell reselection

R2-1914789 Idle Mode cell reselection based on CN type supported Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1912851

Proposal 1. For priority based inter-frequency eMTC Idle cell-reselection, consider frequencies with same CN type as registered CN type are higher priority than frequencies with supported CN type different from registerd CN type.

Proposal 2. Adapt SIB5 enhancements to include CN type supported for inter-frequencies as assistance information for inter-frequency idle cell reselection.

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R2-1915237 Mobility enhancements for Connectivity to 5GC for MTC and NB-IoT Sony discussion Rel-16 NB_IOTenh3-Core R2-1913364

Proposal: *Update the IntraFreqNeighCellInfo and InterFreqNeighCellInfo by adding CN type in SIB4&5.*

Discussion on above 2 papers

- HW wonders if this was disscussed for eLTE. QC thinks not. HW agrees we should try to avoid ping-pong between CN but are not sure this is the best way. LG thinks this was discussed in eLTE and the CN type selection is up to NAS layer and don't think we should do this for IoT either. Intel agrees with LG. Vodafone thinks there will be high power consumption if UE keeps switching CN but the network should be built in a consistent way. Ericsson agrees with HW and VF.
- Intel think we could bar the cell up to 300s instead. QC thinks barring doesn't add any value.
- HW think that dedicated priorities may be used at least in normal coverage. QC thinks for ranking (equal priority) then we need this. HW thinks NW would apply different priorities for different CN support. However for NB-IoT and coverage enhancement there is a problem.
- LG thinks the cell reselection should be based on radio conditions, not CN type.
- Sony thinks that it would be better for UE not to consider the cells of another CN type for reselection.
- LG thinks all this was discussed for eLTE and agreed not to use CN type. T-Mobile agree with LG and think that cell reselection should be able to prioritise based on CN type but also consider radio conditions.
- Gemalto thinks we need to think further about this.
- Sony think the power saving is an important aspect. QC agree.

⇒ **RAN2 will consider introducing a mechanism for minimising ping-pong between CN types in RRC_IDLE/RRC_INACTIVE.**

✉ **[108#97][NB-IoT / eMTC] Consider how to minimize ping-pong between CN types in RRC_IDLE/RRC_INACTIVE. (Qualcomm)**
Intended outcome: email discussion report
Deadline: 2020-02-06

Late/Withdrawn

R2-1915782 RRC release assistance for Control and User Plane CIoT EPS optimizations Ericsson draftCR Rel-16 36.321 15.7.0 B LTE_eMTC5-Core, NB_IOTenh3-Core Late

7.2.11 UE specific DRX

Specify support of UE specific DRX and consider expanding the current DRX range

R2-1916235 NB-IoT UE Specific DRX - Backward Compatibility Sequans Communications discussion Rel-16 NB_IOTenh3-Core R2-1913627

R2-1916236 NB-IoT UE Specific DRX - Efficiency Issues Sequans Communications discussion Rel-16 NB_IOTenh3-Core

R2-1915302 Introduction of UE specific DRX for NB-IoTHuawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

✉ **[108#98][NB-IoT] UE specific DRX (Huawei)**
Scope: Pending LS from SA2, progress on the details.
Intended outcome: Report, including text proposal for stage 3 if possible.
Deadline: 2020-02-06

TPs

R2-1915303 Introduction of UE specific DRX for NB-IoT in 36.300 15.7.0 B NB_IOTenh3-Core Huawei draftCR Rel-16 36.300

R2-1915304 Introduction of UE specific DRX for NB-IoT in 36.304 15.4.0 B NB_IOTenh3-Core Huawei draftCR Rel-16 36.304

R2-1915305 Introduction of UE specific DRX for NB-IoT in 36.306 15.6.0 B NB_IOTenh3-Core Huawei draftCR Rel-16 36.306

R2-1915306 Introduction of UE specific DRX for NB-IoT in 36.331 15.7.0 B NB_IOTenh3-Core Huawei draftCR Rel-16 36.331

7.2.12 Other

Others

7.3 Even further mobility enhancement in E-UTRAN

(LTE_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-190921)
Tdoc Limitation: see 6.9 above.

7.3.1 Organizational

Including incoming LSs, running CR proposals and rapporteur inputs (if any)
Note that the running Stage-2 CR was endorsed as outcome of email discussion [107bis#10][LTE MobE] Updated Stage-2 running CR LTE mobility (China Telecom) in R2-1914007.
Including outcome of email discussion [107bis#14][LTE MobE] Updated RRC running CR for LTE mobility (Ericsson)

Running RRC CR:

R2-1914640 Running CR for Introduction of Even futher Mobility enhancement in E-UTRAN Ericsson draftCR Rel-16 36.331 15.7.0 LTE_feMob-Core

⇨**CR is endorsed as baseline RRC for LTE mobility**

✉ **[108#35][LTE Mob] Running RRC CR (Ericsson)**
Updated running CR with agreements from this meeting and open issue email discussion.
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-16

Running Stage-2 CR for DAPS:

R2-1915349 Clarification of DAPS handover support in 38.300 Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

(moved from 7.3.2.3)

⇨ **Can be discussed in running CR email discussion**

✉ **[108#63][LTE Mob] Running Stage-2 CR (China Telecom)**
Updated running CR based on latest agreements (except CPAC).
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-30

Feature list for mobility enhancement:

R2-1916059 Discussion on UE capability China Telecom discussion
(moved from 7.3)

Proposal 1: It is proposed to introduce the following UE capability bits for mobility enhancement:
- 1 bit for DAPS solution (separate for LTE and NR), optional
- 1 bit for CHO for PCell change (separate for LTE and NR), optional
- 1 bit for CHO for PScell change (only for NR), optional
- 1 bit for T312 for PCell (only for NR), optional
- 1 bit for T312 for PScell (only for NR), optional
- 1 bit for failure handling enhancement (separate for LTE and NR), optional

Proposal 2: For UE capabilities mentioned in [3], it is proposed to be updated based on RAN1 and RAN4's feedbacks.

⇨ **Handled together with offline discussion 106**

Reply LS to RAN1/4:

R2-1915345 Further consideration on reply LSs from RAN1 and RAN4 Huawei, HiSilicon, China Telecom discussion Rel-16 LTE_feMob-Core

7.3.2 Reduction in user data interruption for dual active protocol stack (DAPS) handover

DAPS handovers for LTE and NR are treated jointly in under this AI.
No documents should be submitted to 7.3.2. Please submit to 7.3.2.x.

7.3.2.1 User plane aspects of DAPS HO

No documents should be submitted to 7.3.2.1. Please submit to 7.3.2.1.x.

7.3.2.1.1 PDCP/RLC aspects of DAPS HO

DAPS impacts to PDCP/RLC for LTE and NR are treated jointly under this AI. SDAP-specific aspects should be submitted to 6.9.2.
Including outcome of email discussion [107bis#55][NR LTE MobE] Running LTE and NR PDCP CRs NR mobility (Huawei).
Including bearer handling, data forwarding, exact PDCP impacts, handling of RoHC, RLC impacts (including TPs with details on the WA for RLC UM support)

Running PDCP CRs as outcome of email discussion [107bis#55][NR LTE MobE] Running LTE and NR PDCP CRs NR mobility (Huawei):

R2-1915350 Draft CR for 36.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. draftCR Rel-16 36.323 15.4.0 B LTE_feMob-Core
(moved from 7.3.1)

- LGE thinks most companies only commented on NR specification but same changes were applied for LTE, but not all changes are correct. Howver, LTE doesn't support integrity protection for DRBs. Thinks we should update the CR.
- NEC thinks DL transmission procedure should be modified.

⇨ **Offline discussion 107 (Huawei): Correct parts which are not according to LTE DRB (e.g. integrity protection) as well as any other small comments. Result can be provided in R2-1916319 (CBF)**

R2-1916319 Draft CR for 36.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc.
draftCR Rel-16 36.323 15.4.0 B LTE_feMob-Core
⇨ **Endorsed as running CR.**

R2-1915351 Draft CR for 38.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc.
draftCR Rel-16 38.323 15.6.0 B LTE_feMob-Core
(moved from 7.3.1)
⇨ **Endorsed as running CR.**

✉ **[108#64][LTE NR Mob] Running CR for LTE and NR PDCP on mobility (Huawei)**
Updte running CRs for LTE and NR PDCP based on latest RAN2 agreements.
Intended outcome: Updated running CR for next meeting
Deadline: 2020-01-30

RLC handling (including RLC UM support):

R2-1914611 RLC Impacts analysis with DAPS during HO Mediatek Inc. discussion Rel-16 R2-1912970

Observation 1: No impact is expected at the receiving side of the two RLC AM entities at the UE side associated to the single PDCP entity supporting DAPS.
Observation 2: No PDCP data PDUs should be submitted from the single PDCP entity to the RLC AM entity associated to the source cell after UL new data transmission switching.
Observation 3: The RLC AM entity associated to the source cell should continue to provide STATUS PDUs to the source cell after UL new data transmission switching.
Observation 4: The PDCP transmitting entity supporting DAPS is not expected to receive any successful delivery confirmation for the PDCP data PDUs from the lower layer associated to the source cell after UL new data switching.
Observation 5: The source cell should have stopped the STATUS procedure and finalize the UL data reception at the RLC layer after UL new data transmission.
Observation 6: PDCP control PDUs for ROHC feedback can be submitted from the single PDCP entity to the RLC AM entity associated to the source cell after UL new data transmission switching.
Observation 7: The transmitting side of the RLC entity associated to the source cell should continue to assign RLC SNs to the RLC SDUs containing the ROHC feedback after UL new data transmission switching.
Observation 8: In NR, it is very likely that some PDUs remain in the transmission buffer of the RLC entity associated to the source cell after the UL new data switching due to pre-processing.
Observation 9: The proposal 3, 4 are also applicable to RLC UM.
Proposal 1: The on-going procedure to provide status report for the DL data transmission at the RLC AM entity associated to the source cell should not be impacted by UL new data switching.
Proposal 2: Only PDCP control PDU for ROHC feedback can be submitted from the single PDCP entity supporting DAPS to the RLC entity associated to the source cell after UL new data switching.
Proposal 3: The on-going transmitting operation at the transmitting side of the RLC entity associated to the source cell should not be impacted by UL new data switching.
Proposal 4: UE doesn't stop the on-going ARQ retransmission autonomously upon UL new data switching. The on-going retransmission operation at the transmitting side of the RLC entity associated to the source cell should not be impacted by UL new data switching.
Proposal 5: The impact to RLC should be minimized and nothing needs to be specified in RLC to support DAPS HO for both RLC AM and UM.

P5

- LGE thinks we need to discuss whether LTE RLC is impacted because there is no procedure for RLC release. Samsung thinks this is a modelling issue.
- Ericsson agrees with intention but is not sure we can rule out any impacts to RLC. LGE wonders if we know there will be something. Ericsson clarifies there might be but we will only know it later.

P1

- Samsung wonders if this means RLC status PDU. MediaTek agrees.

P2

- Samsung agrees but this has not been discussed so woudl postpone the decision. LGE thinks we agreed to this already. We only need to consider PDCP status PDU from source PDCP entity.
- Qualcomm agrees we already agreed to this.

P3/4

- Samsung thinks UL data switching means PDCP status switching so these are OK.

Agreements

1 The impact to RLC should be minimized and we do not create a running RLC CR for DAPS. If impacts are later identified, this can be revisited.
2 The on-going procedure to provide RLC status report for the DL data transmission at the RLC AM entity associated to the source cell should not be impacted by UL new data switching.
3 The on-going transmitting operation at the transmitting side of the RLC entity associated to the source cell should not be impacted by UL new data switching.
4 UE doesn't stop the on-going ARQ retransmission autonomously upon UL new data switching. The on-going retransmission operation at the transmitting side of the RLC entity associated to the source cell should not be impacted by UL new data switching.

=> FFS whether we need to consider EHC (from IIoT WID) in Rel-16.

R2-1914707 Clarification on the RLC handling of DAPS handover vivo discussion Rel-16 LTE_feMob-Core

Agreements

1 Upon the release of the source cell, RRC re-establishes the LTE RLC entity before releasing the LTE RLC entity.

- LGE thinks we should align to NR specifications. vivo thinks inn NR RLC re-establishment is not needed.
- Samsung thinks LTE RLC supports in-sequence delivery but NR doesn't always do that.
- Ericsson thinks the intnetion is that out-of-order packets are delivered to PDCP. LGE thinks that whether RLC entity delivers the packets to PDCP is up to UE implementation.
- Nokia si fine with this siunce it aligns with current specifications. Qualcomm agrees.
- LGE thinks this would need to be captured in RRC specification.

R2-1914610 RLC UM handling during DAPS HO MediaTek Inc., Apple, vivo, OPPO discussion

Observation 1: For RLC UM, if there is PDCP PDUs loss, UE can't deliver the PDCP SDUs received with SN larger than the SN of the lost PDCP SDU until t-Reordering expires, which will cause user plane data interruption.

Observation 2: The probability of data loss for RLC UM during HO is high and the gain to support RLC UM during DAPS HO is questionable.

Proposal 1: If the working assumption to support RLC UM during DAPS HO was confirmed, it should be realized in a simple way:

- PDCP SN number continuity is supported for both DL and UL;
- No need to perform retransmission of the PDCP SDUs;
- No need to trigger status report.

- LGE thinks we don't need to capture PDCP SN continuity as it was already agreed. Thinks we could allow retransmissions.
- Samsung thinks it would be strange to support lossless operation for RLC UM. Intel agrees.
- Qualcomm thinks we can allow status report for DL. Intel disagrees.
- Nokia wonders why status report would be needed. Ericsson thinks it could avoid duplicate packets. LGE agrees that this may be needed for early data forwarding. ZTE agrees.
- MediaTek clarifies that status report is not needed since lost PDCP SDUs are just lost. SN status transfer handles the rest. Intel thinks duplication increases robustness so nothing is needed.
- vivo thinks source can send updated SN status transfer to target. LGE thinks source doens't know what UE has received, only what's been transmitted.
- LGE thinks PDCP status reports is needed to avoid duplication, not to help lossless delivery.
- Samsung thinks this may be difficult for LTE compared to NR.

Agreements

1 The working assumption to support RLC UM during DAPS HO is confirmed (without optimizations to make it lossless, i.e. no retransmission).

⇨ **FFS whether PDCP status reporting for DAPS bearers is needed for UL or DL.**

R2-1915912	Discussion on DAPS HO for UM DRB	LG Electronics Inc.	discussion			NR_Mob_enh-Core
R2-1915452	DL PDCP handling for RLC UM	NEC	discussion	Rel-16	LTE_feMob-Core	R2-1913054
R2-1915768	RLC aspects of DAPS handover	Ericsson	discussion	Rel-16	NR_Mob_enh-Core	R2-1912357

CR on RLC UM support:

R2-1914515	PDCP SN continuity support for RLC UM bearers *(moved from 6.9.2)*	Qualcomm Incorporated	discussion

Release of source cell during DAPS:

R2-1914592	On Release of source cell in DAPS Handover Rel-16	Nokia, Nokia Shanghai Bell	discussion

Drawbacks:
Explicit: additional signalling
Implicit: UE and network are not synchronized when source is released, source wastes scheduling resources, unclear which candidate solution is chosen

Agreements

1 UE switches from single PDCP with DAPS to normal PDCP upon receiving an explicit signalling from the target cell.

P1:

- vivo thinks this could also be implicit e.g. after RACH completion. Samsung thinks T304 could also implicitly relase source configuration. Ericsson agrees RACH completion would also work. Nokia thinks source cell doesn't know when this happens. OPPO agrees with Nokia since source will keep scheduling data to UE. Samsung thinks it doesn't matter.
- Intel supports this proposal. Interdigital agrees. Qualcomm also agrees. LGE also agrees. Futurewei agrees. Huawei agrees. CATT agrees. NEC agrees.
- LGE wonders what sinlge PDCP means. Nokia clarifies it's PDCP during DAPS HO.
- Qualcomm thinks RAN3 already agreed to HO success message to source which has explicit context release. Ericsson thinks this is only used for final SN status transfer from source to target.

- Intel thinks normally network releases UE configurations.
- ZTE thinks explicit release is not needed and implicit is enough.

R2-1914817	Discussion on release of source cell in DAPS HO Rel-16 LTE_feMob-Core	ZTE Corporation, Sanechips	discussion
R2-1915965	Handling of releasing source stacks for DAPS *(moved from 7.3.2)*	China Telecommunications	discussion

PDCP entity changes for DAPS:

R2-1914607	Support the change between normal PDCP entity and DAPS PDCP entity	Mediatek Inc., Huawei, HiSilicon	discussion

Agreements

1 Confirm to use the term 'DAPS PDCP' to name the PDCP entity supporting DAPS.
2 The 'PDCP reconfiguration' procedure handles the two cases:
• Change from the normal PDCP entity to the DAPS PDCP entity;
• Change from the DAPS PDCP entity to normal PDCP entity.
3 When upper layers request a PDCP reconfiguration, UE shall performs PDCP reconfiguration from the normal PDCP to DAPS PDCP.
4 For the change from the normal PDCP to DAPS PDCP, UE establishes a ciphering function, integrity protection function and ROHC protocol stack and applies the security algorithms and keys provided by upper layer.
5 When upper layers request a PDCP reconfiguration and the source protocol is released, UE shall performs PDCP reconfiguration from DAPS PDCP to normal PDCP.
6 For the change from DAPS PDCP to the normal PDCP, UE releases the ciphering function, integrity protection function associated to the released RLC entity. FFS how RoHC is handled
7 PDCP status report is triggered when UL switching occurs (from MAC to RRC to PDCP). Since PDCP has switched to target, it is transmitted to target only.
FFS whether PDCP status report is triggered when upper layer requests a PDCP reconfiguration with source protocol release.
8 The state variables control the transmission and reception operation should not be reset and the timers including t-Reordering and discardTimer keeps running during PDCP reconfiguration procedure.

P1

- PDCP rapporteur would like to use "PDCP entity" for legacy and "DAPS PDCP entity" for new PDCP entity.
-

P4

- LGE thinks PDCP doesn't need to be aware of DAPS. Samsung wonders how this works. LGE clarifies the indiction toggles the PDCP state.

P5

- FW wonders if we need to consider reordering as well. MediaTek thinks that with single PDCP entity, we have only one reordering entity.

P6/7:

- vivo thinks UE can only release ciphering/RoHC when all PDCP PDUs are processed by the PDCP entity or the packets are lost. LGE thinks that source is released with explicit indication and there's no problem doing that.
- LGE thinks reordering may be an issue. Some PDUs in reordering might need to be decompressed with old RoHC protocol or they will fail header decompression. Thinks we did this in LTE by applying header decompression first and then storing then in reordering queue again.
- Samsung thinks we should leave RoHC as FFS.

P8:

- Ericsson thinks we should trigger status report immediately upon establishing the target link. LGE agrees.
- NEC thinks the early status report doesn't reflect the final status and should trigger status report when source part is released. LGE thinks early data forwarding works so that target has many PDCP PDUs stored and we should avoid retransmissions.
- Samsung thinks there are three options: 1) HO command reception, 2) UL switching and 3) Source release. Nokia thinks PDCP status at UL switching is needed.
- Nokia thinks SN status transfer can help with avoiding duplication. Ericsson thinks the second SN status transfer is sent at source release.

P9:

- samsung thinks these can be reconfigured during handover. UM also doesn't have t-Reordering. LGE disagrees. Samsung thinks this is oly for out-of-order delivery.

R2-1914608 Draft CR for 38.323 to support the change between normal PDCP and DAPS PDCP Mediatek Inc., Huawei, HiSilicon draftCR Rel-16 38.323 15.6.0 B NR_Mob_enh-Core

R2-1914609 Draft CR for 36.323 to support the change between normal PDCP and DAPS PDCP Mediatek Inc., Huawei, HiSilicon draftCR Rel-16 36.323 15.4.0 B LTE_feMob-Core

SDAP + PDCP:

R2-1914838 SDAP and PDCP handling for DAPS HO Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

R2-1915909 When to apply the target network configurations LG Electronics Inc. discussion NR_Mob_enh-Core

PDCP status reporting:

R2-1915451 Remaining issues on the PDCP anchor relocation for DPAS based handover NEC discussion Rel-16 LTE_feMob-Core R2-1913053

R2-1915911 Need of PDCP status report LG Electronics Inc. discussion NR_Mob_enh-Core

R2-1914619 PDCP status reporting in target cell at DAPS handover Ericsson discussion Rel-16 NR_Mob_enh-Core

Other PDCP details:

R2-1915346 Discussion on handover preparation for DAPS Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

R2-1915496 On per-DRB DAPS Handover in NR and LTE Nokia, Nokia Shanghai Bell discussion R2-1914705 Remaining PDCP issues of DAPS handover vivo discussion Rel-16 LTE_feMob-Core

R2-1915347 Discussion on PDCP duplication and reordering for DAPS HO Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

R2-1915039 Remaining FFSs on Data Forwarding for DAPS HO and CHO ETRI discussion Rel-16 NR_Mob_enh-Core

Rel-16 LTE_feMob-Core R2-1913157

R2-1915910 Need of discard indication LG Electronics Inc. discussion NR_Mob_enh-Core

UDC support:

R2-1914484 UDC Impacts of DAPS CATT discussion Rel-16 LTE_feMob-Core

Withdrawn:

R2-1914620 RLC retransmissions to source during DAPS HO Ericsson discussion Rel-16 NR_Mob_enh-Core R2-1912356 Withdrawn

R2-1914621 Specification impact from RLC-UM DAPS support Ericsson discussion Rel-16 NR_Mob_enh-Core R2-1912357 Withdrawn

7.3.2.1.2 MAC and UL transmission aspects of DAPS HO

Including outcome of email discussion [107bis#56][NR LTE MobE] Updated MAC running CR NR/LTE mobility (vivo)
Note: Handling the FFS on Msg.B details to be done when the 2-step RACH has progressed more.

Running MAC CRs as outcome of email discussion [107bis#56][NR LTE MobE] Updated MAC running CR NR/LTE mobility (vivo):

R2-1914695 Running 36.321 CR for LTE feMob vivo (rapporteur) CR Rel-16 36.321 15.7.0 1460 - B LTE_feMob-Core

- vivo points out there are editor's notes that could be discussed based on CP contributions.

⇨ **Endorsed as baseline CR.**

R2-1914696 Running 38.321 CR for NR mobility enh. vivo (rapporteur) CR Rel-16 38.321 15.7.0 0673 - B NR_Mob_enh-Core

- vivo points out there are editor's notes that could be discussed based on CP contributions.

⇨ **Endorsed as baseline CR.**

✉ **[108#65][LTE/NR] Running MAC CRs for LTE and NR (vivo)**
Updated running CR based on latest agreements (except CPAC).
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-30

UL switching:

R2-1915998 Discussion of UL data transmission switch for DAPS CMCC discussion Rel-16 NR_Mob_enh-Core Revised
(moved from 6.9.2)

R2-1916079 Discussion of UL data transmission switch for DAPS CMCC discussion Rel-16 NR_Mob_enh-Core R2-1915998
(moved from 7.3.2)

7.3.2.2 Control plane aspects of DAPS HO

No documents should be submitted to 7.3.2.2. Please submit to 7.3.2.2.x.

7.3.2.2.1 RRC procedures during DAPS HO

Including any remaining RRC configuration and procedural details, e.g. SRB handling, failure handling details,source cell configuration during DAPS HO (e.g. 1 or 2 messages), impacts of WA on per DRB DAPS configuration.

Source connection during DAPS HO:

R2-1914836 Control plane consideration for dual active protocol stack (DAPS) based RUDI HO Intel Corporation, Qualcomm Inc, Charter Communications, Mediatek Inc, Apple discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core R2-1912776
Observation 1. UE exchanges RRC signalling message with only one eNB at any given instance of time. UE exchanges RRC signalling messages with source eNB until UE receives HO command from source eNB and UE switches RRC signalling message exchange to target eNB after successful HO completion to target eNB.
Observation 2. UE does not expect any RRC messages generated by target node until the successful transmission of HO complete message.
Observation 3. UE can maintain the SRB configuration with source to enable the connection to the source to be resumed without the need for re-establishment in the event of HO failure on the target (T304 expiry)..
The followings are proposed:

P1

- Samsung wonders if this means the same PDCP structure (i.e. DAPS PDCP) is applied to SRBs. Intel larifies that this i snot the case and only path is siwtched from source to target.
- LGE thinks we don't have to stop SRB processing. We don't have to specify this. Intel clarifies that in current RRC CR, source SRB1 is suspended. LGE thinks that as log as RLM continues we shouldnät suspend SRB1. Intel thinks this would lead to two SRB1 being maintained.
- Nokia would like to be explicit abut SRB suspend.
- OPPO thinks we should first agree that after HO command, source eNB is not expected to send RRC messages to UE. Intel thinks this is already the normal network behaviour.
-

P2

- LGE thinks this meanbs SRB could have two PDCP entities. Should first consider if we have one or two SRBs. Prefers to have one SRB. Thinks UMTS had something similar in PDCP. Fallback case can be handled by storing PDCP COUNT.
- LGE thinks we don't need additional RBS for target cell.

P5:

- LGE thinks RRM may not stop. What happens to source RRM upon DAPS HO reception.

P6:

- vivo thinks we don't have to specify any behaviour for these.

Agreements

1 UE establishes PDCP entity for SRBs associated to the target node upon receiving DAPS HO command. UE does not re-establish PDCP entities for source SRBs during DAPS HO.
2 Once HO command is successfully received, UE can switch the RRC protocol signaling processing towards the target cell to receive any further RRC messages.

3 The UE releases the source SRB resources, security configuration of the source cell and stops DL/UL reception/transmission with source upon receiving explicit release from target node.
4 No changes to RRM during handover due to DAPS HO. (No changes needed to running CR)
5 After receiving HO command (RRCConnectionReconfiguration with mobility control info) from source cell, UE stops system information updates, short messages (for NR), paging, ETWS, CMAS reception for the source cell.
6 The UE re-starts system information updates, paging, short messages (for NR), ETWS, CMAS in source cell once resuming the connection to source successfully when target cell is failed.

R2-1914516 Source connection handling during MBB HO Qualcomm Incorporated discussion
(moved from 6.9.2)

R2-1914818 Remaing aspects of control plane handling in DAPS HO ZTE Corporation, Sanechips discussion Rel-16 LTE_feMob-Core

R2-1914622 Release of source cell at DAPS handover Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-1915041 Source Cell Release in DAPS Handover ETRI discussion Rel-16 NR_Mob_enh-Core R2-1913798

R2-1916166 Management of Control Plane during DAPS HO_NR LG Electronics France discussion NR_Mob_enh-Core
(moved from 6.9.2)

R2-1914875 Control Plane Aspects of DAPS HO InterDigital discussion Rel-16 NR_Mob_enh-Core
(moved from 7.3.2.2)

R2-1915040 Bye Message for DAPS Handover ETRI discussion Rel-16 NR_Mob_enh-Core R2-1913797

Per-DRB DAPS:

R2-1914624 On the configuration of DAPS handover per DRB Ericsson discussion Rel-16 NR_Mob_enh-Core
Observation 1 If the UE associates the DRBs not configured for DAPS with the target cell, these cannot be used in the source cell during DAPS handover.
Observation 2 Also the DRBs not configured for DAPS will suffer from the reduced target configuration during a DAPS handover. This is a limitation compared with legacy handover.
Observation 3 It is probably possible to specify that a DRB not configured for DAPS to be associated with source cell after fallback, if the UE keeps the source cell configuration.

Agreements

1 Confirm working assumption on per-DRB DAPS.
2 DRB not configured for DAPS is handled same way as in legacy HO.
FFS how to handle the fallback to source cell when target cell fails.

- Samsung thinks per-DRB DAPS was meant to allow network relaxation. Could just do same thing for all DRBs. No need to specify anything.

P1

- Intel wonders if this means we can't fallback to non-DAPS behviour. Ericsson thinks that's part of P2. Intel thinks this only works if we can restore COUNT.
- LGE thinks RLC UM may need different behaviour.

R2-1914519 Support per DRB MBB HO configuration Qualcomm Incorporated discussion
(moved from 6.9.2)
R2-1915932 DRB specific DAPS HO Apple discussion Rel-16 NR_Mob_enh-Core
(moved from 7.3.2)
R2-1914704 Failure handling of the non-DAPS DRB vivo discussion Rel-16 LTE_feMob-Core
R2-1916111 On per DAPS handover SHARP Corporation discussion Rel-16 LTE_feMob-Core

DAPS failure handling (e.g. fallback to source cell):

R2-1915501 Remaining details of DAPS failure handling Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_feMob-Core
R2-1915502 DraftCR for introducing the fallback to source cell in DAPS handover failure Nokia, Nokia Shanghai Bell draftCR Rel-16 36.331 15.7.0 B LTE_feMob-Core
R2-1914485 Remaining CP Issues of DAPS CATT discussion Rel-16 LTE_feMob-Core
R2-1914623 Fallback to source cell during DAPS handover Ericsson discussion Rel-16 NR_Mob_enh-Core
R2-1914840 DAPS failure handling Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

RRC messages used for DAPS HO:

R2-1916243 RRC message for source and target configuration SHARP Corporation discussion Rel-16 LTE_feMob-Core
Observation 1: Current RRC reconfiguration message for HO can include only the target configuration.
Observation 2: For example, by reusing of the architecture of the CHO RRC message, both source and target configurations can be included in one RRC reconfiguration message.
Observation 3: There are no enough time to consider the need of the source reconfiguration and the new message architecture in Rel.16.
Proposal: In Rel.16, two RRC messages are used for DAPS HO and any optimizations using one RRC message can be considered in Rel.17 if needed.

- LGE supports proposal 1.
- ZTE thinks combined message increases failure cases. Would like to use two messages. Samsung agrees to use two messages. Message could just indicate which to apply first.
- Nokia wonders what the problem is: Size limitation or something else? Intel thinks this is about RRC modelling on whether we use DC-like model. Qualcomm thinks we only use one message in CHO. vivo agrees. OPPO agrees and thinks DAPS HO could be triggered earlier than legacy HO.
- Intel thinks two messages is the existing way.
- Qualcomm thinks we never send two RC messages at the same time.
- Ericsson wonders if we modify the source, don't we need to wait until the reconfiguration is applied before sending the second message.

⇨ **Noted**

R2-1914708 Discussion on the signaling procedures of the DAPS HO vivo discussion Rel-16 LTE_feMob-Core R2-1912350

SRB handling:

R2-1915344 Considerations on control plane for DAPS Huawei, HiSilicon, China Telecom discussion Rel-16 LTE_feMob-Core

R2-1915154 SRB handling for DAPS handover OPPO discussion Rel-16 LTE_feMob-Core

R2-1914706 SRB handling of DAPS failure vivo discussion Rel-16 LTE_feMob-Core

7.3.2.2.2 UE capabilities for DAPS HO

Companies should provide their views to the email discussion and contributions submitted to this agenda items should focus on aspects that were not covered by the email.
Including outcome of email discussion [107bis#53][NR LTE MobE] UE capability structure DAPS/RUDI HO (Intel)

Outcome of email discussion [107bis#53][NR LTE MobE] UE capability structure DAPS/RUDI HO (Intel)

R2-1914832 [107bis#53][NR LTE MobE] UE capability structure DAPS/RUDI HO (Intel)- Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core Late

⇨**Noted.**

UE capabilities defined for DAPS:

R2-1915557 UE capabilities for DAPS handover Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1913016

R2-1914807 LTE DAPS handover UE RF chain requirements Qualcomm India Pvt Ltd, Google Inc, Apple Inc, Charter Communications, Intel Corporation discussion Rel-16 LTE_feMob-Core

R2-1915162 UE capabilities for DAPS HO OPPO discussion Rel-16 LTE_feMob-Core

R2-1916210 Handling Excess of UE Capability in DAPS HO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core R2-1913864
(moved from 6.9.3.3)

UE capability coordination for DAPS:

R2-1914804 UE capability co-ordination signalling aspects for DAPS HO Qualcomm India Pvt Ltd, Google Inc, Apple Inc, Charter Communications discussion Rel-16 LTE_feMob-Core

R2-1914483 Further Considerations on Capability Coordination for DAPS CATT discussion Rel-16 LTE_feMob-Core

R2-1914625 Capability coordination for DAPS handover Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-1914819 Remaining issues on UE capability coordination ZTE Corporation, Sanechips discussion Rel-16 LTE_feMob-Core

R2-1915155 Further considerations on capability coordination OPPO discussion Rel-16 LTE_feMob-Core
R2-1915348 Discussion on UE capability sharing for DAPS Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core
R2-1915453 Further consideration on capability coordination for DAPS based handover NEC discussion Rel-16 LTE_feMob-Core
R2-1915738 Capability coordination for DAPS, required UE capability details and signalling Samsung Telecommunications discussion Rel-16 LTE_feMob-Core Late

7.3.2.3 Other aspects of DAPS HO

Including any other open aspects of DAPS HO not covered by the other agenda items (for both LTE and NR).
R2-1916227 Single stack eMOB solution for NR Samsung R&D Institute India discussion

7.3.3 Conditional handover

Contributions on conditional handover for LTE and NR are treated jointly in under 6.9.3. Do not use this AI for any item that can be discussed jointly.

7.4 Further performance enhancement for LTE in high speed scenario

(LTE_high_speed_enh2-Core; leading WG: RAN4; REL-16; started: Jun 18; target; Sep 19; WID: RP-181482)
Time budget: 0 TU. No on-line treatment at R2#108. Final CR agreement at R2#109.

7.5 Other LTE Rel-16 WIs

This agenda item is to be used for LSs and documents relating to Rel-16 LTE but for which there is no existing RAN WI/SI (e.g. LSs from CT/SA requesting RAN2 action) or for which there is no allocated RAN2 time.
Including discussion on enhancements for Rel-15 QMC functionality as per discussion in RAN2#107bis

CR and LS for QMC:
R2-1914642 Additions to QoE measurement collection Ericsson CR Rel-16 36.331 15.7.0 4140 - C TEI16
R2-1914643 Draft reply LS on QoE Measurement Collection Ericsson LS out TEI16 To:SA5 Cc:CT1, RAN3, SA4

QMC enhancements in Rel-16:
R2-1915623 QoE measurements collection support in Rel-16 Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_QMC_Streaming
Observation 1: QoE Measurement Collection objective is to reuse MDT architecture and framework.
Observation 2: QoE Measurement Collection objective is to support container-based solution in RAN.
Proposal 1: In RAN2 view, areaScope does not need to be maintained in AS layer.
Proposal 2: In RAN2 view, QoE reference and UE request session id do not impact TS36.331.
Proposal 3: Confirm if the measReportAppLayerContainer-r15, which content is agnostic to RRC, can serve the streaming indication.
Proposal 4: Send the LS to SA5 with the Observations and Proposals.

R2-1914641 Discussion on incoming LSes for QoE measurement collection in LTE Ericsson discussion TEI16

Proposal 1: Correct the ASN.1 error so that several QoE measurements can be activated at the same time.

Proposal 2: Discuss and clarify when eNB should stop the QoE measurements in order not to interrupt any ongoing measurements and to avoid the UE from starting new measurements outside the area.

Proposal 3: Add the withinArea in the signalling at handover according to the incoming LS or give an explanation on how the problem can be solved otherwise.

Proposal 4: Wait for feedback from SA5 regarding the streaming indication.

Proposal 5: Wait for feedback from SA5 regarding the temporary stop and restart of QoE measurements.

Proposal 6: Add QoE Reference outside the container both for configuration and report.

Proposal 7: Add a UE capability for the support the release 16 additions for QoE measurements.

R2-1915841 Discussion on potential impacts to other WGs due to new QMC requirements from SA5 Huawei, HiSilicon discussion Rel-16 TEI16

R2-1915840 Technical considerations on new QMC requirements from SA5 Huawei, HiSilicon discussion Rel-16 TEI16 R2-1912763

Observation 1: Since QMC is only for Ues in RRC connected mode, it is our understanding that QoE reference and UE Request Session ID may not be needed to be sent to the UE.

Observation 2: The streaming indication may need for some clarifications from SA5. Currently there is no such indication for legacy QMC.

Observation 3: For the last two steps, i.e. MeasurementReport from UE AS to eNB, and Report from eNB to MCE, there is no QoE report. Currently the UE can send measReportAppLayerContainer-r15 and serviceType to eNB, and then eNB can forward them to OAM.

Discussion (of all of above Tdocs)

- Ericsson thinks SA4 has already implemented these in their specifications. Nokia thinks this is not under WID and we should consider technical issues in the work. Could indicate that SA4 are breaking some assumptions in RRC signalling.
- Ericsson agrees that HO indication is not needed and this could be pointed out in LS. Nokia thinks the requirement is technically wrong and we should try to minimize the impacts to RAN2 if we do anything. Some RAN3 work may also be required.
- Huawei would like to send LS to SA4 with RAN2 observations.

⇨ **Offline 104 (Ericsson): Revised LS to SA5 with RAN2 observations and concerns. Consider also whether to send the LS to SA, CT and RAN. Revised LS can be provided in R2-1916315. (CBT)**

R2-1916315 Draft reply LS on QoE Measurement Collection Ericsson LS out TEI16 To:SA5 Cc:CT1, RAN3, SA4, RAN

- Nokia thinks the LS is incorrect wrt. LS reference.
- Nokia thinks the bullet on handover is not correct: Handover ius supported but QMC config is not propagate during HO. Ericsson disagrees and thinks there are different views. Nokia thinks we should refer to Stage-2 specs in 36.300.

⇨ **Correct R2-1912640 to R2-1912061 in text.**
⇨ **Check whether we can refer to TS36.300 on HO support**
⇨ **Revised LS draft can be provided in R2-1916326 (CBF)**

R2-1916326 Draft reply LS on QoE Measurement Collection Ericsson LS out TEI16 To:SA5 Cc:CT1, RAN3, SA4, RAN

⇨ **Approved, the final LS can be provided in R2-1916328, to be approved unseen.**

R2-1916328 Reply LS on QoE Measurement Collection RAN2 LS out TEI16 To:SA5 Cc:CT1, RAN3, SA4, RAN

⇨ **The LS is approved unseen**

7.6 LTE TEI16 enhancements

Small Technical Enhancements to LTE. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see RP-191602 endorsed at RAN#84.

Time budget: 0.5 TU

Including outcome of email discussion [107bis#51][LTE R16] Handling of non-3GPP paging for Rel-16 UEs (Huawei)

Peak data rates for Cat-M1 UEs:

R2-1914770 Increased peak data rate for HD-FDD MTC UEs Qualcomm Incorporated, Orange, Sierra Wireless, Verizon, Ericsson, Sequans, Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16

- Huawei agrees with P1 and P2 but doesn't agree with the technical analysis. Soft buffer size could limit the peak data rates anyway and increasing the number of HARQ processes affects the soft buffer size as the RLC RTT time increases. This would impact 36.306. Qualcomm thinks TDD has 16 HARQ processes and that didn't affect soft buffer sizes. Ericsson thinks this is related to RAN1 discussion.
- Qualcomm clarifies that HARQ processes may be overbooked.
- MediaTek thinks there's issue with HARQ RTT: 14 processes increases the RTT time (which is currently 15ms). Could have also other number of HARQ processes. Qualcomm thinks RAN1 decided on this and RAN2 shoulnd't speculate on this. Ericsson doesn't see technical issues here.
- Huawei thinks DRX timers could be affected.
- MediaTek thinks the datarate with 10 and 14 processes is the same. Qualcomm clarifies that HARQ processes allows more data transmission with PDSCH while sending ACK for previous ones.
- Huawei thinks TDD is not the question here and RLC RTT still needs to be considered.
- Huawe wonders if we would need new UE category. Qualcomm thinks UE categories already support multiple data rates, even thought e.g. half-duplex would affect that. Ericsson agrees.
- Intel supports the proposal.
- Huawei thinks RAN plenary would need to know about this proposal.
- Qualcomm indicates this would increase peak data rate for half-duplex Cat-M1, not for full duplex Cat-M1 UEs.
- Huawei thinks L2 buffer size needs to be big enough to allow peak data rates. RLC RTT affects this.
- ZTE thinks that TEI impacts should be smaller.
- Qualcomm indicates RAN1 majority didn't consider RAN2 work is needed.

R2-1914771 [DRAFT] Rely LS on support of high peak data rate for Cat-M1 UEs in HD-FDD Qualcomm Incorporated LS out Rel-16 TEI16 To:RAN1

- Huawei thinks this should be sent to RAN as well if this would require new UE category.

Offline discussion 103 (Qualcomm): Revised reply LS to RAN1 indicating this is feasible from RAN2 perspective and RAN1 can proceed. Since some companies think it might require some RAN2 work (TBD), consider whether some RAN2 technical aspects (i.e. RLC RTT) need to be included and whether RANP needs to be CC'ed. Revised LS can be provided in R2-1916314 (CBT)

R2-1916314 [DRAFT] Rely LS on support of high peak data rate for Cat-M1 UEs in HD-FDD Qualcomm Incorporated LS out Rel-16 TEI16 To:RAN1

- Huawei has some minor issues and wonders why new UE category is not included. Thinks we can't agree because RAN2 has not concluded on all aspects. Would like to include RAN in "to"-field.
- Qualcomm thinks UE category is not an issue and think UE categories allow different data rates. Also the L2 buffer size calculation has no issue as discsused in email. Even with 137ms RLC RTT there were no problems.
- Huawei would like to delete that last sentence. Orange thinks this is a good compromise and thinks we should keep the last sentence.
- MediaTek thinks feasibility is fine but there are concerns.

- Qualcomm suggests “Therefore, from RAN2 viewpoint, RAN1 can proceed with the above as TEI for Rel-16.”
- MediaTek thinks UE category is RAN topic.
- Huawei would like to add question to RAN to consider a new UE category.
  - ⇨ **Remove the last sentence and add “and RAN1 can proceed with their technical work.” to the first sentence.**
  - ⇨ **Put RAN in “To”-field without modifying the ACTION-field.**
  - ⇨ **Revised version approved with these changes in R2-1916327, to be approved unseen**

R2-1916327 Reply LS on support of high peak data rate for Cat-M1 UEs in HD-FDD RAN2 LS out Rel-16 TEI16 To:RAN1, RAN

- ⇨ **LS is approved unseen**

Outcome of email discussion [107bis#51][LTE R16] Handling of non-3GPP paging for Rel-16 UEs (Huawei)

R2-1915842 Report of email discussion 107b-51 Huawei discussion Rel-16 LTE_5GCN_connect-Core, TEI16

Agreements
1: Extend UE-RadioPagingInfo IE to indicate the UE release information. 2: For a Rel-16 UE on a non-3GPP paging, it is required to monitor both Rel-15 and Rel-16 non-3GPP access types. The network should ensure that only one type of non-3GPP access type is included in one paging message if there is a non-3GPP paging, i.e. either Rel-15 non-3GPP access type or Rel-16 non-3GPP access type. 3: The Rel-16 non-3GPP access type is applicable to eMTC Ues if they use 5GC.

- Nokia is fine with the proposals. Intel and Qualcomm are also fine.

R2-1915843 Correction on non-3GPP paging Huawei, HiSilicon CR Rel-16 36.331 15.7.0 4172 - B LTE_5GCN_connect-Core, TEI16

- Lenovo thinks the accessType field description could be clarified as it now looks inconsistent (first sentence says both can’t be present, second considers case where they are)
- Lenovo wonders why we start with Rel-15 for AS-release in RadioPagingInfo, could omit that
- Nokia wonders if we need this flexibility and could just say “rel-16 and above”. Qualcomm agrees

  - ⇨ **Clarify field description of *accessType*.**
  - ⇨ **Change the field *accessStratumRelease* to have only one value and rename it to indicate the meaning.**
  - ⇨ **Revised CR can be provided in R2-1916316 (CBT)**

R2-1916316 Correction on non-3GPP paging Huawei, HiSilicon CR Rel-16 36.331 15.7.0 4172 1 C LTE_5GCN_connect-Core, TEI16

- ⇨ **CR is Endorsed.**

Early security re-activation in RRC resume:

R2-1915794 Early security re-activation discussion Ericsson, LG electronics Inc, Sierra Wireless, Qualcomm Inc Rel-16 TEI16

Observation 1 UE capable of UP-EDT, MT-EDT, PUR or connecting to 5GC is already capable of early security re-activation.
Observation 2 Early security re-activation enables unified handling of security and consistent security/protection level (across use cases/scenarios).

Proposal 1 Introduce support for early security re-activation independent of UE support of UP-EDT or connectivity to 5GC in Rel-16.
Proposal 2 For UEs supporting early security re-activation, NCC is provided in RRCConnectionRelease with suspend indication for support of early security.

Proposal 3 The UE supporting early security re-activation and with NCC provided during suspend shall perform early security in cells where early security re-activation is enabled, i.e., re-activates AS security using the NCC, resumes radio bearers, and restores AS states before Msg3 transmission.
Proposal 4 The UE ignores the NCC field received in the RRCConnectionResume message in response to the RRCConnectionResumeRequest message with early security re-activation.
Proposal 5 Introduce early security re-activation as a separate UE capability.
Proposal 6 Introduce indication whether early security re-activation is enabled in the cell in SIB2.
Proposal 7 The above proposals are applicable also for NB-IoT.

- Huawei would like to understand whether this is fully independent of UP-EDT and UP-EDT would not use this flag. Ericsson clarifies this is intended to be the case and is not linked to UP-EDT in any way.
- Nokia wonders what the benefit of this feature is for regular UEs. Ericsson thinks this would allow Msg3/Msg4 to be sent with AS security activated. Thinks this is the same as in RRC_INACTIVE already. Intel agrees Msg4 can be encrypted.
- Ericsson indicates several features now assume early security activation except regular UEs.
- ZTE thinks there's no data in Msg3/4 for normal UEs.
- Qualcomm thinks there are many clauses in specification that handle specific cases that this could simplify. Huawei thinks this is not an argument as such.
- Nokia is not sure of the benefits. Ericsson thinks UP-EDT UEs will have similar functionality.
- Huawei thinks the proposal is different from RRC_INACTIVE for RoHC context.

⇨ **Check if there are technical details not considered in the CRs (CBT)**

- Ericson indicates there are no other technical aspects to be considered. Some doubt benefits but nobody objects.

⇨ **RAN2 will work on this enhancement.**

- Ericsson thinks there is one open issue that was not addressed yet and could be handled in email discussion.

⇨ **CRs should be submitted to next meeting by proponents.**

R2-1915795 Early security re-activation at RRC Connection Resume - Alternative 1 Ericsson, LG Electronics Inc, Sierra Wireless, Qualcomm Inc CR Rel-16 36.331 15.7.0 4166 - B TEI16

R2-1915796 Early security re-activation at RRC Connection Resume - Alternative 2 Ericsson, LG Electronics, Sierra Wireless, Qualcomm Inc CR Rel-16 36.331 15.7.0 4167 - B TEI16

R2-1915797 Early security re-activation at RRC Connection Resume Ericsson, LG Electronics Inc, Sierra Wireless, Qualcomm Inc. CR Rel-16 36.306 15.6.0 1723 - B TEI16

Wideband PRG (agreed with modifications in RAN2#107bis):

R2-1915875 Introduction of wideband PRG size Huawei, HiSilicon CR Rel-16 36.306 15.6.0 1724 - B TEI16

R2-1915876 Introduction of wideband PRG size Huawei, HiSilicon CR Rel-16 36.331 15.7.0 4173 - B TEI16

⇨**Postponed**

UDC enhancements for Rel-16 (agreed to be done in RAN2#107bis):

R2-1915877 UDC reconfiguration for RRC connection re-establishment case Huawei, HiSilicon CR Rel-16 36.331 15.7.0 4174 - C TEI16

⇨**Postponed**

Access control for IMS signalling:

R2-1916261 Different Access Control Treatment for IMS signaling in EPS Intel Corporation CR Rel-16 36.331 15.7.0 4180 - C TEI16 Late

7.7 Support of Indian Navigation Satellite System (NavIC)

(LCS_NAVIC; leading WG: RAN2; REL-16; started: Sept 19; target; March-20; WID: RP-192350)
Time budget: 0.5 TU

R2-1914764 CR of TS 36.355 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.355 15.5.0 0247 2 B LCS_NAVIC R2-1914071 Late
⇨ Revised in R2-1916293

R2-1916293 CR of TS 36.355 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.355 15.5.0 0247 3 B LCS_NAVIC R2-1914764
Spirent observe there are some typos to be cleaned up.
Offline discussion #506, CEWiT; revision in R2-1916406.
⇨ Revised in R2-1916406

R2-1916406 CR of TS 36.355 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.355 15.5.0 0247 4 B LCS_NAVIC R2-1916293

R2-1914765 CR of TS 36.331 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.331 15.7.0 4137 1 B LCS_NAVIC R2-1913939 Late
⇨ Revised in R2-1916294

R2-1916294 CR of TS 36.331 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.331 15.7.0 4137 2 B LCS_NAVIC R2-1914765
Nokia think there is some confusion about the IDC aspects and wonder how the legacy eNB will handle the Rel-16 VictimSystemType. They think a better approach might be to have the new field add only the NavIC victim type.
Nokia also wonder if there is impact related to the UL CA IDC information, and think this should be discussed in the main session with IDC experts.
CEWiT consider that the VictimSystemType could be updated as suggested by Nokia, but they think considering the band used for NavIC there is no impact on the UL CA bands.
Offline discussion to progress the IDC aspects. Offline discussion #507, CEWiT; revision in R2-1916407.
⇨ Revised in R2-1916407

R2-1916407 CR of TS 36.331 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.331 15.7.0 4137 3 B LCS_NAVIC R2-1916294

R2-1914766 CR of TS 36.305 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.305 15.4.0 0084 1 B LCS_NAVIC R2-1913937 Late

ESA think there are some instances of using the GNSS term and listing only the global systems, where in the CR NavIC is added. They think we should not add regional systems to these lists.
To be revised as part of offline discussion #506 (CEWiT); revision in R2-1916408.
⇨ Revised in R2-1916408

R2-1916408 CR of TS 36.305 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.305 15.4.0 0084 2 B LCS_NAVIC R2-1914766

R2-1914767 Support for Indian Navigation Satellite System (NavIC) Reliance Jio discussion Rel-16 R2-1912306 Late

7.8 DL MIMO efficiency enhancements for LTE

(LTE_DL_MIMO_EE-Core; leading WG: RAN1; REL-16;target; March-20; WID: RP-182901)
Time budget: 0.5 TU

R2-1915878 Discussion on DL MIMO efficiency enhancement Huawei, HiSilicon discussion Rel-16 LTE_DL_MIMO_EE-Core
Observation 1: RAN2 only focus on the new signaling design for configuration and UE capability.
Observation 2: The value range of p0-UE-additionalSRS is still under discussion in RAN1.
Observation 3: For DL MIMO efficiency enhancement, the UE capabilities related to short TTI transmission and guard period are still under discussion in RAN1 and RAN4.
Proposal 1: RAN2 waits for RAN1 and RAN4 further progress on the value range of p0-UE-additionalSRS, and UE capabilities related to short TTI transmission and guard period.
Proposal 2: RAN2 endorse the CRs for DL MIMO efficiency enhancement.

- Qualcomm agrees with O1, O3 and P1.
- Ericsson thinks one agreement on PHR reporting was not considered in the paper which is considered in 5644.

R2-1915644 Introduction of Additional SRS Ericsson CR Rel-16 36.321 15.7.0 1461 - B LTE_DL_MIMO_EE-Core
- Ercisson indicates there might be a third case but RAN1 is still discussing
- Qualcomm thinks this is good baseline
- Ericsson thinks we have to wait for RAN1 still

⇨ **Updated CR (with latest RAN1 details) to be provided to next meeting**

R2-1915879 Introduction of DL MIMO efficiency enhancement Huawei, HiSilicon CR Rel-16 36.306 15.6.0 1725 - B LTE_DL_MIMO_EE-Core
R2-1915880 Introduction of DL MIMO efficiency enhancement Huawei, HiSilicon CR Rel-16 36.331 15.7.0 4175 - B LTE_DL_MIMO_EE-Core

- Ericsson wonders why some RAN1 parameters were not added and whether signalling was correct. Qualcomm also has some comments.
- Lenovo thinks we should try to extend legacy fields but is not sure what is the right way to do so.

⇨ **Offline discussion 105 (Huawei): Revise the CRs to take comments into account (RAN1 parameters missing, extension of fields, etc). Revised CRs can be provided in R2-1916317 (36.306) and R2-1916318 (36.331)**

R2-1916317 Introduction of DL MIMO efficiency enhancement Huawei, HiSilicon CR Rel-16 36.306 15.6.0 1725 1 B LTE_DL_MIMO_EE-Core

R2-1916318 Introduction of DL MIMO efficiency enhancement Huawei, HiSilicon CR Rel-16 36.331 15.7.0 4175 1 B LTE_DL_MIMO_EE-Core

- Huawei indicates there have been some comments.
  - ⇨ **CRs are endorsed as baseline**
  - ⇨ **Updated CRs should be submitted to next meeting with latest RAN1 status.**

7.9 LTE-based 5G Terrestrial Broadcast

(LTE_terr_bcast-Core; leading WG: RAN1; REL-16; target; March-20; WID: RP-182924)
Time budget: 0 TU. No on-line treatment at R2#108. CR agreement at R2#109.

- ⇨ **WID Rapporteur is expected to provide CR on L1 parameters (as per R2-1914321) of this WID for RAN2#109 as discussed in the main session.**

8 Breakout session reports

No documents shall be submitted to this AI or its sub-AIs. It is only for at-meeting-generated contents.

8.1 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility

R2-1916281 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility Vice Chairman (Nokia) report

⇒ **approved**

As continuation of offline discussion 100, revised Rel-15 CR can be provided in **R2-1916323**.

R2-1916306 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR Rel-13 36.331 13.14.0 4181 - F LTE_CA_enh_b5C-Core, TEI15

⇒ **Agreed**

R2-1916307 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR Rel-14 36.331 14.12.0 4182 - A LTE_CA_enh_b5C-Core, TEI15

⇒ **Agreed**

R2-1916323 Clarification on sCellIndex and SCell lists Ericsson, Nokia, Nokia Shanghai Bell, ZTE CR Rel-15 36.331 15.7.0 4160 2 A LTE_CA_enh_b5C-Core, TEI15

⇒ **Agreed**

Discuss together with the NR CR in main session.

R2-1916529 Restoring RoHC/SDAP during INACTIVe Resume Intel CR Rel-15 36.331 15.7.0 4183 - F LTE_5GCN_connect-Core Late

⇒ **agreed**

NR feMOB

Send LS to RAN3 (cc: RAN, RAN4) on our agreements for CPAC (CATT) and indicate RAN2 sees no RAN3 impact for intra-SN change without MN involvement. LS can be provided in **R2-1916330**.

R2-1916330 LS on Conditional PSCell addition/change RAN2 LS out Rel-16 NR_Mob_enh-Core To:RAN3, CC: RAN, RAN4

⇒ **Approved (this is the final version)**

8.2 Report from session on SRVCC, CLI, PRN, eMIMO, RACS

R2-1916282 Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS Vice Chairman (ZTE) report

⇒ **approved**

8.3 Report from session on eMTC

R2-1916283 Report eMTC breakout session Session chair (Ericsson)report

⇒ **approved**

8.4 Report from session on NR-U, Power Savings, NTN and 2-step RACH

R2-1916284 Session minutes for NR-U, Power Savings, NTN and 2-step RACH Session chair (InterDigital) report

- CATT indicate that R1 has generated an LS on CSI relation to Power saving. CATT wonder if this can be taken into account.
- IDT think that the general recommendation is to take into account R1 outcome asap.

⇒ **approved**

8.5 Report from session on Rel-15 and 16 LTE and NR positioning

R2-1916285 Report from session on Rel-15 and 16 LTE and NR positioning Session chair (MediaTek) report

- Ericsson wonders about on-demand SI in connected. MTK explains that the desire has been acknowledged, but details are for email discussion next meeting

⇒ **approved**

R2-1916406 CR of TS 36.355 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.355 15.5.0 0247 4 B LCS_NAVIC R2-1916293

⇒ **agreed in principle**

R2-1916407 CR of TS 36.331 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.331 15.7.0 4137 3 B LCS_NAVIC R2-1916294

⇒ **agreed in principle**

R2-1916408 CR of TS 36.305 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.305 15.4.0 0084 2 B LCS_NAVIC R2-1914766

⇒ **agreed in principle**

8.6 Report from session on SON/MDT

R2-1916286 Report from SON/MDT session Session chair (CMCC) report

The following email discussion is agreed:

✉ **[108#49][NR MDT] running 38.306 CR (vivo)**
Intended outcome: Running CR to support UE capabilities for SON/MDT
Deadline: 2020-01-30

Approved LS outs with numbers:

R2-1916416 **[DRAFT]** LS on trace related configurations for NR MDT Huawei
=> Approved in R2-1916598

R2-1916417 Draft LS on EN-DC related MDT configuration details Ericsson
=> change to “RAN2 understand that X2 inter node signaling is the suitable place to introduce the forwarding of MDT configuration from MN to SN.”
=> with this change, LS is approved in R2-1916579.

R2-1916418 LS on Logged Measurements CMCC LS out Rel-16 NR_SON_MDT-Core To:RAN4
=> LS is approved in R2-1916588.

R2-1916420 [Draft] LS on RACH report and RLF report. Ericsson
=> Remove SA5
=> Add the agreement on MRO
=> With these changes, LS is approved in R2-1916580

8.7 Report from session on NB-IoT

R2-1916287 Report NB-IoT breakout session Session chair (Huawei) report

⇒ **approved**

8.8 Report from session on LTE V2X and NR V2X

R2-1916288 Report from session on LTE V2X and NR V2X Session chair (Samsung) report

⇒ **approved**

R2-1914604 Notification for Alternative QoS profiles Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core
DISCUSSION
- Samsung think other groups have already discussed this. Ericsson think we should do this.
- Samsung thikn SA2 has the overview.

⇒ **noted**

R2-1914605 LS on Notification for Alternative QoS profiles Nokia, Nokia Shanghai Bell LS out Rel-16 5G_V2X_NRSL-Core To:SA2 Cc:RAN3

⇒ **postponed**

Closing of the meeting (17:00)

The meeting was closed by the chairman at 17:26 on Friday, 22nd of November.

Annex A: List of participants

RAN2#108 participants list is at:
https://portal.3gpp.org/Home.aspx#/participantslist?MtgId=32835

Total number of participants: 332 (registered 394)

Annex B: List of Tdocs

The list of tdocs from RAN2#108 is attached to this report.
Total of 2336 tdoc numbers were allocated of which 2262 tdocs were made available.

Annex C: Incoming liaison statements

TDoc	Title	Source	Status	Rel	Related WIs	To	Cc	Original LS

R2-1914302	LS on channel quality report for LTE-MTC (R1-1911386; contact: Samsung)	RAN1	noted	Rel-16	LTE_eMTC5-Core	RAN2, RAN4		R1-1911386
R2-1914303	LS on support of high peak data rate for Cat-M1 UEs in HD-FDD (R1-1911398; contact: Qualcomm)	RAN1	noted	Rel-16	TEI16	RAN2		R1-1911398
R2-1914304	LS on PUR transmission for NB-IoT/eMTC (R1-1911399; contact: Futurewei)	RAN1	noted	Rel-16	NB_IOTenh3, LTE_eMTC5	RAN2	RAN4	R1-1911399
R2-1914305	LS on PDCCH-based Power Saving Signal/Channel carrying indication of UE wakeup before DRX ON (R1-1911475; contact: CATT)	RAN1	noted	Rel-16	NR_UE_pow_sav-Core	RAN2		R1-1911475
R2-1914306	LS on NR IAB case-1 timing (R1-1911548; contact: ZTE)	RAN1	noted	Rel-16	NR_IAB-Core	RAN2	RAN4	R1-1911548
R2-1914307	LS on UE higher layer signalling for cross-slot scheduling (R1-1911586; contact: MediaTek)	RAN1	noted	Rel-16	NR_UE_pow_sav-Core	RAN2		R1-1911586
R2-1914308	LS on simultaneous TCI state activation and spatial relation update across multiple CCs/BWPs by MAC-CE (R1-1911617; contact: LGE)	RAN1	noted	Rel-16	NR_eMIMO-Core	RAN2		R1-1911617
R2-1914309	LS on SCell BFR (R1-1911619; contact: Apple)	RAN1	noted	Rel-16	NR_eMIMO-Core	RAN2		R1-1911619
R2-1914310	LS on SRS for NR Positioning (R1-1911634; contact: Intel)	RAN1	noted	Rel-16	NR_pos	RAN2, RAN3	RAN4	R1-1911634
R2-1914311	Reply to LS on differentiating between MSG2 and MSGB (R1-1911656; contact: Nokia)	RAN1	noted	Rel-16	NR_2step_RACH	RAN2	RAN3, RAN4	R1-1911656
R2-1914313	Reply LS on propagation delay compensation for reference time information delivery (R1-1911693; contact: Nokia)	RAN1	noted	Rel-16	NR_IIOT-Core	RAN2		R1-1911693
R2-1914314	LS on signalling of sidelink RSRP and CSI between UEs (R1-1911698; contact: LGE)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2		R1-1911698
R2-1914315	Reply LS on SL RLM/RLF (R1-1911699; contact: InterDigital)	RAN1	noted	Rel-16	5G_V2X_NRSL	RAN2		R1-1911699
R2-1914316	Reply LS on additional PDCCH monitoring occasions for paging for NR-U (R1-1911705; contact: ZTE)	RAN1	noted	Rel-16	NR_unlic-Core	RAN2		R1-1911705
R2-1914317	LS on NR V2X synchronization procedures (R1-1911718; contact: CATT)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2	RAN4	R1-1911718
R2-1914318	Reply LS on UL-SL prioritization (R1-1911720; contact: OPPO)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2, RAN4		R1-1911720
R2-1914319	Reply to LS on RAN2 agreements related to 2-step RACH (R1-1911739; contact: Nokia)	RAN1	noted	Rel-16	NR_2step_RACH	RAN2		R1-1911739
R2-1914320	Reply LS on ambiguity of UE L1 FDD/TDD FR1/FR2 capabilities (R1-1911741; contact: ZTE)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2		R1-1911741
R2-1914321	LS on Rel-16 LTE and NR parameter lists (R1-1911745; contact: Qualcomm)	RAN1	noted	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core, LTE_DL_MIMO_EE-Core, LTE_terr_bcast-Core, NR_2step_RACH-Core, NR_unlic-Core, NR_IAB-Core,	RAN2, RAN3		R1-1911745

					5G_V2X_NRSL-Core, NR_L1enh_URLLC-Core, NR_IIOT-Core, NR_eMIMO-Core, NR_UE_pow_sav-Core, NR_pos-Core, NR_Mob_enh-Core, LTE_NR_DC_CA_enh			
R2-1914322	LS on additional high layer information for sidelink physical layer operations (R1-1911746; contact: LGE)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2		R1-1911746
R2-1914323	LS on aspects of Mission Critical Services over 5MBS (S6-192003; contact: AT&T)	SA6	noted	Rel-17	FS_MC5MBS	SA, RAN, SA2, RAN2, RAN3	SA1	S6-192003
R2-1914324	LS Reply on maximum value of MDBV (C3-194330; contact: Nokia)	CT3	noted	Rel-16	5GS_Ph1	SA2	RAN1, RAN2, RAN3, CT4, SA1	C3-194330
R2-1914325	LS on CLI measurement reporting range (R4-1911416; contact: LGE)	RAN4	withdrawn	Rel-16	NR_CLI_RIM-Core	RAN2		R4-1911416
R2-1914326	LS on NID structure and length (C4-194332; contact: Ericsson)	CT4	noted	Rel-16	Vertical_LAN	RAN2, RAN3, CT1, CT3	SA2	C4-194332
R2-1914327	LS on NR IAB case-1 timing (R1-1911548; contact: ZTE)	RAN1	withdrawn	Rel-16	NR_IAB-Core	RAN2	RAN4	R1-1911548
R2-1914328	LS to SA3 on False Base Station Detection (R3-196256; contact: Huawei)	RAN3	noted	Rel-16	FS_5GFBS	SA3	RAN2	R3-196256
R2-1914329	LS on PRACH configuration conflict detection (R3-196270; contact: CATT)	RAN3	noted	Rel-16	NR_SON_MDT	RAN1, RAN2		R3-196270
R2-1914330	LS on resource coordination between NG-RAN nodes for NR V2X sidelink communication (R3-196280; contact: Ericsson)	RAN3	noted	Rel-16	5G_V2X_NRSL-Core	RAN2		R3-196280
R2-1914331	LS on IP assignment in IAB network (R3-196284; contact: Samsung)	RAN3	noted	Rel-16	NR_IAB	RAN2		R3-196284
R2-1914332	Reply LS on CSI-RS configuration transfer (R3-196288; contact: China Telecom)	RAN3	noted	Rel-16	TEI16	RAN2	RAN1	R3-196288
R2-1914333	LS on CLI measurement reporting range (R4-1911416; contact: LGE)	RAN4	noted	Rel-16	NR_CLI_RIM-Core	RAN2		R4-1911416
R2-1914334	Reply LS on definition for SFTD measurement (R4-1912704; contact: Apple)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN1	RAN2	R4-1912704
R2-1914335	Reply LS on SFTD measurement (R4-1912705; contact: Intel)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2	RAN1	R4-1912705
R2-1914336	LS on NR Mobility Enhancements (R4-1912707; contact: Intel)	RAN4	noted	Rel-16	NR_Mob_enh-Core	RAN2		R4-1912707
R2-1914337	LS Response on the feasibility of time synchronization accuracy requirements and related testing (R4-1912743; contact: Nokia	RAN4	noted	Rel-16	NR_IIOT-Core	RAN1, RAN2	RAN5	R4-1912743
R2-1914338	Reply LS on second SMTC	RAN4	noted	Rel-16	TEI16	RAN2	RAN1	R4-1912744

	periodicity in idle mode (R4-1912744; contact: Orange)							
R2-1914339	LS on thresholds for serving cell RSRP change based TA validation in PUR (R4-1912782; contact: Huawei)	RAN4	noted	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core	RAN2	RAN1	R4-1912782
R2-1914340	LS on sidelink synchronization under multiple synchronization sources with different timing (R4-1912826; contact: Qualcomm)	RAN4	noted	Rel-16	5G_V2X_NRS L-Core	RAN2	RAN1	R4-1912826
R2-1914341	LS reply on NR V2X cross-RAT configuration (R4-1912874; contact: Huawei)	RAN4	noted	Rel-16	5G_V2X_NRS L-Core	RAN2	RAN1	R4-1912874
R2-1914342	LS on sync raster for NR V2X (R4-1913063; contact: Vivo, CATT)	RAN4	noted	Rel-16	5G_V2X_NRS L-Core	RAN1, RAN2		R4-1913063
R2-1914343	Reply LS on mapping between LTE V2X PPPP and NR V2X priority (S2-1909987; contact: Qualcomm)	SA2	noted	Rel-16	eV2XARC	RAN1	RAN2	S2-1909987
R2-1914344	Reply LS on LS on the IAB-indication to core network (S2-1910281; contact: Qualcomm)	SA2	noted	Rel-16	IABARC	RAN3	RAN2, SA3, SA5	S2-1910281
R2-1914345	LS on IAB terminology update (S2-1910349; contact: Nokia)	SA2	noted	Rel-16	IABARC	RAN2, RAN3	RAN, SA	S2-1910349
R2-1914346	Reply LS on assistance indication for WUS (S2-1910549; contact: Qualcomm)	SA2	noted	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	RAN2, CT1, RAN3		S2-1910549
R2-1914347	Reply LS on LTE-M identification in 5GC (S2-1910644; contact: Orange)	SA2	noted	Rel-16	5G_CIoT	RAN2, RAN3	RAN	S2-1910644
R2-1914348	Reply LS on LS on maximum value of MDBV (S2-1910663; contact: Qualcomm)	SA2	noted	Rel-15	5GS_Ph1	RAN3, CT4, CT3	RAN1, RAN2, SA1	S2-1910663
R2-1914349	LS Reply on Handling of multiple PLMN-assigned capability IDs (S2-1910680; contact: vivo)	SA2	noted	Rel-16	RACS-RAN, RACS	RAN2		S2-1910680
R2-1914350	Reply LS on Sidelink HARQ Feedback for Groupcast (S2-1910771; contact: LGE)	SA2	noted	Rel-16	eV2XARC, 5G_V2X_NRS L-Core	RAN1, RAN2		S2-1910771
R2-1914351	Reply LS on NID structure and length (S2-1910784; contact: Ericsson)	SA2	noted	Rel-15	Vertical_LAN	RAN2, RAN3, CT1, CT4	CT3	S2-1910784
R2-1914352	LS on dependencies on AS design for mobility management aspects of NTN in 5GS (S2-1910786; contact: Qualcomm)	SA2	noted	Rel-16	FS_5GSAT_ARCH	RAN2, RAN3	CT1	S2-1910786
R2-1914353	LS on system level design assumptions for satellite in 5GS (S2-1910787; contact: Qualcomm)	SA2	noted	Rel-16	FS_5GSAT_ARCH	RAN2, RAN3	CT1	S2-1910787
R2-1914354	Reply LS on RRC Connection Reestablishment for CP for NB-IoT connected to 5GC (S2-1910789; contact: Huawei)	SA2	noted	Rel-16	5G_CIoT	RAN2, CT4, SA3	CT1, RAN3	S2-1910789
R2-1914355	Reply LS on clarifications on Private Networks (S2-1910803; contact: Ericsson)	SA2	noted	Rel-16	Vertical_LAN, NG_RAN_PRN	RAN3, SA1	RAN2	S2-1910803
R2-1914356	Reply LS on Mobile-terminated Early Data Transmission (S2-1910804; contact: OPPO)	SA2	noted	Rel-16	5G_CIoT	RAN2, RAN3, RAN	SA	S2-1910804
R2-1914357	LS on PC5S and PC5 RRC unicast message protection (S3-193802; contact: Qualcomm)	SA3	noted	Rel-16	FS_eV2X_Sec	RAN2, SA2, CT1		S3-193802
R2-1914358	Reply on QoE Measurement Collection (S4-191234; contact: Ericsson)	SA4	noted	Rel-16	QOED	SA5	CT1, RAN2, RAN3	S4-191234

R2-1914359	LS on energy efficiency (S5-196771; contact: Orange)	SA5	noted	Rel-16	EE_5G	RAN3	RAN2, SA	S5-196771
R2-1914360	LS on UE power saving terminology and text proposal to 38.300 (R1-1911667; contact: CATT)	RAN1	noted	Rel-16	NR_UE_pow_sav-Core	RAN2		R1-1911667
R2-1916268	Forwarding of Reply LS on GUTI allocation for 5G CIoT (C1-198560; contact: Qualcomm)	CT1	noted	Rel-16	5G_CIoT	SA2	RAN2, RAN3, CT4, SA3	C1-198560
R2-1916275	Reply LS on NR V2X Security for user plane data and PDCP SN size (S3-193854; contact: LGE)	SA3	noted	Rel-16	FS_eV2X_Sec, 5G_V2X_NRSL-Core	RAN2		S3-193854
R2-1916280	LS on further aspects of Mission Critical Services over 5MBS (S6-192404; contact: AT&T)	SA6	noted	Rel-17	FS_MC5MBS	SA, RAN, SA2, RAN2, RAN3	SA1	S6-192404
R2-1916289	LS on GUTI allocation for MT-EDT in 5G CIoT (C1-199005; contact: Huawei)	CT1	noted	Rel-16	5G_CIoT	SA2, RAN2, RAN3	SA3, CT4	C1-199005
R2-1916290	LS on enhanced access control for IMS signalling (C1-199007; contact: NTT DOCOMO)	CT1	noted	Rel-16	5GProtoc16, SAES16	SA1	RAN2	C1-199007
R2-1916291	Reply LS on assistance indication for WUS (C1-199008; contact)	CT1	available	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	SA2, RAN2, RAN3		C1-199008
R2-1916292	LS on Extended NAS timers for Coverage Enhancement in 5GS (C1-199034; contact: Ericsson)	CT1	noted	Rel-16	5G_CIoT	RAN2	RAN3, SA2	C1-199034
R2-1916482	LS on Discussion over UE capabilities of FG2-36/2-40/2-41/2-43 (R1-1913295; contact: Huawei)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2		R1-1913295
R2-1916515	Reply LS on Fast MCG Link Recovery using SRB3 (R3-197606; contact: ZTE)	RAN3	available	Rel-16	LTE_NR_DC_CA_enh-Core	RAN2		R3-197606
R2-1916517	Reply LS on direct indication of ETWS/CMAS (R1-1913367; contact: Futurewei)	RAN1	noted	Rel-16	LTE_eMTC5-Core	RAN2		R1-1913367
R2-1916520	Reply LS on Sending CAG ID in NAS layer (R3-197591; contact: Ericsson)	RAN3	available	Rel-16	NG_RAN_PRN	SA3, SA2, RAN2	CT1	R3-197591
R2-1916536	Reply LS on SL RLM/RLF (R1-1913464; contact: InterDigital)	RAN1	noted	Rel-16	5G_V2X_NRSL	RAN2		R1-1913464
R2-1916541	LS on UE capabilities and RRC signalling on Tx switching period delay (R4-1916083; contact: Apple)	RAN4	available	Rel-16	NR_RF_FR1	RAN2	RAN1	R4-1916083
R2-1916542	LS on UE capability of intraBandENDC-Support (R4-1913130; Qualcomm)	RAN4	available	Rel-15	NR_newRAT-Core	RAN2		R4-1913130
R2-1916578	LS on channel raster for NR V2X UE (R4-1916146; contact: CATT)	RAN4	available	Rel-16	5G_V2X_NRSL	RAN2	RAN1	R4-1916146
R2-1916585	LS reply on CSI/SRS reporting (R1-1913480; contact: vivo)	RAN1	available	Rel-16	NR_UE_pow_sav-Core	RAN2	RAN4	R1-1913480

75 incoming LS, of which 68 were treated. The remaining non-treated LSin will be handled in RAN2#109.

Annex D: Outgoing liaison statements

TDoc	Title	Rel	Related WIs	To	Cc
R2-1916327	Reply LS on support of high peak data rate for Cat-M1 Ues in HD-FDD	Rel-16	TEI16	RAN1, RAN	
R2-1916328	Reply LS on QoE Measurement Collection	Rel-16	QOED	SA5	RAN3, SA4, CT1, RAN
R2-1916330	LS on Conditional PSCell addition/change	Rel-16	NR_Mob_enh-Core	RAN3	RAN, RAN4
R2-1916344	Reply LS on NID structure and length	Rel-16	Vertical_LAN, NG_RAN_PRN-Core	CT4	RAN3, CT1, CT3, SA2, CT
R2-1916345	CMAS/ETWS and emergency services for SNPNs	Rel-16	NG_RAN_PRN-Core	SA1, SA2	CT1
R2-1916348	LS on CLI measurements UE capabilities	Rel-16	NR_CLI_RIM-Core	RAN1	RAN4
R2-1916349	Reply LS on Sending CAG ID in NAS layer	Rel-16	NG_RAN_PRN	SA3, SA2, RAN3	CT1
R2-1916368	Reply LS on Mobile-terminated Early Data Transmission	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core, 5G_CIoT	SA2, CT1	RAN3, RAN, SA
R2-1916369	LS on UE identifier for UP CIoT 5GS Optimisation	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core	RAN3	
R2-1916375	LS on RRM Measurement Relaxation for UE Power Saving in NR	Rel-16	NR_UE_pow_sav-Core	RAN4	
R2-1916380	LS on consistent Uplink LBT failure detection mechanism	Rel-16	NR_unlic-Core	RAN1	
R2-1916435	LS reply PUR transmission for NB-IoT/eMTC	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	RAN1	RAN4
R2-1916437	Feedback on RAN1 agreements on PUR	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core	RAN1	
R2-1916440	Reply LS on assistance indication for WUS	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	SA2, CT1, RAN3	SA
R2-1916457	Reply LS on signalling of sidelink RSRP and CSI	Rel-16	5G_V2X_NRSL-Core	RAN1	
R2-1916458	Response LS on additional high layer information for sidelink physical layer operations	Rel-16	5G_V2X_NRSL-Core	RAN1	
R2-1916459	Reply LS on resource coordination between NG-RAN nodes for NR V2X sidelink communication	Rel-16	5G_V2X_NRSL-Core	RAN3	
R2-1916460	Response LS on TX resource (re-)selection and MAC related agreements	Rel-16	5G_V2X_NRSL-Core	RAN1	
R2-1916461	Reply LS on PC5S and PC5 RRC unicast message protection	Rel-16	5G_V2X_NRSL-Core	SA3	SA2, CT1
R2-1916465	Reply LS on sidelink synchronization under multiple synchronization sources with different timing	Rel-16	5G_V2X_NRSL-Core	RAN4, RAN1	
R2-1916467	LS on NR V2X Security issue and PDCP SN size	Rel-16	5G_V2X_NRSL-Core	SA3	
R2-1916468	Reply LS on UL-SL prioritization	Rel-16	5G_V2X_NRSL-Core	RAN1, RAN4	
R2-1916470	LS on dependencies on AS design for mobility management aspects of NTN in 5GS	Rel-16	FS_5GSAT_ARCH	SA2, RAN3	CT1
R2-1916481	LS to RAN1 for clarification of PUCCH configuration	Rel-15	NR_newRAT-Core	RAN1	
R2-1916516	Reply LS on Recommended Bit Rate/Query for FLUS and MTSI	Rel-16	E_FLUS	SA4	
R2-1916528	Reply LS on CSI-RS configuration transfer	Rel-16	TEI16	RAN3	
R2-1916530	LS on RRC establishment cause value in EPS voice fallback from NR to E-UTRAN	Rel-16	TEI16	CT1	
R2-1916547	Need for Ethernet padding compression	Rel-16	NR_IIOT	SA1	
R2-1916572	LS on Uplink skipping	Rel-15	NR_newRAT-Core	RAN1	
R2-1916576	LS on Network Coordination for UL PDCP Duplication	Rel-16	NR_IIOT-Core	RAN3	
R2-1916577	LS on F1AP over LTE leg signalling for IAB	Rel-16	NR_IAB-Core	RAN3	
R2-1916579	LS on EN-DC related MDT configuration details	Rel-16	NR_SON_MDT-Core	RAN3, SA5	

R2-1916580	LS on RACH report and RLF report	Rel-16	NR_SON_MDT-Core	RAN3	
R2-1916588	LS on MDT Measurements	Rel-16	NR_SON_MDT-Core	RAN4	
R2-1916592	LS on default codebook parameters	Rel-15	NR_newRAT-Core	RAN1	
R2-1916595	LS on measurement reporting criteria for EN-DC	Rel-15	NR_newRAT-Core	RAN4	
R2-1916597	LS on secondary DRX group	Rel-16	TEI16	RAN1, RAN4	
R2-1916598	LS on trace related configurations for NR MDT	Rel-16	NR_SON_MDT-Core	SA5	RAN3
R2-1916600	LS on inter-RAT HO from SA to EN-DC	Rel-16	TEI16	RAN3, RAN4	SA2, CT1
R2-1916601	LS on RAN2 progress on Scell uplink behaviour of the UE in dormancy	Rel-16	LTE_NR_DC_CA_enh-Core	RAN1	RAN4
R2-1916620	LS on LS on system level design assumptions for satellite in 5GS	Rel-16	FS_5GSAT_ARCH	SA2, RAN3	CT1
R2-1916621	Response LS on SL RLM/RLF	Rel-16	5G_V2X_NRSL-Core	RAN1, SA2	
R2-1916622	LS on handover without SN configuration query	Rel-15	NR_newRAT-Core	RAN3	
R2-1916623	Reply LS on extended NAS timers for CE in 5GS	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core, 5G_CIoT	CT1	RAN3, SA2

44 outgoing LS.

Annex E: List of agreed CRs

TDoc	Title	Source	Rel	Spec	Related WIs	CR	Rev	Ca
R2-1914534	Corrections on CG-Config	CATT	Rel-15	38.331	NR_newRAT-Core	1267	1	F
R2-1914571	Correction on field description of cellReselectionInfoCommon	Qualcomm Incorporated, Ericsson	Rel-15	38.331	NR_newRAT-Core	1278	1	F
R2-1914578	Clarification on the restriction of maximum SRS resource sets configuration for uplink beam management	Intel Corporation	Rel-15	38.306	NR_newRAT-Core	0185	1	F
R2-1914649	Correction on T322	Nokia, Nokia Shanghai Bell	Rel-14	36.331	NB_IOTenh-Core	4112	2	F
R2-1914650	Correction on T322	Nokia, Nokia Shanghai Bell	Rel-15	36.331	NB_IOTenh-Core	4113	1	A
R2-1914662	Correction on frequency indication in SIB1 and SIB2	Huawei, HiSilicon, Ericsson, MediaTek	Rel-15	38.331	NR_newRAT-Core	1296	2	F
R2-1914667	CR to 38.331 on CGI information	Huawei, HiSilicon, Ericsson	Rel-15	38.331	NR_newRAT-Core	1341	1	F
R2-1914685	Correction on PUCCH transform precoding	vivo, Nokia (rapporteur)	Rel-15	38.300	NR_newRAT-Core	0178		F
R2-1914714	Miscellaneous corrections	Lenovo, Motorola Mobility (Rapporteur)	Rel-15	36.306	TEI15, LTE_1024QAM_DL-Core, NR_newRAT-Core	1719		F
R2-1914744	Security requirement for UE capability enquiry for NR	Intel Corporation, NTT DoCoMo, Ericsson, Apple	Rel-15	38.331	NR_newRAT-Core	1147	2	C
R2-1914904	Conditional presence on ue-CapabilityInfo and servCellIndexRangeSCG for inter-MN handover without SN change	NTT DOCOMO, INC., Ericsson	Rel-15	38.331	NR_newRAT-Core	1358		F
R2-1914907	CR to introduce timer for DRX based SFTD measurement	ZTE Corporation, Sanechips, MediaTek Inc.	Rel-15	38.331	NR_newRAT-Core	1273	1	F
R2-1914908	CR to INM on absence of gapPurpose	ZTE Corporation, Sanechips	Rel-15	38.331	NR_newRAT-Core	1274	1	F
R2-1914955	Clarification on measurement gap configuration in NR SA	MediaTek Inc., Nokia (Rapporteur), Samsung, ZTE Corporation, Sanechips, Intel	Rel-15	38.300	NR_newRAT-Core	0173	2	F
R2-1915031	KgNB derivation upon mobility	Qualcomm Incorporated	Rel-15	38.300	NR_newRAT-Core	0174	1	F
R2-1915076	Configuration limitation for RRCRelease message in R15	OPPO	Rel-15	38.331	NR_newRAT-Core	1362		F

R2-1915122	PDCP version in EN-DC	Ericsson	Rel-15	37.340	NR_newRAT-Core	0155	2	F
R2-1915287	Correction for P-Max in FR2	Ericsson, NTT DOCOMO INC.	Rel-15	38.331	NR_newRAT-Core	1292	1	F
R2-1915360	Correction to power limitations in (NG)EN-DC	Ericsson, Qualcomm Incorporated, MediaTek Inc., Nokia, Nokia Shanghai Bell	Rel-15	36.331	NR_newRAT-Core	4119	2	F
R2-1915482	Correction on the Msg3 based on demand system information	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1333	1	F
R2-1915488	Correction on camping conditions	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1378		F
R2-1915506	Clarifying the alignment of capability filtering across LTE and NR in MR-DC	Nokia, Nokia Shanghai Bell	Rel-15	38.331	NR_newRAT-Core	1283	2	F
R2-1915526	Correction to nonCriticalExtension of RRCConnectionRelease	Huawei, HiSilicon	Rel-15	36.331	LTE_5GCN_connect-Core, TEI15	4150		F
R2-1915559	Reconfiguration failure in NE-DC	Google Inc.	Rel-15	36.331	NR_newRAT-Core	4115	1	F
R2-1915582	Correction on AS-Config	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1385		F
R2-1915590	Correction on measurement reporting in NR-DC	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1387		F
R2-1915653	Corrections of terminology for stage 2	Ericsson	Rel-15	38.305	NR_newRAT-Core	0016		F
R2-1915655	Corrections for Positioning Architecture	Ericsson	Rel-15	38.305	NR_newRAT-Core	0015	2	F
R2-1915657	Specify UDC Header is part of Data Field	Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Huawei, HiSilicon, CATT	Rel-15	36.323	LTE_UDC-Core	0277		F
R2-1915672	Presence and absence of TAC in NR cell	Ericsson	Rel-15	38.331	NR_newRAT-Core	1325	2	F
R2-1915689	Correction to pdsch-RepetitionMultiSlots and pusch-RepetitionMultiSlots	Ericsson	Rel-15	38.306	NR_newRAT-Core	0205		F
R2-1915722	Correction to field conditions in NE-DC	Ericsson	Rel-15	36.331	NR_newRAT-Core, LTE_5GCN_connect-Core	4128	2	F
R2-1915890	Clarification for aggregated bandwidth for overheating	Huawei, HiSilicon, Ericsson	Rel-15	38.331	NR_newRAT-Core	1335	2	F
R2-1915891	Clarification on the feature set report in EUTRAN	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1337	1	F
R2-1915905	Corrections on PDCCH blind decoding in NR-DC	Huawei, HiSilicon	Rel-15	38.306	NR_newRAT-Core	0191	1	F
R2-1916142	NE-DC dynamic power sharing capability	Qualcomm Incorporated	Rel-15	38.331	NR_newRAT-Core	1421		F
R2-1916172	Clarification to CSI reporting in C-DRX	Qualcomm Inc	Rel-15	38.321	NR_newRAT-Core	0672	3	F
R2-1916184	Correction on mini-slot scheduling	Fujitsu, Nokia (Rapporteur)	Rel-15	38.300	NR_newRAT-Core	0181		F
R2-1916262	Security Algorithms for Radio Bearers	Qualcomm Incorporated	Rel-15	38.331	NR_newRAT-Core	1332	4	F
R2-1916271	Clarification on crossCarrierScheduling-OtherSCS in R15	OPPO	Rel-15	38.306	NR_newRAT-Core	0219		F
R2-1916301	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	Rel-14	36.321	LTE_VoLTE_ViLTE_enh	1456	5	F
R2-1916302	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	Rel-15	36.321	LTE_VoLTE_ViLTE_enh	1457	4	A
R2-1916304	Correction on inter-frequency neighbour cell measurements	Ericsson	Rel-15	36.300	LTE_5GCN_connect-Core, LTE_euCA-Core	1252	3	F
R2-1916305	Correction to SIB5 acquisition for idle mode measurements	Ericsson	Rel-15	36.331	LTE_5GCN_connect-Core, LTE_euCA-Core	4120	4	F
R2-1916306	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai Bell, ZTE	Rel-13	36.331	LTE_CA_enh_b5C-Core	4181		F
R2-1916307	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai Bell, ZTE	Rel-14	36.331	LTE_CA_enh_b5C-Core	4182		F
R2-1916309	Correction on handling of stored AS context for UP optimization and RRC_INACTIVE state	Huawei, HiSilicon	Rel-15	36.304	LTE_5GCN_connect-Core	0775	1	F
R2-1916310	Miscellaneous corrections	Lenovo, Motorola Mobility	Rel-15	36.331	LTE_sTTIandPT-Core, TEI15, NR_newRAT-Core, LTE_QMC_Streaming-Core	4142	1	F
R2-1916323	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai	Rel-15	36.331	LTE_CA_enh_b5C-Core	4160	2	F

		Bell, ZTE						
R2-1916325	Correction to early measurement reporting results	Ericsson	Rel-15	36.331	LTE_euCA-Core	4161	2	F
R2-1916353	Correction to channelBWs	Ericsson	Rel-15	38.306	NR_newRAT-Core	0202	1	F
R2-1916398	Correction to PHR in dual connectivity	Qualcomm Inc, Nokia, Nokia Shanghai Bell, Ericsson	Rel-15	36.321	NR_newRAT-Core	1462		F
R2-1916399	Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC	Huawei, HiSilicon	Rel-15	36.331	NR_newRAT-Core	4185		F
R2-1916400	Clarification regarding QoS handling in MRDC with 5G CN	Samsung Telecommunications	Rel-15	37.340	NR_newRAT-Core	0168	1	F
R2-1916413	Missing RACH aspect for DC	Nokia, Nokia Shanghai Bell, ZTE Corporation (Rapporteur)	Rel-15	37.340	NR_newRAT-Core	0169	1	F
R2-1916422	Stop using redirectedCarrierOffsetDedicated after reselection to another frequency	Huawei, HiSilicon	Rel-15	36.331	NB_IOTenh-Core, TEI15	4144	1	F
R2-1916423	Allow Delta Configuration of ParametersListFmt2 and ParametersListEDTFmt2 in SIB2-NB	MediaTek Inc., ZTE Corporation, Sanechips, Huawei, HiSilicon	Rel-15	36.331	NB_IOTenh2-Core	4143	1	F
R2-1916439	Clarification of PDCCH monitoring when not fully aligned with PDCCH periods	NTT DOCOMO INC.	Rel-15	36.321	NB_IOT-Core, TEI15	1459	2	F
R2-1916471	Correction on sending Failure Information via SRB3	Ericsson, ZTE Corporation (Rapporteur), Huawei	Rel-15	37.340	NR_newRAT-Core	0159	3	F
R2-1916473	SMTC setting in MR-DC PSCell change	Nokia, Nokia Shanghai Bell	Rel-15	37.340	NR_newRAT-Core	0157	3	F
R2-1916474	Correction to integrity protection in DRB addition and modification	Ericsson	Rel-15	38.331	NR_newRAT-Core	1309	2	F
R2-1916475	CR to 36.331 on performing L3 filtering for NR related measurements	Ericsson	Rel-15	36.331	NR_newRAT-Core	4148	1	F
R2-1916476	Corrections on scg-RB-Config in CG-Config	Ericsson	Rel-15	38.331	NR_newRAT-Core	1301	2	F
R2-1916479	Correction on the condition of RBTermChange	Ericsson	Rel-15	38.331	NR_newRAT-Core	1369	1	F
R2-1916480	Correction on the configuration of split SRB	Huawei, HiSilicon, Samsung	Rel-15	38.331	NR_newRAT-Core	1375	1	F
R2-1916484	Correction on the pre-condition for reconfiguration with sync of SCG	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1383	1	F
R2-1916485	Restoring RoHC/SDAP during Resume	Intel	Rel-15	38.331	NR_newRAT-Core	1357	1	F
R2-1916491	Correction on SIB1 description	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1389	1	F
R2-1916493	Clarification regarding inter-node transfer of UE capability containers	Samsung Telecommunications	Rel-15	38.331	NR_newRAT-Core	1406	1	F
R2-1916494	Miscellaneous correction for late drop	Ericsson	Rel-15	36.331	NR_newRAT-Core	4117	3	F
R2-1916502	Use of splitSRB-WithOneUL-Path capability (38.306)	Ericsson	Rel-15	38.306	NR_newRAT-Core	0204	1	F
R2-1916507	Miscellaneous corrections on UE capability fields	Intel Corporation	Rel-15	38.306	NR_newRAT-Core	0186	3	F
R2-1916510	Correction of cell reselection parameters for multi-beam operation	Qualcomm Incorporated, Ericsson	Rel-15	38.304	NR_newRAT-Core	0139	2	F
R2-1916513	Handling of AS-Config in HandoverPreparationInformation	Ericsson	Rel-15	38.331	NR_newRAT-Core	1300	2	F
R2-1916514	Correction of SRB3 handling at full configuration (Alt2)	Ericsson	Rel-15	38.331	NR_newRAT-Core	1308	3	F
R2-1916523	Correction to Feature Set Combination and Band combination list for NR-DC (38.331)	Ericsson	Rel-15	38.331	NR_newRAT-Core	1402	1	F
R2-1916525	Correction on MCG measurements in SCGFailureInformation	Ericsson	Rel-15	38.331	NR_newRAT-Core	1305	2	F
R2-1916529	Restoring RoHC/SDAP during INACTIVe Resume	Intel	Rel-15	36.331	LTE_5GCN_connect-Core	4183		F
R2-1916534	Correction on security key derivation	Ericsson	Rel-15	36.331	NR_newRAT-Core	4145	1	F
R2-1916535	Correction on security key derivation	Ericsson	Rel-15	38.331	NR_newRAT-Core	1368	1	F
R2-1916545	NE-DC dynamic power sharing capability	Qualcomm Incorporated	Rel-15	38.306	NR_newRAT-Core	0216	1	F

R2-1916546	Correction on initial BWP bandwidth capabilities	Huawei, HiSilicon	Rel-15	38.306	NR_newRAT-Core	0215	1	F
R2-1916551	Correction on PRACH procedure with SRS switching	Huawei, HiSilicon	Rel-15	38.321	NR_newRAT-Core	0680	1	F
R2-1916552	Correction on CORESET location	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1379	1	F
R2-1916571	Correction on ambiguity of UE FDD/TDD FR1/FR2 capabilities	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd	Rel-15	38.306	NR_newRAT-Core	0220		F
R2-1916589	Security requirements for split PDU session (38.331)	Ericsson, Qualcomm	Rel-15	38.331	NR_newRAT-Core	1403	2	F
R2-1916593	Clarification on ne-DC capability	Huawei, HiSilicon	Rel-15	38.306	NR_newRAT-Core	0200	1	F
R2-1916594	Clarification on the en-DC and ng-EN-DC capabilities	Huawei, HiSilicon	Rel-15	36.306	NR_newRAT-Core	1720	1	F
R2-1916602	PDCP configuration generation (email discussion of 107#25)	Huawei, HiSilicon	Rel-15	37.340	NR_newRAT-Core	0158	3	F
R2-1916603	IP version on X2-U	R3 (Huawei)	Rel-15	37.340	NR_newRAT-Core	0170		F
R2-1916604	Correction to MR-DC with 5GC with RRC_INACTIVE	R3 (Google)	Rel-15	37.340	NR_newRAT-Core	0171		F
R2-1916605	Independent migration to IPv6 on NG-U	R3 (Samsung)	Rel-15	38.300	NR_newRAT-Core	0182		F
R2-1916606	Correction of SN Status Transfer during HO with DC	R3 (Nokia, Nokia Shanghai Bell)	Rel-15	37.340	NR_newRAT-Core	0172		F
R2-1916607	Correction of QoS flow re-mapping before handover	R3 (Ericsson)	Rel-15	38.300	NR_newRAT-Core	0183		F
R2-1916608	CR TS 38.300 Remote Interference Management	R3 (Ericsson, CMCC)	Rel-16	38.300	NR_CLI_RIM	0184		B
R2-1916609	Introduction of Additional RRM Policy Index (ARPI)	R3 (Ericsson, Vodafone, Deutsche Telekom, Verizon Wireless, TIM, AT&T, Orange)	Rel-16	36.300	TEI16	1256		B
R2-1916612	Introduction of direct data forwarding for inter-system HO between EPS and 5GS	R3 (Ericsson, NTT DoCoMo, Samsung, Nokia, Huawei, ZTE, CATT)	Rel-16	38.300	Direct_data_fw_NR-Core	0185		B
R2-1916613	Correcting misbehaviors and clean-ups on 37.340 related to PDU session spilt	R3 (Intel Corporation, Nokia, Nokia Shanghai Bell)	Rel-15	37.340	NR_newRAT-Core	0175		F
R2-1916615	Stage2 Clarifications for RRC_Inactive with MR-DC@5GC	R3 (ZTE, Qualcomm Incorporated, China Telecom, China Unicom)	Rel-15	37.340	NR_newRAT-Core	0177		F
R2-1916616	Correction of NG connection in MR DC	R3 (Nokia, Nokia Shanghai Bell, Orange)	Rel-15	37.340	NR_newRAT-Core	0178		F
R2-1916617	Correcting misbehaviors and clean-ups on 37.340 related to data forwarding and SN status transfer	R3 (Intel Corporation, CATT, Google)	Rel-15	37.340	NR_newRAT-Core	0179		F
R2-1916618	TS36.300 Removal of Requirement for Exchanging Complete Cell List over X2	R3 (ZTE, Ericsson, China Unicom)	Rel-16	36.300	TEI16	1257		F
R2-1916624	DRB ID co-ordination between MN and SN	Ericsson, ZTE Corporation (Rapporteur)	Rel-15	37.340	NR_newRAT-Core	0174	1	F
R2-1916625	Resuming SCG in RRC Resume	Ericsson, ZTE Corporation (Rapporteur)	Rel-16	37.340	LTE_NR_DC_CA_enh-Core	0176	1	B
R2-1916626	Clarification on UE Inactive AS context	Google Inc.	Rel-15	36.331	LTE_5GCN_connect-Core	4177	2	F
R2-1916627	Miscellaneous non-controversial corrections Set IV	Ericsson	Rel-15	38.331	NR_newRAT-Core	1323	3	F
R2-1916628	Correction on the EUTRAN terminology	Huawei, HiSilicon	Rel-15	38.305	NR_newRAT-Core	0014	2	F
R2-1916629	Correction to key derivation for the UE configured with sk-counter	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1381	2	F
R2-1916630	Correction to Pcompensation for FR2	Huawei, HiSilicon	Rel-15	38.304	NR_newRAT-Core	0143	1	F
R2-1916631	Stage2 Introduction of ARPI&SPID for EN-DC	R3 (ZTE)	Rel-16	37.340	TEI16	0173	1	B
R2-1916632	Correction of UE assistance information	Samsung Telecommunications	Rel-15	38.331	NR_newRAT-Core	1405	2	F
R2-1916633	Clarification on security key change and bearer termination point change	ZTE Corporation, Ericsson, Intel	Rel-15	37.340	NR_newRAT-Core	0163	2	F
R2-1916634	Clarification of NR-DC synchronization	ZTE Corporation	Rel-15	37.340	NR_newRAT-Core	0160	2	F

R2-1916635	Clarification on the offered non-GBR resources	R3 (Huawei, Ericsson, China Unicom, CMCC)	Rel-16	37.340	LTE_NR_DC_CA_enh-Core	0180	1	F

114 Agreed CRs

Annex F: Email Approvals

Short email discussions for input to RP (1 week): Deadline Thursday, 2019-11-28, 23:59 Pacific Time (unless stated)

Please request TDoc numbers for the following email discussions from MCC if not already allocated below

✉ **[108#01][R15 NR] PDCP configuration generation (Huawei)**
Intended outcome: Agreed CR
Deadline: 2019-11-28
=> Agreed in R2-1916602, 37.340 CR#0158 r3

✉ **[108#02][R15 NR] Miscellaneous Corrections (Ericsson)**
Intended outcome: Agreed CR
Deadline: 2019-11-28
=> Agreed in R2-1916350, 38.331 CR#1323 r2

✉ **[108#03][R15 NR] ChannelBWs CR (Ericsson)**
Intended outcome: Agreed CR
Deadline: 2019-11-28
=> Agreed in R2-1916353, 38.306 CR#0202 r1

✉ **[108#04][R15 NR] Support of 70MHz channel bandwidth (Huawei)**
Based on Option 1
Intended outcome: For next meeting, Report, if possible Agreeable CR Deadline: 2020-02-13

✉ **[108#05][NTN] Remaining details on random access (Ericsson)**
Intended outcome: agreed TP
Deadline: 2019-11-28
=> Endorsed in R2-1916414

✉ **[108#06][NTN] Earth fixed vs. Earth moving cells in NTN LEO (Thales)**
- Extract what are the impact on the standards and the main differences with moving beams
- Capture the preliminary findings
Intended outcome: agreed TP
Deadline: 2019-11-28
=> Endorsed in R2-1916351

✉ **[108#07][NTN] TP on ephemeris (Ericsson)**
Intended outcome: Agreed TP
Deadline: 2019-11-28
=> Endorsed in R2-1916469

✉ **[108#08][NTN] DRX, HARQ, and UL schedule (Ericsson)**
Intended outcome: Agreed TP
Deadline: 2019-11-28
=> Endorsed in R2-1916415

✉ **[108#09][eMTC] Reply LS on extended NAS timers for CE in 5GC (Ericsson)**
To draft a reply LS regarding the extended NAS timers for coverage enhancement in 5GS
Intended outcome: approved LS in R2-1916360
Deadline: 2019-11-28
=>Approved in R2-1916623

✉ **[108#113][eMTC] [RAN3_CRs] Agreement of RAN3 endorsed stage-2 CRs (MCC)**
Intended outcome: Set of agreed CRs
Deadline: 2019-12-02
=>Agreed CRs in R2-1916603 (37.340), R2-1916604 (37.340), R2-1916605 (38.300), R2-1916606 (37.340), R2-1916607 (38.300), R2-1916608 (38.300), R2-1916609 (38.300), R2-1916612 (38.300), R2-1916613 (37.340), R2-1916615 (37.340), R2-1916616 (37.340), R2-1916617 (37.340), R2-1916618 (36.300), R2-1916624 (37.340), R2-1916625 (37.340), R2-1916631 (37.340), R2-1916635 (37.340)

Short II email discussions not for RP (3 weeks): Deadline Thursday, 2019-12-13, 23:59 Pacific Time (unless stated)

Please request TDoc numbers for the following email discussions from MCC if not already allocated below

✉ **[108#104][NB-IoT eMTC] Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC (Blackberry)**
Intended outcome: endorsed document in R2-1916424
Deadline: 2019-11-28
=> Endorsed in R2-1916424

✉ **[108#10][IAB] Running CR 38.300 (QC)**
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916641

✉ **[108#11][IIOT] Running CR 38.300 (Nokia)**
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916355

✉ **[108#12][IIOT] Running CR 38.321 (Samsung)**
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916352

✉ **[108#13][DCCA] Stage 2 running CRs 36.300, 38.300 (Ericsson)**
Scope: Final check on the stage 2 CRs
Intended outcome: Endorsed CRs
Deadline: 2019-12-13
=> Endorsed in:
R2-1916518 (36.300)
R2-1916519 (38.300)

✉ **[108#14][DCCA] Stage 2 running CRs 37.340 (vivo)**
Scope: Final check on the stage 2 CRs

Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916642

✉ **[108#15][DCCA] Power control for NR DC (Vivo)**
Intended outcome: Endorsed TP, input to the RRC running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916643

✉ **[108#16][NR Mob] T312 for PCell and PSCell (Samsung)**
Running CR showing changes required to adopt T312 in NR.
Intended outcome: Endorsed Draft RRC CR
Deadline: 2019-12-13
=> Endorsed in R2-1916640

✉ **[108#17][CLI] Additional frequency information for CLI (LG)**
Intended outcome: Clarify the issue raised in the discussion and decide whether there is anything to further check with RAN1. Possible outcome is to send an LS to RAN1
Deadline: 2019-12-13
=> LSout approved in R2-1916645

✉ **[108#18][PRN] Stage 2 running CR (Nokia)**
Intended outcome: Endorsed running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916637

✉ **[108#19][eMTC NB-IoT] When to resume DRBs in UP optimization for 5GC (Ericsson)**
To agree on when to resume DRBs in UP optimization for 5GC
Intended outcome: Email discussion report in R2-1916564
Deadline: Thursday 2019-12-05
=> Noted in R2-1916564

✉ **[108#20][eMTC] Update 36.300 running CR (Intel)**
Update 36.300 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916361
Deadline: 2019-12-13
=> Endorsed in R2-1916361

✉ **[108#21][eMTC NB-IoT] LS to RAN3 and cc RAN1 about Stage 2 CRs (Huawei)**
Inform RAN3 and RAN1 about Stage 2 CRs for both eMTC and NB-IoT.
Intended outcome: approved LS in R2-1916563
Deadline: 2019-12-13
=> Approved in R2-1916563

✉ **[108#22][eMTC] Update 36.302 running CR (ZTE)**
Update 36.302 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916366
Deadline: 2019-12-13
=> Endorsed in R2-1916366

✉ **[108#23][eMTC] Update 36.304 running CR (Nokia)**
Update 36.304 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916365
Deadline: 2019-12-13
=> Endorsed in R2-1916365

✉ **[108#25][eMTC] Update 36.321 running CR (Ericsson)**
Update 36.321 running CR with agreements from this meeting

Intended outcome: endorsed running CR in R2-1916362
Deadline: 2019-12-13
=> Endorsed in R2-1916362

✉ **[108#26][eMTC] Update 38.300 running CR (Qualcomm)**
Update 38.300 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916363
Deadline: 2019-12-13
=> Endorsed in R2-1916363

✉ **[108#27][V2X] 38.300 Running CR (LG)**
To update and endorse 38.300 running CR capturing this meeting agreements
Intended outcome: Endorsed CR
Deadline: 2019-12-13
=> Endorsed in R2-1916638

✉ **[108#105][NB-IoT] Update 36.304 CR (Nokia)**
Intended outcome: Endorsed running CR in R2-1916565
Deadline: 2019-12-13
=> Endorsed in R2-1916565

✉ **[108#106][NB-IoT] Update 36.300 CR (Huawei)**
Intended outcome: Endorsed running CR in R2-1916567
Deadline: 2019-12-13
=> Endorsed in R2-1916567

✉ **[108#107][NB-IoT] Update 36.321 CR (Ericsson)**
Intended outcome: Endorsed running CR in R2-1916568
Deadline: 2019-12-13
=> Endorsed in R2-1916568

✉ **[108#108][NB-IoT] Update 38.300 CR (Qualcomm)**
Intended outcome: Endorsed running CR in R2-1916570
Deadline: 2019-12-13
=> Endorsed in R2-1916570

✉ **[108#111][URLLC] MAC Running CR (Huawei)**
Intended outcome: Agreeable Running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916354

RRC discussions: Deadline Thursday, 2020-01-23, 23:59 Pacific Time (unless stated)

TDoc numbers for the following email discussions may be requested via 3GU tool

For email discussions on RRC running CRs, please pay attention to the plan of R2-1915665 Rel-16 RRC planning (Ericsson), which was endorsed, except that full TS doesn't have to be used for running CRs.

Note: After the main deadline which is at latest 2020-01-23, based on findings in RRC merge email discussion, each RRC email discussion can continue up to 2020-02-13 to produce a second result addressing merge issues (for some WIs there are specific instructions below).

✉ **[108#28][R16 RRC] RRC Merge (Ericsson Samsung)**
Detection and Correction of RRC Merge Issues. This discussion is expected to start at 2020-01-23 when RRC running CRs are ready.

Intended outcome: Issue List, suggested corrections etc (details up to rapporteurs)
Deadline: 2020-02-13

Short II, for R2#108

✉ **[108#29][eMTC] Update 36.331 running CR (Qualcomm)**
Update 36.331 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1916364
Deadline: 2019-12-13
=> Endorsed in R2-1916364

✉ **[108#30][CLI] RRC running CR (LG)**
Intended outcome: Endorsed RRC running CR
Deadline: 2019-12-13
=> Endorsed in R2-1916639

✉ **[108#109][NB-IoT] Update 36.331 CR (Huawei)**
Intended outcome: Endorsed running CR in R2-1916566
Deadline: 2019-12-13
=> Endorsed in R2-1916566

Long

✉ **[108#31][IAB] Running CR 38.331 36.331 (Ericsson)**
Intended outcome:
Deadline: 2020-01-23

✉ **[108#32][IIOT] Running CR 38.331 (Ericsson)**
Intended outcome:
Deadline: 2020-01-23

✉ **[108#33][DCCA] RRC running CRs 36.331, 38.331 (Ericsson)**
Scope: agreeable Draft CRs for next meeting, capturing agreements
Intended outcome: Agreeable Draft CR
Deadline: 2020-01-23

✉ **[108#34][NR Mob] Running RRC CR for CHO and DAPS (Intel)**
Two-phase discussion: 1st phase discussion to collect input for CHO and DAPS based on latest agreements and open issue email discussion, second phase to combine the CRs into one.
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-16

✉ **[108#35][LTE Mob] Running RRC CR (Ericsson)**
Updated running CR with agreements from this meeting and open issue email discussion.
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-16

✉ **[108#36][NR eMIMO] Running RRC CR (Ericsson)**
Intended outcome: List of agreeable proposals regarding the issues identified in the previous email discussion (and any newly identified issues) and corresponding updated running CR.
Deadline: 2020-01-23

✉ **[108#37][PRN] RRC Running CR (Nokia)**
Intended outcome: Endorsable running CR for next meeting reflecting agreements and WAs from this meeting
Deadline: 2020-01-23

✉ **[108#38][NR-U] Running 38.331 (Qualcomm)**

Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 2020-01-23
Phase 2 :
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#39][Power Saving] Running 38.331 (Mediatek)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 2020-01-23
Phase 2 :
Capture open issues from contribution from RAN2#108 (UE assistance including MR-DC related aspects) and from CR implementation phase on all aspects related to RRC
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#40][2-step RA] Running 38.331 (Ericsson)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 2020-01-23
Phase 2 :
Capture open issues from contribution from RAN2#108 and from CR implementation phase on all aspects related to RRC
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#41][NR/Pos] Running CR to 38.331 on positioning (Ericsson)**
Update the running CR. Final version to include the whole RRC spec with the changes.
Intended outcome: Agreeable CR for merge into the large RRC CR.
Deadline: 2020-01-23

✉ **[108#42][NR/MDT] running 38.331 CR to support SON/MDT (Huawei and Ericsson)**
Merged the endorsed running SON CR and MDT CR into one CR, also including mobility history reporting part
Intended outcome: running CR
Target to agree the CR next meeting
Deadline: 2020-01-23

✉ **[108#43][NR/MDT] Running 36.331CR for MDT (Huawei)**
Intended outcome: running 36.331 CR to introduce MDT neighbour cell measurements and SCG failure agreement if spec impact is figured out.
Target to agree the running CR next meeting
Deadline: 2020-01-23

✉ **[108#44][V2X] 38.331 36.331 running CRs (Huawei)**
To update and endorse 38.331/36.331 running CR capturing this meeting agreements. Also to discuss miscellaneous issues for 38.331/36.331 implementations (including consideration of further RAN1 inputs, L1/2 ASN.1 parameters, procedures, etc.)
Intended outcome: Endorsable draft CRs for next meeting.
Deadline: 2020-01-23

✉ **[108#112][URLLC] RRC running CR (Huawei)**
Intended outcome: Agreeable Running CR
Deadline: 2020-01-23

Next meeting (long) discussions: Deadline Thursday, 2020-01-30, 23:59 Pacific Time (unless stated)

TDoc numbers for the following email discussions may be requested via 3GU tool

For email discussions on Features Lists and UE capabilities, please pay attention to the endorsed plan of Proposal 1 in R2-1916192 Work plan for Rel-16 UE Capability feature list.

Feature List and UE capabilities, Short

- ✉ **[108#24][eMTC] Update 36.306 running CR (Huawei)**
  Update 36.306 running CR with agreements from this meeting
  Intended outcome: endorsed running CR in R2-1916562
  Deadline: 2019-12-13

=> Endorsed in R2-1916562

- ✉ **[108#45][LTE NR Mob] UE feature list for LTE and NR mobility (Intel)**
  Collect UE feature list from RAN2 viewpoint and consider RAN1/4 input to this meeting (also from LSs not yet treated). After the discussion, take the UE capabilities into account in RRC running CR.
  Intended outcome: Email discussion report.
  Deadline: 2019-12-13

=> Reserved in R2-1916644

- ✉ **[108#110][NB-IoT] Update 36.306 CR (Blackberry)**
  Intended outcome: Endorsed running CR in R2-1916569
  Deadline: 2019-12-13

=> Endorsed in R2-1916569

Feature List and UE capabilities, Long

- ✉ **[108#46][IAB] Feature List (Ericsson)**
  Intended outcome:
  Deadline: 2020-01-30

- ✉ **[108#47][IIOT] UE feature list (Nokia)**
  Intended outcome: identify features relations, and discuss optionality
  Deadline: 2020-01-30

- ✉ **[108#48][DCCA] DCCA R2 feature list (Huawei)**
  Scope: Identify features and dependencies (incl also e.g. TDD-FDD FRx applicability), and structure (per band per BC when applicable), for LTE and NR,
  Intended outcome: Agreeable Input to R2 feature list(s), Agreeable TPs 38.331 38.306
  Deadline: 2020-01-30

- ✉ **[108#49][NR MDT] running 38.306 CR (vivo)**
  Intended outcome: Running CR to support UE capabilities for SON/MDT
  Deadline: 2020-01-30

- ✉ **[108#50][V2X] Feature List and UE caps (OPPO)**
  To discusss initial UE capabilities aspects (including consideration of further RAN1 inputs, information structure, etc.)
  Intended outcome: Endorsable Draft CRs for next meeting.
  Deadline: 2020-01-30

Other Email Discussions

✉ **[108#51][IAB] Running CR 38.340 (Huawei)**
Intended outcome: Capture agreements this meeting, address FFSes, identify FFSes (and instert appropriate editors notes), agree final details of functional view. Agree and Capture baseline definitions of Control PDUs for flow control and RLF notification. Agreeable Draft CR.
Deadline: 2020-01-30

✉ **[108#52][IIOT] Running CR 38.323 (LG)**
Intended outcome: Endorsable draft CR
Deadline: 2020-01-30

✉ **[108#53][IIOT] EHC remaining issues (Huawei)**
Remaining Issues focus on:
- Whether to reset EHC protocol at PDCP re-establishment
- EHC feedback mechanism details
- EHC packet formats

Intended outcome: Report and agreeable TP
Deadline: 2020-01-30

✉ **[108#54][DCCA] Early measurements (Ericsson)**
Scope: Identify and progress if possible any remaining issues
Intended outcome: Report with agreeable TPs for next meeting
Deadline: 2020-01-30

✉ **[108#55][DCCA] MCG SCell and SCG Configuration with RRC Resume (ZTE)**
Scope: Identify and progress if possible any remaining issues (Main OI: How to handle the case if Resumed cells/scg or cells/scg to resume is in fact not present, smaller OI: gNB indicate what to resume/release to the UE).
Intended outcome: Report for next meeting
Deadline: 2020-01-30

✉ **[108#56][DCCA] Scell Dormancy Open Issues (Oppo)**
Intended outcome: Report for next meeting, paving the way for fruitful discussions.
Deadline: 2020-01-30

✉ **[108#57][DCCA] Async CA (QC)**
Scope: RRC signalling design for slot offset, taking into account R1 Nov outcome.
Intended outcome: Agreeable TP for RRC
Deadline: 2020-01-30

✉ **[108#58][TEI16] NeedForGap Signaling (MTK)**
Scope: arrive at agreeable CRs
Intended outcome: Agreeable CRs, If remaining open issues also a report
Deadline: 2020-01-30

✉ **[108#59][TEI16] DL segmentation CRs (Ericsson)**
Intended outcome: Agreeable CRs
Deadline: 2020-01-30

✉ **[108#60][TEI16] DRX coord (Huawei)**
Intended outcome: Agreeable CR to 38331
Deadline: 2020-01-30

✉ **[108#61][R16] on-demand SI procedure in RRC_CONNECTED (Ericsson)**
Intended outcome: Address remaining issues, agreeable draft CR
Deadline: 2020-01-30

✉ **[108#62][NR Mob] Running Stage-2 CR (Intel)**

Updated running CR based on latest agreements (except CPAC).
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-30

✉ **[108#63][LTE Mob] Running Stage-2 CR (China Telecom)**
Updated running CR based on latest agreements (except CPAC).
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-30

✉ **[108#64][LTE NR Mob] Running CRs for LTE and NR PDCP on mobility (Huawei)**
Updte running CRs for LTE and NR PDCP based on latest RAN2 agreements.
Intended outcome: Updated running CR for next meeting
Deadline: 2020-01-30

✉ **[108#65][LTE NR Mob] Running MAC CRs for LTE and NR (vivo)**
Updated running CR based on latest agreements (except CPAC).
Intended outcome: Agreeable running CR for next meeting
Deadline: 2020-01-30

✉ **[108#66][LTE NR Mob] Open issues for LTE and NR mobility (Intel)**
Collect remaining open issues (for the whole WID) and disucss if some can be resolved over email. Can have two phases to first, one to resolve existing issues where possible and second to collect other issues to resolve in the next meeting. Resolve dissues should be input to running CR discussion(s)
Intended outcome: Email discussion report + input to running CRs on agreeable issues
Deadline: 2020-01-30

✉ **[108#67][NR Mob] Resolving open issues in CPAC and creating TP (CATT)**
Discuss contents of R2-1916329 to see if they are agreeable. Attempt to close open issues and create TP illustrating the changes needed for this feature.
Intended outcome: Report and RRC TP for CPAC feature.
Deadline: 2020-01-30

✉ **[108#68][NR eMIMO] Design of DL MAC CEs (Oppo)**
Intended outcome: Identify possible solutions to take RAN1 requests into account for all the following new/modified MAC CEs:
9. PUCCH spatial relation Activation/Deactivation MAC CE
10. AP-SRS spatial relation and pathloss reference RS update MAC CE
11. SP-SRS pathloss reference RS update MAC CE
12. PUSCH pathloss reference RS update MAC CE
13. simultaneous PUCCH resource group spatial relation update/indication MAC CE
14. simultaneous multiple CCs/BWPs PDSCH TCI state IDs activation
15. simultaneous multiple CCs/BWPs PDCCH CORESET TCI state IDs activation
16. simultaneous multiple CCs/BWPs SP/AP SRS resource Spatial Relation activation

(at least for the MAC CEs 5 ~ 8 for simultaneous update/indication/activation discuss which approach to follow: 1. RRC configuration only, 2. RRC configuration plus MAC CE changes, 3. MAC CE changes only)
Deadline: 2020-01-30

✉ **[108#69][NR eMIMO] MAC Running CR (Samsung)**
Intended outcome: Endorsed running CR including:
Phase 1 (until next week): meeting agreements and also the details of the MAC CEs as agreed from R2-1914710
Phase 2: possibly including the output of the email discussion on other DL MAC CEs.
Deadline: 2020-01-30

✉ **[108#70][NR eMIMO] BFR MAC CE (Samsung)**
Intended outcome: BFR MAC CE Design
Deadline: 2020-01-30

✉ **[108#71][PRN] Running 38.304 CR (Qualcomm)**
Intended outcome: Endorsed running CR reflecting agreements from this meeting. Consider also proposals R2-1915384
Deadline: 2020-01-30

✉ **[108#72][eMTC] To finalize the 2 bit Quality report (Qualcomm)**
Whether 2 bit Quality Report is supported, and if yes how.
Intended outcome: Email discussion report to be provided in R2-1916370
Deadline: 2020-01-30

✉ **[108#73][eMTC] TPs for RSS (Ericsson)**
To draft TPs for running CRs based on RAN1 agreements
Intended outcome: Report with TPs for running CRs in R2-1916367
Deadline: 2020-01-30

✉ **[108#74][NR-U] Running 38.300 (Qualcomm)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#75][NR-U] Running 38.321 (Ericsson)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture critical open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#76][NR-U] Running 38.304 (Qualcomm)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#77][NR-U] Running 37.340 (Oppo)**
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 2020-01-23

✉ **[108#78][Power Saving] Running 38.321 (Huawei)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2 :
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion

Deadline: 2020-02-13

✉ **[108#79][Power Saving] Running 38.304 (Vivo)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2 :
Capture open issues from contribution from RAN2#108 (RRM measurements) and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#80][Power Saving] Running 38.300 (CATT)**
Outcome: Running CR for 38.300
Deadline: 2020-02-13

✉ **[108#81][Power Saving] Running 37.340 (Oppo)**
Outcome: Running CR for 37.340
Deadline: 2020-02-13

✉ **[108#82][2-step RA] Running 38.321 (ZTE)**
Phase 1:
Intended outcome: Running CRs capturing agreements from RAN2 #108
Deadline: 10/01/2020 (up to rapporteur)
Phase 2:
Capture open issues from contribution from RAN2#108 and from CR implementation phase
Outcome: set of agreeable proposals capturing open issues and update running CRs with agreeable proposals from open issue discussion
Deadline: 2020-02-13

✉ **[108#83][2-step RA] Running 38.300 (Nokia)**
Outcome: Running CR for 38.300
Deadline: 2020-02-13

✉ **[108#84][NR/Pos] Running stage 2 CR on positioning (Intel)**
Intended outcome: Agreeable CR to be submitted to RAN2#109.
Deadline: Thursday 2020-01-23

✉ **[108#85][NR/Pos] Running CR to 36.355 (Intel)**
RAN1 parameters part to be complete by 2020-01-23. Further aspects can be developed until the next meeting deadline.
Intended outcome: Agreeable CR to next meeting.
Deadline: Thursday 2020-02-13

✉ **[108#86][NR/Pos] Single positioning method approach in LPP (Ericsson)**
Develop a detailed proposal for a single positioning method to compare with the multiple methods in the running CR.
Intended outcome: Text proposal to next meeting.
Deadline: Thursday 2020-02-13

✉ **[108#87][NR/Pos] Additional path reporting (Ericsson)**
Discuss the proposed additional path reporting and develop a text proposal if the approach is agreeable.
Intended outcome: Agreeable TP for next meeting
Deadline: Thursday 2020-02-13

✉ **[108#88][NR/Pos] Remaining issues on broadcast assistance data (Ericsson)**

Clarify the remaining issues on broadcast:
- Per-SIB vs. per-SI request in connected mode
- Per-SIB vs. per-SI request in idle mode
- Need of a separate SIB for posSIB scheduling
- “Subscription” mechanism for posSIBs
- FFS on separate area ID for posSI
- Unicast scope for posSIBs in SI scheduling

Intended outcome: Report and TPs (RRC, stage 2, and LPP if needed) to next meeting
Deadline: Thursday 2020-02-13

✉ **[108#89][NR/Pos] UE-based downlink positioning assistance data (Qualcomm)**
Intended outcome: Agreeable CR for merge into the general LPP CR
Deadline: Thursday 2020-01-23

✉ **[108#90][NR/TEI16] Introduction of B1C BDS signal (CATT)**
Intended outcome: Agreeable CR 36.355 for next meeting
Deadline: Thursday 2020-02-13

✉ **[108#91][NR/L2M] running 38.314 CR (CMCC)**
Intended outcome: running CR
Target to agree the CR next meeting
Deadline: 2020-01-30

✉ **[108#92][NR/MDT] Running 37.320 CR for MDT (CMCC, Nokia)**
Intended outcome: running 37.320 CR to introduce NR MDT
Target to agree the running CR next meeting
Deadline: 2020-01-30

✉ **[108#93][NR/MDT] running 38.321 CR (Ericsson)**
Intended outcome: running CR to support SON/MDT
Target to agree the CR next meeting
Deadline: 2020-01-30

✉ **[108#94][NB-IoT/eMTC R16] Finalise the WUS signalling (Qualcomm)**
Scope: finalise the WUS signalling both for eMTC and NB-IoT using the signalling in section 2 of R2-1916430 as the base line, taking into account RAN1 parameters list.
Intended outcome: TP submitted to next meeting
Deadline: 2020-02-06

✉ **[108#95][NB-IoT] Finalise SON ANR and RLF (Huawei)**
Intended outcome: report to next meeting
Deadline: 2020-02-06

✉ **[108#96][NB-IoT/eMTC R16] Finalise details on RAI (Ericsson)**
Intended outcome: email discussion report.
Deadline: 2020-02-06

✉ **[108#97][NB-IoT / eMTC] Consider how to minimize ping-pong between CN types in RRC_IDLE/RRC_INACTIVE. (Qualcomm)**
Intended outcome: email discussion report
Deadline: 2020-02-06

✉ **[108#98][NB-IoT] UE specific DRX (Huawei)**
Scope: Pending LS from SA2, progress on the details.
Intended outcome: Report, including text proposal for stage 3 if possible.
Deadline: 2020-02-06

✉ **[108#99][V2X] HARQ based TX side RLM/RLF (Interdigital)**

To discuss if HARQ feedback (HARQ A/N and/or HARQ DTX) based TX-side RLF/RLF is required and if so, how to support in RAN2 specification
Intended outcome: Report and TP for next meeting
Deadline: 2020-01-30

✉ **[108#100][V2X] 38.321 36.321 running CRs (LG)**
To update and endorse 38.321/36.321 running CR capturing this meeting agreements. Also to discuss miscellaneous issues for 38.321/36.321 implementations (including consideration of further RAN1 inputs, etc.)
Intended outcome: Endorsable draft CRs for next meeting.
Deadline: 2020-01-30

✉ **[108#101][V2X] 38.322 running CR (Ericsson)**
To discuss miscellaneous issues for 38.322 implementation and to update the running CR
Intended outcome: Endorsable Draft CRs for next meeting.
Deadline: 2020-01-30

✉ **[108#102][V2X] 38.323 running CR (CATT)**
To discuss miscellaneous issues for 38.323 implementation (including consideration of further SA3 inputs, etc.) and to update the running CR
Intended outcome: Endorsable Draft CRs for next meeting.
Deadline: 2020-01-30

✉ **[108#103][V2X] 38.304 36.304 running CRs (ZTE)**
To discuss miscellaneous issues for 38.304/36.304 implementation and to update the running CRs
Intended outcome: Endorsable Draft CRs for next meeting.
Deadline: 2020-01-30

Annex G: History

Document history		
Date	**TSG RAN WG2 Tdoc**	**Subject**
27.11.2019		First draft version
08.12.2019		Second draft version, includes the results of short (1 week) email discussions
23.02.2020		Third draft, includes the results of short II (3 weeks) email discussions
24.02.2020	R2-2000009	Submitted for approval in RAN2#109-e

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APPENDIX D

TDoc	Title	Source	TDoc Status	Reservation date	Uploaded
R2-1914300	Agenda for RAN2#108	Chairman	approved	2019-11-04 16:24:48	2019-11-08 07:53:53
R2-1914301	RAN2#107bis Meeting Report	MCC	approved	2019-11-04 16:24:48	2019-11-17 15:08:49
R2-1914302	LS on channel quality report for LTE-MTC (R1-1911386; contact:	RAN1	noted	2019-11-04 16:24:48	2019-11-04 19:18:22
R2-1914303	LS on support of high peak data rate for Cat-M1 UEs in HD-FDD (R1-	RAN1	noted	2019-11-04 16:24:48	2019-11-06 00:46:22
R2-1914304	LS on PUR transmission for NB-IoT/eMTC (R1-1911399; contact:	RAN1	noted	2019-11-04 16:24:48	2019-11-06 00:46:22
R2-1914305	LS on PDCCH-based Power Saving Signal/Channel carrying indication of UE wakeup before	RAN1	noted	2019-11-04 16:24:48	2019-11-06 00:46:22
R2-1914306	LS on NR IAB case-1 timing (R1-	RAN1	noted	2019-11-04 16:24:48	2019-11-06 00:46:22
R2-1914307	LS on UE higher layer signalling for cross-slot scheduling (R1-1911586;	RAN1	noted	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914308	LS on simultaneous TCI state activation and spatial relation update across multiple CCs/BWPs	RAN1	noted	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914309	LS on SCell BFR (R1-1911619;	RAN1	noted	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914310	LS on SRS for NR Positioning (R1-	RAN1	noted	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914311	Reply to LS on differentiating between MSG2 and MSGB (R1-	RAN1	noted	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914312	LS on UE power saving terminology and text proposal to	RAN1	revised	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914313	Reply LS on propagation delay compensation for reference time	RAN1	noted	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914314	LS on signalling of sidelink RSRP and CSI between UEs (R1-	RAN1	noted	2019-11-04 16:24:49	2019-11-06 00:46:22
R2-1914315	Reply LS on SL RLM/RLF (R1-	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914316	Reply LS on additional PDCCH monitoring occasions for paging for	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914317	LS on NR V2X synchronization procedures (R1-1911718; contact:	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914318	Reply LS on UL-SL prioritization (R1-1911720; contact: OPPO)	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914319	Reply to LS on RAN2 agreements related to 2-step RACH (R1-	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914320	Reply LS on ambiguity of UE L1 FDD/TDD FR1/FR2 capabilities	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914321	LS on Rel-16 LTE and NR parameter lists (R1-1911745; contact: Qualcomm)	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914322	LS on additional high layer information for sidelink physical	RAN1	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914323	LS on aspects of Mission Critical Services over 5MBS (S6-192003;	SA6	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914324	LS Reply on maximum value of MDBV (C3-194330; contact: Nokia)	CT3	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914325	LS on CLI measurement reporting range (R4-1911416; contact: LGE)	RAN4	withdrawn	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914326	LS on NID structure and length (C4-	CT4	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914327	LS on NR IAB case-1 timing (R1-	RAN1	withdrawn	2019-11-04 16:24:50	2019-11-06 00:46:22

R2-1914328	LS to SA3 on False Base Station Detection (R3-196256; contact:	RAN3	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914329	LS on PRACH configuration conflict detection (R3-196270; contact:	RAN3	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914330	LS on resource coordination between NG-RAN nodes for NR	RAN3	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914331	LS on IP assignment in IAB network (R3-196284; contact: Samsung)	RAN3	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914332	Reply LS on CSI-RS configuration transfer (R3-196288; contact: China	RAN3	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914333	LS on CLI measurement reporting range (R4-1911416; contact: LGE)	RAN4	noted	2019-11-04 16:24:50	2019-11-06 00:46:22
R2-1914334	Reply LS on definition for SFTD measurement (R4-1912704;	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914335	Reply LS on SFTD measurement	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914336	LS on NR Mobility Enhancements	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914337	LS Response on the feasibility of time synchronization accuracy requirements and related testing	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914338	Reply LS on second SMTC periodicity in idle mode (R4-	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914339	LS on thresholds for serving cell RSRP change based TA validation	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914340	LS on sidelink synchronization under multiple synchronization sources with different timing (R4-	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914341	LS reply on NR V2X cross-RAT configuration (R4-1912874; contact:	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914342	LS on sync raster for NR V2X (R4-1913063; contact: Vivo, CATT)	RAN4	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914343	Reply LS on mapping between LTE V2X PPPP and NR V2X priority (S2-	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914344	Reply LS on LS on the IAB-indication to core network (S2-	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914345	LS on IAB terminology update (S2-	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914346	Reply LS on assistance indication for WUS (S2-1910549; contact:	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914347	Reply LS on LTE-M identification in 5GC (S2-1910644; contact:	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914348	Reply LS on LS on maximum value of MDBV (S2-1910663; contact:	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914349	LS Reply on Handling of multiple PLMN-assigned capability IDs (S2-	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914350	Reply LS on Sidelink HARQ Feedback for Groupcast (S2-	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914351	Reply LS on NID structure and length (S2-1910784; contact:	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914352	LS on dependencies on AS design for mobility management aspects of	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914353	LS on system level design assumptions for satellite in 5GS	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914354	Reply LS on RRC Connection Reestablishment for CP for NB-IoT	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914355	Reply LS on clarifications on Private Networks (S2-1910803;	SA2	noted	2019-11-04 16:24:51	2019-11-06 00:46:22
R2-1914356	Reply LS on Mobile-terminated Early Data Transmission (S2-	SA2	noted	2019-11-04 16:24:52	2019-11-06 00:46:22
R2-1914357	LS on PC5S and PC5 RRC unicast message protection (S3-193802;	SA3	noted	2019-11-04 16:24:52	2019-11-06 00:46:22
R2-1914358	Reply on QoE Measurement Collection (S4-191234; contact:	SA4	noted	2019-11-04 16:24:52	2019-11-06 00:46:22
R2-1914359	LS on energy efficiency (S5-	SA5	noted	2019-11-04 16:24:52	2019-11-06 00:46:22
R2-1914360	LS on UE power saving terminology and text proposal to	RAN1	noted	2019-11-04 18:47:20	2019-11-12 05:34:01
R2-1914361	Discussion on RAN2 impacts of async CA	Qualcomm Incorporated	noted	2019-11-05 00:03:54	2019-11-08 05:47:46

R2-1914362	CR to 38.331 on support of cross-carrier scheduling with different numerology	Qualcomm Incorporated, ZTE Corporation,	noted	2019-11-05 00:05:44	2019-11-08 05:47:46
R2-1914363	Remaining issues of dormancy behaviour	Qualcomm Incorporated	available	2019-11-05 00:06:41	2019-11-08 05:47:46
R2-1914364	Further discussion on suspension of SCG	Qualcomm Incorporated	available	2019-11-05 00:07:21	2019-11-08 05:47:46
R2-1914365	Remaining Issues on RACH	vivo	available	2019-11-05 00:07:45	2019-11-08 07:02:38
R2-1914366	Issues on the Autonomous BWP	vivo	available	2019-11-05 00:07:45	2019-11-08 07:02:38
R2-1914367	Remaining Issues of UL LBT	vivo	available	2019-11-05 00:07:45	2019-11-08 07:02:38
R2-1914368	LBT Impacts on 2-step RACH	vivo	available	2019-11-05 00:07:45	2019-11-08 07:02:38
R2-1914369	CAPC Restriction to SRB	vivo	available	2019-11-05 00:07:46	2019-11-08 07:02:38
R2-1914370	Further Consideration on RAR	vivo	available	2019-11-05 00:07:46	2019-11-08 07:02:38
R2-1914371	Support of Multiple Active SPS	vivo	noted	2019-11-05 00:07:46	2019-11-08 07:02:38
R2-1914372	Further Discussion on the Whitelist	vivo	noted	2019-11-05 00:07:46	2019-11-08 07:02:38
R2-1914373	Differentiation Between Msg2 and	vivo	noted	2019-11-05 00:07:46	2019-11-08 07:01:40
R2-1914374	Discussion on the 2-step CFRA	vivo	available	2019-11-05 00:07:46	2019-11-08 07:01:40
R2-1914375	Contention Resolution of 2-step RACH Triggered by Uplink Data	vivo	available	2019-11-05 00:07:46	2019-11-08 07:01:40
R2-1914376	Remaining Issues on MsgA	vivo	noted	2019-11-05 00:07:46	2019-11-08 07:01:40
R2-1914377	Resource Selection for 2-step	vivo	available	2019-11-05 00:07:46	2019-11-08 07:01:40
R2-1914378	Discussion on the BFR-initiated 2-	vivo	available	2019-11-05 00:07:46	2019-11-08 07:01:40
R2-1914379	UE capability of Rel-16 DCCA enhancement	Qualcomm Incorporated	available	2019-11-05 00:08:37	2019-11-08 05:47:46
R2-1914380	Remaining issues of NR early measurements	Qualcomm Incorporated	noted	2019-11-05 00:09:36	2019-11-08 05:47:46
R2-1914381	Discussion on fast SCell activation based on Aperiodic TRS (A-TRS)	Qualcomm Incorporated	available	2019-11-05 00:10:24	2019-11-08 05:47:46
R2-1914382	Remaining issues of Scell BFR	CATT	noted	2019-11-05 01:17:43	2019-11-08 06:14:44
R2-1914383	On Remaining Open Issues of IAB	CATT	available	2019-11-05 01:17:43	2019-11-08 06:14:44
R2-1914384	On Hop-by-Hop Flow control for	CATT	noted	2019-11-05 01:17:43	2019-11-08 06:14:44
R2-1914385	On Remaining Open Issues of IAB	CATT	available	2019-11-05 01:17:43	2019-11-08 06:14:44
R2-1914386	Cell restriction for CA duplication	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:20:06
R2-1914387	Draft CR for MAC CE format to	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:20:06
R2-1914388	Remaining open issues for 2-step	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:17:51
R2-1914389	Draft TP for msgB MAC PDU	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:17:51
R2-1914390	Remaining issues on 2-step RACH configuration without 4-step	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:17:51
R2-1914391	Contention resolution for 2-step RACH in C-RNTI MAC CE case	OPPO	noted	2019-11-05 01:32:13	2019-11-08 04:17:51
R2-1914392	Contention free 2-step RACH	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:17:51
R2-1914393	Text proposal on power saving	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:04:50
R2-1914394	Remaining issues on PDCCH-	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:04:50
R2-1914395	Impacts of power saivng signalling	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:04:50
R2-1914396	[Draft] LS on preamble group for 2-	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:17:51
R2-1914397	RRM relaxation for power saving	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:04:50
R2-1914398	Text proposal for NR-U impacts on	OPPO	reserved	2019-11-05 01:32:13	
R2-1914399	LBT aware UL BWP selection for	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:34:29
R2-1914400	Remaining issues on consistent	OPPO	noted	2019-11-05 01:32:13	2019-11-08 04:34:29
R2-1914401	2-step RACH for NR-U	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:34:29
R2-1914402	DRX procedure enhancements due	OPPO	available	2019-11-05 01:32:13	2019-11-08 04:34:29
R2-1914403	Remaining issues on NR-U	OPPO	noted	2019-11-05 01:32:13	2019-11-08 04:34:29
R2-1914404	CAPC for CG when SRB is	OPPO	noted	2019-11-05 01:32:13	2019-11-08 07:01:09
R2-1914405	Discussion RAN1 LS on supporting multiple frequency domain	OPPO	noted	2019-11-05 01:32:13	2019-11-08 05:39:29
R2-1914406	Stopping criteria for paging	OPPO	available	2019-11-05 01:32:13	2019-11-08 06:17:40
R2-1914407	Discussion on SSB measurement configuration with UE mobility	China Unicom	available	2019-11-05 01:40:38	2019-11-05 02:25:45
R2-1914408	Open Issues of Reference Timing	CATT	noted	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914409	Remaining Issues of Multiple	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914410	Discussion on Ethernet Header	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914411	Intra-UE prioritization framework considering RAN1/RAN2	CATT	noted	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914412	Handling of Dropped MAC PDU	CATT	noted	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914413	MAC PDU Priority Determination	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914414	Equal-priority Handling	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28

R2-1914415	The Prioritization between MAC	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914416	Primary Path and Initial State for	CATT	noted	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914417	Discussion on Duplication MAC	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914418	LCH-to-Cell Restriction in Rel-16	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914419	Discussion on UE based	CATT	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914420	MAC upgrade for SR dropping in	CATT,	available	2019-11-05 01:41:37	2019-11-08 02:01:28
R2-1914421	On the remaining open issues of 2-	CATT	noted	2019-11-05 01:41:37	2019-11-08 05:53:30
R2-1914422	Load Balancing between RACH Types	CATT, OPPO, vivo, Spreadtrum, Panasonic,	noted	2019-11-05 01:41:37	2019-11-08 05:53:30
R2-1914423	Consideration on msgB-RNTI	CATT	available	2019-11-05 01:41:37	2019-11-08 05:53:30
R2-1914424	RA Type Selection between Legacy	CATT	available	2019-11-05 01:41:37	2019-11-08 05:53:30
R2-1914425	Remaining issues on early measurement	CATT	available	2019-11-05 01:41:37	2019-11-08 05:56:19
R2-1914426	Remaining Issues for Extending RAR Window	Samsung Electronics Co.,	noted	2019-11-05 01:46:40	2019-11-07 23:44:16
R2-1914427	CAPC Aspects for Scheduling SRB in Configured Grant	Samsung Electronics Co.,	noted	2019-11-05 01:46:40	2019-11-07 23:44:16
R2-1914428	Signaling Multiple UL grants for Msg3 Transmission in NR-U	Samsung Electronics Co.,	noted	2019-11-05 01:46:40	2019-11-07 23:44:16
R2-1914429	Draft RRC CR_Supporting RAR Window Size larger than 10ms in	Samsung Electronics Co.,	available	2019-11-05 01:46:40	2019-11-07 23:44:16
R2-1914430	Report of Email discussion 107bis#76- MSG B Format Design	Samsung Electronics Co.,	noted	2019-11-05 01:46:40	2019-11-08 02:39:10
R2-1914431	MAC TP_MSGB Format Design	Samsung Electronics Co.,	endorsed	2019-11-05 01:46:40	2019-11-08 04:47:25
R2-1914432	Legacy CFRA and Selection between 2 step and 4 step RA	Samsung Electronics Co.,	noted	2019-11-05 01:46:40	2019-11-07 23:46:14
R2-1914433	2 Step RACH_RNTI for Receiving Network Response	Samsung Electronics Co.,	noted	2019-11-05 01:46:40	2019-11-07 23:46:14
R2-1914434	2 Step RA_RACH Configuration	Samsung Electronics Co.,	available	2019-11-05 01:46:40	2019-11-07 23:46:14
R2-1914435	Open issues for supporting 2 step CFRA	Samsung Electronics Co.,	available	2019-11-05 01:46:40	2019-11-07 23:46:14
R2-1914436	Impact of Mode 1 Resource Allocation on Uu BWP Operation	Samsung Electronics Co.,	available	2019-11-05 01:46:40	2019-11-07 23:45:19
R2-1914437	RRC Connection Initiation Trigger for V2X Sidelink Communication	Samsung Electronics Co.,	available	2019-11-05 01:46:40	2019-11-07 23:45:19
R2-1914438	RAN2 Aspects of SCell BFR	Samsung Electronics Co.,	available	2019-11-05 01:46:40	2019-11-07 23:44:46
R2-1914439	Open Issues for Cell Selection and	CATT	available	2019-11-05 01:49:52	2019-11-08 06:08:59
R2-1914440	Discussion on Connected mode	CATT	available	2019-11-05 01:52:38	2019-11-08 06:09:03
R2-1914441	RLM / RLF procedure in NR V2X	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914442	Resource (Re-) selection function	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914443	Remaining Issues on SL HARQ	CATT	noted	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914444	Remaining Issues on PDCP	CATT	noted	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914445	Resource allocation mode	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914446	Leftover Issues on LCP	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914447	Leftover Issues for Sidelink	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914448	Remaining Issues for Prioritization	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914449	UE Behavior Clarification during	CATT	revised	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914450	Open Issues for the Bi-directional	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914451	Discussion on inter-RAT Cell	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914452	Left Issues of SL BSR/SR	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914453	Congestion control for NR SL	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914454	Type 1 Sidelink Configured Grant	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914455	Re-consideration on PLMN-wide	CATT	noted	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914456	Draft LS on PLMN-wide Filter	CATT	available	2019-11-05 02:05:18	2019-11-08 06:36:37
R2-1914457	Proposal about the configurations of validity area for early measurement	China Unicom	available	2019-11-05 02:13:04	2019-11-05 02:35:27
R2-1914458	Discussion for early measurement configuration for 2-step resume	China Unicom	available	2019-11-05 02:18:32	2019-11-05 02:31:03
R2-1914459	Discussion on SL capability signaling for Uu-RRC and PC5-	OPPO	available	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914460	Discussion on SL-related Uu-RRC	OPPO	available	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914461	Left issues on HARQ for NR-V2X	OPPO	noted	2019-11-05 02:29:55	2019-11-08 06:29:54

R2-1914462	Left issues on CSI report for NR-	OPPO	noted	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914463	Left issues on UL-SL prioritization	OPPO	noted	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914464	Left issues on PC5-S impact on AS-	OPPO	noted	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914465	SL RSRP measurement report via	OPPO	available	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914466	Left issues on failure case handling	OPPO	noted	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914467	Left issues on SLRB configuration	OPPO	available	2019-11-05 02:29:55	2019-11-08 06:29:54
R2-1914468	Signaling design for RAT-	CATT	available	2019-11-05 02:35:51	2019-11-08 06:38:56
R2-1914469	Broadcast Positioning Procedure in	CATT	revised	2019-11-05 02:35:51	2019-11-08 06:38:56
R2-1914470	Open Issues of Broadcast	CATT	noted	2019-11-05 02:35:51	2019-11-08 06:38:56
R2-1914471	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc	revised	2019-11-05 02:35:51	2019-11-08 06:34:14
R2-1914472	Discussion on WUS assistance indication LS from SA2 and Rel-15	NTT DOCOMO INC.	noted	2019-11-05 04:58:05	2019-11-08 07:19:44
R2-1914473	[DRAFT] Reply LS on assistance indication for WUS	NTT DOCOMO INC.	available	2019-11-05 05:01:19	2019-11-08 07:19:44
R2-1914474	CE Mode Threshold Adjustments	NTT DOCOMO	available	2019-11-05 05:04:02	2019-11-08 07:19:44
R2-1914475	Report of email discussion	NTT DOCOMO	noted	2019-11-05 05:08:10	2019-11-08 07:19:44
R2-1914476	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecommunicati	withdrawn	2019-11-05 05:16:34	
R2-1914477	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecommunicati	withdrawn	2019-11-05 05:16:36	
R2-1914478	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecommunicati	withdrawn	2019-11-05 05:16:37	
R2-1914479	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecommunicati	withdrawn	2019-11-05 05:16:40	
R2-1914480	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecommunicati	withdrawn	2019-11-05 05:16:42	
R2-1914481	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecommunicati	reserved	2019-11-05 05:16:43	
R2-1914482	Clarification of PDCCH monitoring when not fully aligned with PDCCH	NTT DOCOMO INC.	revised	2019-11-05 06:06:00	2019-11-13 07:03:40
R2-1914483	Further Considerations on	CATT	available	2019-11-05 06:07:13	2019-11-08 06:14:44
R2-1914484	UDC Impacts of DAPS	CATT	available	2019-11-05 06:07:13	2019-11-08 06:14:44
R2-1914485	Remaining CP Issues of DAPS	CATT	available	2019-11-05 06:07:13	2019-11-08 06:14:44
R2-1914486	Consideration on WA or MCG Fast	CATT	available	2019-11-05 06:07:13	2019-11-08 06:14:44
R2-1914487	Further Discussions on Cell	CATT	available	2019-11-05 06:07:13	2019-11-08 06:14:44
R2-1914488	Coexistence of Simultaneous	CATT	available	2019-11-05 06:07:13	2019-11-08 06:14:44
R2-1914489	Remaining Issues of CHO	CATT	available	2019-11-05 06:07:13	2019-11-08 06:14:44
R2-1914490	Considerations on IAB multi	KDDI Corporation	noted	2019-11-05 06:57:44	2019-11-07 02:28:40
R2-1914491	Discussion on a configuration mismatch between a UE and a	KDDI Corporation	available	2019-11-05 06:58:54	2019-11-07 02:28:40
R2-1914492	Discussion on reselection between	KDDI Corporation	available	2019-11-05 07:02:01	2019-11-07 02:28:40
R2-1914493	Open Issues on NPN for UE in	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914494	Feeder link switch	CATT	revised	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914495	Measurement Initiation Issue for	CATT	revised	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914496	Discussion on Location Report	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914497	Consideration on the SPS/CG for	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914498	TP on Random Access procedure	CATT	revised	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914499	Leftover Issues for RACH Report	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914500	Configuration of Out-of-coverage	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914501	Recording and Reporting of CEF	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914502	Failure Indication about SCG	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914503	Statistic of UL Delay Measurement	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914504	Uncertainty of L2 Measurement	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914505	Consideration on Successful HO	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914506	Supporting of Handover Type	CATT	available	2019-11-05 08:23:07	2019-11-08 06:30:27
R2-1914507	Report on Email Discussion 107b#85 NRMDT Mobility History	CATT	noted	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914508	Discussion on PRACH	CATT	revised	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914509	Reply LS on PRACH configuration	CATT	available	2019-11-05 08:23:07	2019-11-08 06:25:15
R2-1914510	FDD and TDD Timing Alignment	Vodafone	noted	2019-11-05 16:26:36	2019-11-07 16:11:42

R2-1914511	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecommunications, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO,	noted	2019-11-05 18:20:12	2019-11-05 18:35:11
R2-1914512	Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16	China Telecommunications, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO,	revised	2019-11-05 18:30:42	2019-11-05 18:35:11
R2-1914513	Consecutive Conditional Handover	Apple Inc.	available	2019-11-05 19:10:18	2019-11-08 00:20:11
R2-1914514	Remaining Issues for IAB Routing	Futurewei Technologies	available	2019-11-05 19:20:27	2019-11-08 03:52:49
R2-1914515	PDCP SN continuity support for RLC UM bearers	Qualcomm Incorporated	available	2019-11-06 00:16:37	2019-11-08 01:49:45
R2-1914516	Source connection handling during MBB HO	Qualcomm Incorporated	available	2019-11-06 00:17:29	2019-11-08 01:49:45
R2-1914517	CHO SN addition/change handling	Qualcomm Incorporated	available	2019-11-06 00:18:47	2019-11-08 01:49:45
R2-1914518	CHO SN addition/change failure handling	Qualcomm Incorporated	available	2019-11-06 00:19:29	2019-11-08 01:49:45
R2-1914519	Support per DRB MBB HO configuration	Qualcomm Incorporated	available	2019-11-06 00:20:18	2019-11-08 01:49:45
R2-1914520	Running Stage-2 CR for NR-U	Qualcomm Incorporated	endorsed	2019-11-06 01:28:07	2019-11-08 01:59:17
R2-1914521	Running RRC CR for NR-U	Qualcomm Incorporated	endorsed	2019-11-06 01:31:58	2019-11-08 01:59:17
R2-1914522	RAN2 work plan for UE Power	CATT	noted	2019-11-06 01:50:16	2019-11-08 02:53:36
R2-1914523	[107bis#69][PowerSaving] Running	CATT	endorsed	2019-11-06 01:50:16	2019-11-09 09:54:56
R2-1914524	Remaining issues of PDCCH-	CATT	noted	2019-11-06 01:50:16	2019-11-08 02:53:36
R2-1914525	Impacts of PDCCH-WUS on RRC	CATT	revised	2019-11-06 01:50:16	2019-11-08 02:53:36
R2-1914526	Remaining issues on UE	CATT	available	2019-11-06 01:50:16	2019-11-08 02:53:36
R2-1914527	Reusing overheating fields for	CATT, Apple	available	2019-11-06 01:50:16	2019-11-08 02:53:36
R2-1914528	Measurement Configuration in Inactive Mode and MR-DC	CATT	available	2019-11-06 01:50:16	2019-11-08 05:49:20
R2-1914529	Considerations on cell reselection for early measurement reporting	CATT	available	2019-11-06 01:50:16	2019-11-08 05:49:20
R2-1914530	Temporary RS utilization for SCell and SpCell	CATT	available	2019-11-06 01:50:16	2019-11-08 03:29:10
R2-1914531	Consideration on Dormant SCG State	CATT	available	2019-11-06 01:50:16	2019-11-08 03:29:10
R2-1914532	Signalling enhancement for Inactive	CATT	available	2019-11-06 01:50:16	2019-11-08 02:54:10
R2-1914533	Bearer type negotiation	CATT	available	2019-11-06 01:50:16	2019-11-08 02:54:10
R2-1914534	Corrections on CG-Config	CATT	agreed	2019-11-06 01:50:16	2019-11-08 02:54:26
R2-1914535	Consideration on mode1 resource allocation	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914536	Discussion on UL and SL prioritisation	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914537	Discussion on SL CSI and RSRP report	ZTE Corporation, Sanechips	noted	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914538	Consideration on NR V2X CBR	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914539	Left issues for MAC in NR V2X	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914540	Discussion on left issue in NR V2X UP	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914541	Discussion on NR V2X system information acquisition	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914542	Discussion on remaining issues on SLRB parameters	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914543	Consideration on sidelink RLM management	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914544	Consideration on exceptional resource pool	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55

R2-1914545	Consideration on NR V2X cross RAT support	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914546	Handling of SLRB when UE RRC states transition	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914547	Further discussion on RLC AM and UM for NR V2X unicast	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914548	Discussion on NR V2X groupcast feedback options	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914549	Discussion the missing of UE coverage status description in	ZTE Corporation, Sanechips	available	2019-11-06 02:35:23	2019-11-08 05:29:55
R2-1914550	Running Idle/Inactive CR for NR-U	Qualcomm Incorporated	endorsed	2019-11-06 02:39:34	2019-11-08 01:59:17
R2-1914551	Fast Scell activation in sTAG	OPPO	available	2019-11-06 02:40:31	2019-11-08 05:21:55
R2-1914552	Introduction of dormancy behavior in NR	OPPO	available	2019-11-06 02:40:31	2019-11-08 06:02:39
R2-1914553	Open issues for early measurement	OPPO	available	2019-11-06 02:40:31	2019-11-08 05:21:55
R2-1914554	Open issues for CLI measurment	OPPO	available	2019-11-06 02:40:31	2019-11-08 05:19:00
R2-1914555	UE assistance information reportin	OPPO	available	2019-11-06 02:40:31	2019-11-08 05:19:00
R2-1914556	Security algorithom update in RRC	OPPO,Huawei	available	2019-11-06 02:40:31	2019-11-08 05:19:00
R2-1914557	Correction on RRC	OPPO	not treated	2019-11-06 02:40:31	2019-11-08 05:19:30
R2-1914558	Correction Release cause for RRC	OPPO	not treated	2019-11-06 02:40:33	2019-11-08 05:19:30
R2-1914559	Correction on split PDU session	OPPO	not pursued	2019-11-06 02:40:34	2019-11-08 05:19:30
R2-1914560	Discussion on Cached Data	OPPO	available	2019-11-06 02:40:35	2019-11-08 05:19:00
R2-1914561	(running)36.304CR on cell selection(reselection) for NR V2X	ZTE Corporation, Sanechips	endorsed	2019-11-06 02:40:47	2019-11-13 09:31:01
R2-1914562	(running)38.304CR on cell selection(reselection) for NR V2X	ZTE Corporation, Sanechips	endorsed	2019-11-06 02:43:19	2019-11-13 09:31:01
R2-1914563	CR on NR V2X UE coverage status description in TS 36.304	ZTE Corporation, Sanechips	available	2019-11-06 02:46:44	2019-11-08 05:29:55
R2-1914564	CR on NR V2X UE coverage status description in TS 38.304	ZTE Corporation, Sanechips	available	2019-11-06 02:49:33	2019-11-08 05:29:55
R2-1914565	Discussion on DL/UL PRS based	ZTE Corporation	available	2019-11-06 03:10:59	2019-11-08 01:37:43
R2-1914566	Modification to Multi-cell power	ZTE Corporation	available	2019-11-06 03:12:06	2019-11-08 01:37:43
R2-1914567	Discussion on ECID positioning in	ZTE Corporation	available	2019-11-06 03:13:05	2019-11-08 01:37:43
R2-1914568	Draft LS on configuration exchange	OPPO	available	2019-11-06 03:19:45	2019-11-08 05:19:00
R2-1914569	Draft LS on early measurement configuration during 2 step resume	OPPO	available	2019-11-06 03:19:45	2019-11-08 05:21:55
R2-1914570	Correction of cell reselection parameters for multi-beam	Qualcomm Incorporated,	revised	2019-11-06 03:40:01	2019-11-08 01:59:17
R2-1914571	Correction on field description of cellReselectionInfoCommon	Qualcomm Incorporated,	agreed	2019-11-06 03:41:51	2019-11-08 01:59:17
R2-1914572	Handling of UL LBT failures	Intel Corporation	available	2019-11-06 03:43:59	2019-11-08 05:01:02
R2-1914573	Channel Access Priority selection and multiplexing for Configured	Intel Corporation	available	2019-11-06 03:43:59	2019-11-08 05:01:01
R2-1914574	Multiple Active Configured Grants	Intel Corporation	available	2019-11-06 03:43:59	2019-11-08 05:01:01
R2-1914575	SCell Dormancy operation in NR	Intel Corporation	noted	2019-11-06 03:43:59	2019-11-08 05:59:45
R2-1914576	Practical scoping of SCG suspension operation in NR	Intel Corporation	noted	2019-11-06 03:43:59	2019-11-08 05:59:45
R2-1914577	Miscellaneous corrections on UE	Intel Corporation	revised	2019-11-06 03:43:59	2019-11-08 05:01:01
R2-1914578	Clarification on the restriction of maximum SRS resource sets	Intel Corporation	agreed	2019-11-06 03:44:02	2019-11-08 05:01:01
R2-1914579	Signaling Support for Frame Based	Intel Corporation	noted	2019-11-06 03:44:03	2019-11-08 05:01:01
R2-1914580	Measurement gap capability	Intel Corporation	available	2019-11-06 03:44:03	2019-11-08 05:59:45
R2-1914581	Work plan for Rel-16 UE Capability	Intel Corporation	revised	2019-11-06 03:44:03	2019-11-08 05:01:01
R2-1914582	CAPC for RACH and PUCCH in	MediaTek Inc.	not treated	2019-11-06 05:59:14	2019-11-07 17:35:43
R2-1914583	On Restrictions in Multiplexing of High and Low Priority LCH in CG	MediaTek Inc.	available	2019-11-06 06:02:23	2019-11-07 17:35:57
R2-1914584	Including RSSI and Channel Occupancy in NR-U UE	MediaTek Inc.	available	2019-11-06 06:06:56	2019-11-07 17:36:14
R2-1914585	Conditional HO with L2 packet	MediaTek Inc.	available	2019-11-06 06:08:48	2019-11-07 17:36:31
R2-1914586	Improving Cell Reselection using Next Cell Information in LEO-NTN	MediaTek Inc.	available	2019-11-06 06:10:48	2019-11-07 17:36:46
R2-1914587	Configuring Threshold-based Soft	MediaTek Inc.	available	2019-11-06 06:12:34	2019-11-07 17:37:00

R2-1914588	Synchronized Handover without	MediaTek Inc.	available	2019-11-06 06:14:09	2019-11-18 02:34:58
R2-1914589	On Increasing Number of HARQ	MediaTek Inc.	available	2019-11-06 06:16:08	2019-11-07 17:39:20
R2-1914590	UE CLI Measurements for Multiconnectivity	Nokia, Nokia Shanghai Bell	available	2019-11-06 06:20:03	2019-11-08 04:40:30
R2-1914591	Remaning Issues for UE-CLI	Nokia, Nokia Shanghai Bell	available	2019-11-06 06:20:03	2019-11-08 04:40:30
R2-1914592	On Release of source cell in DAPS Handover	Nokia, Nokia Shanghai Bell	noted	2019-11-06 06:20:03	2019-11-08 04:40:30
R2-1914593	Introduction of Rel-16 NB-IoT	Nokia	revised	2019-11-06 06:20:03	2019-11-08 04:40:30
R2-1914594	GWUS Configuration and Resource mapping	Nokia, Nokia Shanghai Bell	available	2019-11-06 06:20:03	2019-11-08 04:40:30
R2-1914595	Remaining Issues for PUR	Nokia, Nokia Shanghai Bell	available	2019-11-06 06:20:03	2019-11-08 04:40:30
R2-1914596	PUR for control plane solution	Nokia, Nokia Shanghai Bell	available	2019-11-06 06:20:03	2019-11-08 04:40:30
R2-1914597	RNA Configuration	Nokia	not pursued	2019-11-06 06:59:44	2019-11-08 01:53:17
R2-1914598	NPN Work Plan	Nokia, China Telecom	noted	2019-11-06 06:59:46	2019-11-08 05:36:13
R2-1914599	NPN Stage 2 Draft CR	Nokia (Rapporteur)	revised	2019-11-06 06:59:46	2019-11-07 21:19:09
R2-1914600	LS on Emergency Services in	Nokia	noted	2019-11-06 06:59:46	2019-11-08 01:53:17
R2-1914601	Split Threshold for DC and NR-U	Nokia, Nokia Shanghai Bell	noted	2019-11-06 06:59:46	2019-11-08 01:53:17
R2-1914602	QoS Flow Handling	Nokia, Nokia Shanghai Bell	available	2019-11-06 06:59:46	2019-11-08 01:53:17
R2-1914603	MDBV Enforcement	Nokia, InterDigital, Nokia	available	2019-11-06 06:59:46	2019-11-08 01:53:18
R2-1914604	Notification for Alternative QoS profiles	Nokia, Nokia Shanghai Bell	postponed	2019-11-06 06:59:46	2019-11-08 01:53:18
R2-1914605	LS on Notification for Alternative QoS profiles	Nokia, Nokia Shanghai Bell	postponed	2019-11-06 06:59:46	2019-11-08 01:53:18
R2-1914606	HARQ process ID for deprioritized	III	available	2019-11-06 07:03:26	2019-11-08 03:07:27
R2-1914607	Support the change between normal PDCP entity and DAPS PDCP	Mediatek Inc., Huawei, HiSilicon	noted	2019-11-06 07:42:05	2019-11-08 05:34:18
R2-1914608	Draft CR for 38.323 to support the change between normal PDCP and	Mediatek Inc., Huawei, HiSilicon	available	2019-11-06 07:49:56	2019-11-08 05:34:18
R2-1914609	Draft CR for 36.323 to support the change between normal PDCP and	Mediatek Inc., Huawei, HiSilicon	available	2019-11-06 07:52:33	2019-11-08 05:34:18
R2-1914610	RLC UM handling during DAPS HO	MediaTek Inc., Apple, vivo,	noted	2019-11-06 07:54:30	2019-11-08 05:34:18
R2-1914611	RLC Impacts analysis with DAPS	Mediatek Inc.	noted	2019-11-06 07:57:00	2019-11-08 05:35:03
R2-1914612	QoS Flow to DRB Remapping	Mediatek Inc.,	noted	2019-11-06 08:01:47	2019-11-08 05:34:18
R2-1914613	draft CR to 37.324 to support QoS flow remapping during DAPS HO	Mediatek Inc., Apple	available	2019-11-06 08:03:48	2019-11-08 05:34:18
R2-1914614	Correction on reestablishRLC	CATT	not treated	2019-11-06 09:15:02	2019-11-08 02:54:26
R2-1914615	DRX ambiguous period enhancements for NTN	Asia Pacific Telecom co. Ltd	available	2019-11-06 09:48:01	2019-11-08 02:03:51
R2-1914616	Discussion on SCell BFR procedure	Asia Pacific Telecom co. Ltd	available	2019-11-06 09:51:18	2019-11-08 01:23:08
R2-1914617	Discussion on 2-step RACH for BFR	Asia Pacific Telecom co. Ltd	available	2019-11-06 09:54:29	2019-11-08 01:23:08
R2-1914618	QoS in NR V2X	Fraunhofer IIS, Fraunhofer HHI	available	2019-11-06 10:48:44	2019-11-07 15:49:07
R2-1914619	PDCP status reporting in target cell	Ericsson	available	2019-11-06 11:20:09	2019-11-07 16:53:02
R2-1914620	RLC retransmissions to source	Ericsson	withdrawn	2019-11-06 11:20:09	2019-11-07 16:53:02
R2-1914621	Specification impact from RLC-UM	Ericsson	withdrawn	2019-11-06 11:20:09	2019-11-07 16:53:02
R2-1914622	Release of source cell at DAPS	Ericsson	available	2019-11-06 11:20:09	2019-11-07 16:53:02
R2-1914623	Fallback to source cell during	Ericsson	available	2019-11-06 11:20:09	2019-11-07 16:53:02
R2-1914624	On the configuration of DAPS	Ericsson	noted	2019-11-06 11:20:09	2019-11-07 16:53:01
R2-1914625	Capability coordination for DAPS	Ericsson	available	2019-11-06 11:20:09	2019-11-07 16:53:02
R2-1914626	Cell Selection and Reselection	Ericsson	noted	2019-11-06 11:20:09	2019-11-07 20:53:49
R2-1914627	Connected mode aspects of NPN	Ericsson	available	2019-11-06 11:20:09	2019-11-07 20:53:49
R2-1914628	SIB1 design for NPN	Ericsson	available	2019-11-06 11:20:09	2019-11-07 22:49:41
R2-1914629	On skipping	Ericsson	noted	2019-11-06 11:20:09	2019-11-08 16:31:10
R2-1914630	CR to 38.304 on dedicated cell	Ericsson	merged	2019-11-06 11:20:09	2019-11-07 16:53:02

R2-1914631	Dummify one of the cellReservedForOperatorUse-	Ericsson	withdrawn	2019-11-06 11:20:11	
R2-1914632	[107bis#66][NR/NTN] Running TP	THALES	revised	2019-11-06 11:50:36	2019-11-07 21:22:04
R2-1914633	Inputs to TR 38.821 recommendations	THALES, Nomor, Nokia, Vodafone, Mediatek	revised	2019-11-06 12:01:10	2019-11-07 21:21:11
R2-1914634	Remaining open issues for CHO	Ericsson	noted	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914635	Handling of a HO command while	Ericsson	available	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914636	Suspend/Release while monitoring	Ericsson	available	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914637	Conditional PSCell addition/change	Ericsson	available	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914638	TP for 38.331 on CHO	Ericsson	available	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914639	Further details on CHO failure	Ericsson	noted	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914640	Running CR for Introduction of Even futher Mobility enhancement	Ericsson	endorsed	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914641	Discussion on incoming LSes for QoE measurement collection in	Ericsson	noted	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914642	Additions to QoE measurement	Ericsson	not treated	2019-11-06 12:06:58	2019-11-07 20:24:52
R2-1914643	Draft reply LS on QoE	Ericsson	revised	2019-11-06 12:07:00	2019-11-07 20:24:52
R2-1914644	UE capabilities for SRVCC from 5G to 3G	Ericsson	available	2019-11-06 12:07:00	2019-11-07 20:24:52
R2-1914645	Introduction of SRVCC from 5G to 3G	Ericsson	revised	2019-11-06 12:07:00	2019-11-07 20:24:52
R2-1914646	Running CR for introduction of SRVCC from 5G to 3G	Ericsson	endorsed	2019-11-06 12:07:01	2019-11-07 20:24:52
R2-1914647	Remaining issues on Paging	Ericsson	available	2019-11-06 12:07:01	2019-11-07 20:24:52
R2-1914648	RRM in NR-U	Ericsson	available	2019-11-06 12:07:01	2019-11-08 07:23:31
R2-1914649	Correction on T322	Nokia, Nokia Shanghai Bell	agreed	2019-11-06 12:18:50	2019-11-07 21:34:15
R2-1914650	Correction on T322	Nokia, Nokia Shanghai Bell	agreed	2019-11-06 12:22:35	2019-11-07 21:34:15
R2-1914651	On combined RRC procedures	Nokia, Nokia Shanghai Bell,	available	2019-11-06 12:31:58	2019-11-07 21:34:15
R2-1914652	RRC processing delays for combined procedures	Nokia, Nokia Shanghai Bell,	not treated	2019-11-06 12:35:11	2019-11-07 21:34:15
R2-1914653	Remaining issues of SL	MediaTek Inc.	revised	2019-11-06 12:48:43	2019-11-08 06:33:33
R2-1914654	Remaining issues of SL LCP	MediaTek Inc.	available	2019-11-06 12:48:43	2019-11-08 06:33:33
R2-1914655	On SL configured grant	MediaTek Inc.	available	2019-11-06 12:48:43	2019-11-08 06:33:33
R2-1914656	Support of simultaneous mode 1	MediaTek Inc.	available	2019-11-06 12:48:43	2019-11-08 06:33:33
R2-1914657	RRM Measurements for Mobility in NR-U	Fraunhofer HHI, Fraunhofer IIS	available	2019-11-06 13:23:02	2019-11-07 14:56:52
R2-1914658	Implicit Indication of LBT Failures	Fraunhofer HHI	available	2019-11-06 13:25:15	2019-11-07 14:56:52
R2-1914659	Multiple Frequency Domain	Fraunhofer HHI	available	2019-11-06 13:26:40	2019-11-07 14:56:52
R2-1914660	Introduction of a second SMTC per frequency carrier in idle/inactive	Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo	endorsed	2019-11-06 13:42:15	2019-11-07 14:49:54
R2-1914661	Introduction of a second SMTC for inter-RAT cell reselection	Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo	endorsed	2019-11-06 13:44:56	2019-11-07 14:49:54
R2-1914662	Correction on frequency indication in SIB1 and SIB2	Huawei, HiSilicon,	agreed	2019-11-06 14:15:33	2019-11-07 18:04:01
R2-1914663	Correction on parameter description of	Huawei, HiSilicon	postponed	2019-11-06 14:15:35	2019-11-07 18:04:01
R2-1914664	Clarification on gap sharing configuration handling at handover	Huawei, HiSilicon	postponed	2019-11-06 14:15:37	2019-11-07 18:04:01
R2-1914665	CR to 38.306 on DRX-based intra-frequency SFTD measurement	Huawei, HiSilicon,	revised	2019-11-06 14:15:38	2019-11-07 18:04:01
R2-1914666	CR to 38.331 on DRX-based intra-frequency SFTD measurement	Huawei, HiSilicon,	revised	2019-11-06 14:15:39	2019-11-07 18:04:01
R2-1914667	CR to 38.331 on CGI information	Huawei, HiSilicon,	agreed	2019-11-06 14:15:40	2019-11-07 18:04:01
R2-1914668	Report of [107bis#50][NR TEI16] Adding CSI-RS information into	Huawei, HiSilicon	noted	2019-11-06 14:15:41	2019-11-08 07:39:04

R2-1914669	CR to 38.331 on CSI-RS inter-node	Huawei, HiSilicon	endorsed	2019-11-06 14:15:42	2019-11-08 07:39:04
R2-1914670	Reply LS on CSI-RS configuration	Huawei, HiSilicon	revised	2019-11-06 14:15:43	2019-11-08 07:39:04
R2-1914671	Support of releasing UL configuration	Huawei, HiSilicon, CMCC, China Telecom, MediaTek Inc., Vodafone, Orange, vivo, OPPO, Spreadtrum Communications,	endorsed	2019-11-06 14:15:43	2019-11-07 18:04:01
R2-1914672	DRX configuration coordination in	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-07 18:04:01
R2-1914673	On the support of NG-based (i.e. via CN) handover based using CGI	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-07 18:04:01
R2-1914674	MAC CE signaling enhancement for TCI indication of single-PDCCH	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-07 18:04:01
R2-1914675	RRC signalling for MIMO	Huawei, HiSilicon	reserved	2019-11-06 14:15:44	
R2-1914676	MAC CE signaling for multi-beam	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-07 18:04:01
R2-1914677	NR-DC power control	Huawei, HiSilicon	noted	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914678	Idle/inactive NR measurements in LTE and in NR	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914679	MAC impact to support the efficient and low latency SCell configuration	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914680	CG fast recovery via alternative UL	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914681	Remaining issues on fast MCG link recovery	Huawei, HiSilicon	noted	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914682	RAN2 impact to support cross-carrier scheduling with different	Huawei, HiSilicon	noted	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914683	Clarification on RAN2 impact to support DL HARQ timing for dual	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914684	UE capabilities for DC and CA enhancements	Huawei, HiSilicon	available	2019-11-06 14:15:44	2019-11-08 07:21:56
R2-1914685	Correction on PUCCH transform precoding	vivo, Nokia (rapporteur)	agreed	2019-11-06 15:02:20	2019-11-08 07:01:00
R2-1914686	Cell re-selection during RRC	vivo	not treated	2019-11-06 15:02:21	2019-11-08 07:01:00
R2-1914687	Correction on beamSwitchTiming	vivo, Huawei,	endorsed	2019-11-06 15:02:23	2019-11-08 07:01:00
R2-1914688	Introduction of NR IDC solution	vivo	not treated	2019-11-06 15:02:23	2019-11-08 07:01:00
R2-1914689	38.304 Running CR on UE Power	vivo	not treated	2019-11-06 15:02:25	2019-11-08 07:01:00
R2-1914690	Left issues and RRC parameters	vivo	available	2019-11-06 15:02:27	2019-11-08 07:01:01
R2-1914691	WUS impact upon BWP switching	vivo	withdrawn	2019-11-06 15:02:27	
R2-1914692	UE assistance information for	vivo	available	2019-11-06 15:02:27	2019-11-08 07:01:01
R2-1914693	Network controlled RRM	vivo	available	2019-11-06 15:02:27	2019-11-08 07:01:01
R2-1914694	UE Power Consumption Reduction	vivo	available	2019-11-06 15:02:27	2019-11-08 07:01:01
R2-1914695	Running 36.321 CR for LTE feMob	vivo (rapporteur)	endorsed	2019-11-06 15:02:27	2019-11-08 07:01:01
R2-1914696	Running 38.321 CR for NR mobility	vivo (rapporteur)	endorsed	2019-11-06 15:02:28	2019-11-08 07:01:01
R2-1914697	RRC remaining issues for	vivo	available	2019-11-06 15:02:29	2019-11-08 07:01:01
R2-1914698	Discussion on CHO release	vivo	available	2019-11-06 15:02:29	2019-11-08 07:01:01
R2-1914699	Discussion on the number of	vivo	available	2019-11-06 15:02:29	2019-11-08 07:01:01
R2-1914700	Discussion on the timer design for	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914701	Discussion on simultaneous	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914702	Discussion on the DC configuration	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914703	Remaining issue of conditional	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914704	Failure handling of the non-DAPS	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914705	Remaining PDCP issues of DAPS	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914706	SRB handling of DAPS failure	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914707	Clarification on the RLC handling of	vivo	noted	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914708	Discussion on the signaling	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914709	Discussion on the mTRP modelling	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914710	Email discussion summy on	vivo (rapporteur)	noted	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914711	Discussion on eMIMO MAC CE	vivo	revised	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914712	Remaining issue of SCell BFR	vivo	available	2019-11-06 15:02:30	2019-11-08 07:01:01
R2-1914713	New MAC CE for indicating spatial resource for PUCCH resources	Ericsson	not treated	2019-11-06 15:16:04	2019-11-08 07:02:58
R2-1914714	Miscellaneous corrections	Lenovo, Motorola Mobility	agreed	2019-11-06 15:16:18	2019-11-07 12:58:23

R2-1914715	Miscellaneous corrections	Lenovo, Motorola Mobility	revised	2019-11-06 15:19:46	2019-11-07 12:58:36
R2-1914716	Running RRC CR for Introduction	Ericsson	revised	2019-11-06 15:27:49	2019-11-15 13:45:15
R2-1914717	Issue of D-PUR reconfiguration and release for CP solution	ZTE Corporation, Sanechips	available	2019-11-06 15:33:01	2019-11-08 06:09:02
R2-1914718	PUCCH MAC CE and SRS MAC	Ericsson	available	2019-11-06 15:47:30	2019-11-08 07:02:58
R2-1914719	CHO for NTN LEO	Ericsson	revised	2019-11-06 16:09:32	2019-11-13 21:59:22
R2-1914720	Remaining issues for D-PUR in IDLE	ZTE Corporation, Sanechips	available	2019-11-06 16:10:19	2019-11-08 06:10:49
R2-1914721	Input to TR38.821 on NGSO constellation greater than 600 km	HUGHES Network Systems	agreed	2019-11-06 16:29:47	2019-11-07 19:00:06
R2-1914722	Remaining issues of supporting short eDRX for eMTC connection	ZTE Corporation, Sanechips	noted	2019-11-06 16:31:41	2019-11-08 06:14:30
R2-1914723	Consideration on UE ID of PO calculation for NB-IoT connection to	ZTE Corporation, Sanechips	noted	2019-11-06 16:37:24	2019-11-08 06:18:47
R2-1914724	Reduced User Data Interruption for	Ericsson	available	2019-11-06 16:39:03	2019-11-13 21:59:22
R2-1914725	Remaining issues for accurate reference timing delivery in TSC	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd	available	2019-11-06 16:53:25	2019-11-08 06:20:02
R2-1914726	Stop monitoring the paging in NR-U	PANASONIC R&D Center	available	2019-11-06 16:56:34	2019-11-07 15:24:44
R2-1914727	Running stage 2 CR on positioning (	Intel Corporation, ESA	revised	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914728	LPP CR Capturing RAN1 parameters for positioning	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914729	Support of NR dependent	Intel Corporation	noted	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914730	Assistance data for UE based DL	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914731	UE capability on positioning	Intel Corporation	noted	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914732	Access Control for SNPN and CAG	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914733	Parent Selection at IAB nodes	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914734	Multi-route support in IAB	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914735	Flow control in IAB - remaining	Intel Corporation	noted	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914736	Uplink latency reduction	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914737	Further discussion on Backhaul	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914738	Handling of Fairness in IAB	Intel Corporation	noted	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914739	Conditional Handover for Non-	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:50
R2-1914740	Support of multiple SPS and CG	Intel Corporation	noted	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914741	Details for Ethernet header	Intel Corporation	noted	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914742	PDCP duplication with multiple	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914743	UE based PDCP duplication	Intel Corporation	available	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914744	Security requirement for UE capability enquiry for NR	Intel Corporation, NTT DoCoMo, Ericsson, Apple	agreed	2019-11-06 16:59:13	2019-11-08 04:37:49
R2-1914745	Security requirement for UE capability enquiry for LTE	Intel Corporation, NTT DoCoMo, Ericsson, Apple	postponed	2019-11-06 16:59:15	2019-11-08 04:37:49
R2-1914746	Restoring RoHC/SDAP during	Intel	revised	2019-11-06 16:59:17	2019-11-08 04:37:49
R2-1914747	Parent Selection at UEs during	Intel Corporation	available	2019-11-06 16:59:19	2019-11-08 04:37:50
R2-1914748	Remaining issues for reference	Ericsson	noted	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914749	On downlink delay compensation	Ericsson	noted	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914750	On support of non-integer multiple	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914751	SPS and CG remaining config	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914752	SPS and CG remaining MAC	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914753	Reliability aspects in LCP	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914754	Miscellaneous issues with L2	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914755	Ethernet header compression	Ericsson	noted	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914756	On EHC feedback	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914757	Handling of de-prioritized MAC	Ericsson	noted	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914758	Main functions of intra-UE data-	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914759	Intra-UE control-data – SR over	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914760	Configuration and RRC aspects of	Ericsson	noted	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914761	Open issues related to MAC CE for	Ericsson	available	2019-11-06 17:45:43	2019-11-07 20:53:12
R2-1914762	RRC running CR for NR IIoT	Ericsson	endorsed	2019-11-06 17:45:43	2019-11-07 20:53:12

R2-1914763	Report of email discussion	Ericsson	revised	2019-11-06 19:08:35	2019-11-12 15:02:00
R2-1914764	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs	revised	2019-11-06 19:16:25	2019-11-10 09:24:22
R2-1914765	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs	revised	2019-11-06 19:24:25	2019-11-10 09:24:22
R2-1914766	CR of TS 36.305 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs	revised	2019-11-06 19:28:18	2019-11-10 09:24:22
R2-1914767	Support for Indian Navigation	Reliance Jio	available	2019-11-06 19:32:46	2019-11-10 09:24:22
R2-1914768	Enhancements for low-latency IAB Uplink scheduling	Futurewei Technologies	available	2019-11-06 19:58:34	2019-11-08 03:52:49
R2-1914769	NR-U specific aspects for 2-step RACH	Qualcomm Incorporated, ZTE	noted	2019-11-06 19:59:56	2019-11-08 01:59:17
R2-1914770	Increased peak data rate for HD-FDD MTC UEs	Qualcomm Incorporated, Orange, Sierra Wireless, Verizon, Ericsson, Sequans, Nokia,	noted	2019-11-06 20:00:37	2019-11-08 07:25:17
R2-1914771	[DRAFT] Rely LS on support of high peak data rate for Cat-M1 UEs	Qualcomm Incorporated	revised	2019-11-06 20:00:37	2019-11-08 07:25:17
R2-1914772	DRX Active Time for NR-U	Qualcomm Incorporated	noted	2019-11-06 20:59:32	2019-11-08 01:59:17
R2-1914773	MAC Scheduling Aspects of Multi-TTI Grant	Qualcomm Incorporated	noted	2019-11-06 21:05:11	2019-11-08 01:59:17
R2-1914774	UE impact of second SMTC periodicity	Qualcomm Incorporated	noted	2019-11-06 21:09:53	2019-11-08 01:59:17
R2-1914775	Remaining issues of reference time delivery	Huawei, HiSilicon,China Southern Power Grid Co., Ltd	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914776	Prioritization issues for MAC CEs	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914777	Remaining issues for EHC	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914778	Support non-compressed packets transmission without context	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914779	Solutions to mitigate the periodicity misalignment between TSC traffic	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914780	Remaining issues for CG/SPS	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914781	New Confirmation MAC CE for	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914782	Discussion on mapping between	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914783	UE autonomous transmission in a CG resource for deprioritized data	Huawei, HiSilicon, SIA	withdrawn	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914784	Network controlled	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914785	Cell restriction for PDCP	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-08 04:30:55
R2-1914786	Discussion on multiplexing of data	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914787	Discussion on DL LBT failure	Huawei, HiSilicon	available	2019-11-06 21:19:33	2019-11-07 22:35:10
R2-1914788	Updates to reestablishment procedure	ZTE Corporation, Sanechips, Intel Corporation,	not treated	2019-11-06 21:56:33	2019-11-07 22:01:58
R2-1914789	Idle Mode cell reselection based on CN type supported	Qualcomm Incorporated	noted	2019-11-06 22:02:37	2019-11-08 01:23:33
R2-1914790	LBT aspects of 2-step RACH MSGA	ZTE Corporation, Sanechips	available	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914791	LBT failure report on SCell	ZTE Corporation, Sanechips	available	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914792	Multiple Msg1 transmission opportunities	ZTE Corporation, Sanechips	available	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914793	RAR MAC PDU design for NR-U	ZTE Corporation, Sanechips	available	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914794	Multiple configured grants	ZTE Corporation, Sanechips	available	2019-11-06 22:05:06	2019-11-07 22:01:58

R2-1914795	Remaining issues of paging for NR-U	ZTE Corporation, Sanechips	available	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914796	Remaining open issues for 2-step CBRA	ZTE Corporation, Sanechips	noted	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914797	Consideration on the MsgB RA-RNTI calculation	ZTE Corporation, Sanechips	available	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914798	Running MAC CR for 2-step RACH	ZTE Corporation (email rapporteur)	endorsed	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914799	Summary of running MAC CR review issue list	ZTE Corporation (email rapporteur)	noted	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914800	Support of CFRA with 2-step RACH	ZTE Corporation, Sanechips, Vivo, Oppo, Fujitsu, Qualcomm,	noted	2019-11-06 22:05:06	2019-11-07 22:01:58
R2-1914801	UAC information change indication in 5GC	Qualcomm Incorporated	available	2019-11-06 22:06:39	2019-11-08 01:23:33
R2-1914802	UE identity for CIoT/5GC UP Optimization and RRC indication to	Qualcomm India Pvt Ltd	available	2019-11-06 22:10:18	2019-11-08 01:23:33
R2-1914803	PTW support for RRC_INACTIVE state with short eDRX	Qualcomm Incorporated	noted	2019-11-06 22:15:30	2019-11-08 01:23:33
R2-1914804	UE capability co-ordination signalling aspects for DAPS HO	Qualcomm India Pvt Ltd, Google Inc, Apple Inc, Charter Communications,	available	2019-11-06 22:23:42	2019-11-08 01:23:33
R2-1914805	Mobility Robustness enhancement for combined CHO and DAPS HO	Qualcomm Incorporated	available	2019-11-06 22:29:26	2019-11-08 01:23:33
R2-1914806	IAB workplan update	Qualcomm Incorporated (Rapporteur)	noted	2019-11-06 22:37:07	2019-11-07 21:16:50
R2-1914807	LTE DAPS handover UE RF chain requirements	Qualcomm India Pvt Ltd, Google Inc, Apple Inc, Charter Communications,	available	2019-11-06 22:37:42	2019-11-08 01:23:33
R2-1914808	IAB BAP upstream routing	Qualcomm Incorporated	available	2019-11-06 22:38:42	2019-11-07 21:16:50
R2-1914809	TP to running NR_IAB CR to 38340 on BAP functional view	Qualcomm Incorporated	available	2019-11-06 22:40:16	2019-11-07 21:16:50
R2-1914810	Clarification on security key change and bearer termination point change	ZTE Corporation, Ericsson, Intel	revised	2019-11-06 22:40:51	2019-11-08 06:45:08
R2-1914811	Clarification of NR-DC	ZTE Corporation	revised	2019-11-06 22:40:53	2019-11-08 06:45:08
R2-1914812	Further issues on CHO configuration and execution	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914813	Discussion on CHO execution condition	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914814	Discussion on fast RLF recovery when applying CHO and fast MCG	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914815	Discussion on combination of DAPS and CHO	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914816	Discussion on conditional PSCell addition and change	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914817	Discussion on release of source cell in DAPS HO	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914818	Remaing aspects of control plane handling in DAPS HO	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914819	Remaining issues on UE capability coordination	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914820	Remaining Issues on Early Measurements	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914821	Inter-RAT Operation	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914822	Scell dormancy behaviour	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914823	On SCG suspension	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08

R2-1914824	Maintaining SCG Configuration in Resume procedure	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914825	Further issues on MCG fast recovery	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914826	Configuration for MCG fast recovery	ZTE Corporation, Sanechips	available	2019-11-06 22:40:54	2019-11-08 06:45:08
R2-1914827	IAB BAP layer control messages	Qualcomm Incorporated	available	2019-11-06 22:41:44	2019-11-07 21:16:50
R2-1914828	IAB scheduling support	Qualcomm Incorporated	noted	2019-11-06 22:44:03	2019-11-07 21:16:50
R2-1914829	[DRAFT] LS on IAB scheduling support	Qualcomm Incorporated	available	2019-11-06 22:45:12	2019-11-07 21:16:50
R2-1914830	IAB load reporting to IAB-donor CU-CP	Qualcomm Incorporated	noted	2019-11-06 22:46:24	2019-11-07 21:16:50
R2-1914831	IAB flow control feedback info	Qualcomm Incorporated	revised	2019-11-06 22:50:02	2019-11-07 21:16:50
R2-1914832	[107bis#53][NR LTE MobE] UE capability structure DAPS/RUDI	Intel Corporation	noted	2019-11-06 23:33:44	2019-11-11 08:22:17
R2-1914833	RRC running CR for NR mobility	Intel Corporation	endorsed	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914834	RRC running CR for NR mobility	Intel Corporation	endorsed	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914835	Summary of open issues on RRC running CR-DAPS ([107bis#54])	Intel Corporation	noted	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914836	Control plane consideration for dual active protocol stack (DAPS) based RUDI HO	Intel Corporation, Qualcomm Inc, Charter Communications, Mediatek Inc,	noted	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914837	Handling of CHO configuration and requirement (compliance check)	Intel Corporation	noted	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914838	SDAP and PDCP handling for DAPS HO	Intel Corporation	available	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914839	Handling of measurement configuration for execution condition	Intel Corporation	noted	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914840	DAPS failure handling	Intel Corporation	available	2019-11-06 23:33:44	2019-11-08 05:01:01
R2-1914841	UE Feature list for Rel-16 Mobility	Intel Corporation	noted	2019-11-06 23:33:44	2019-11-08 05:01:02
R2-1914842	Other User Plane Stage-3 issues	Intel Corporation	available	2019-11-06 23:33:44	2019-11-08 05:01:02
R2-1914843	Remaining issues on PUSCH resource unit selection for 2-step	Intel Corporation	available	2019-11-06 23:33:44	2019-11-08 05:01:02
R2-1914844	LBT impact on MsgA	Intel Corporation	available	2019-11-06 23:33:44	2019-11-08 05:01:02
R2-1914845	PDCCH-WUS operation with	Intel Corporation	available	2019-11-06 23:33:45	2019-11-08 05:01:02
R2-1914846	UE assistance for C-DRX, SCell and moving UE out of	Intel Corporation	available	2019-11-06 23:33:45	2019-11-08 05:02:49
R2-1914847	Relaxation of RRM measurements	Intel Corporation	available	2019-11-06 23:33:45	2019-11-08 05:02:49
R2-1914848	Left issues on NR SL MAC design	Intel Corporation	noted	2019-11-06 23:33:45	2019-11-08 05:02:49
R2-1914849	Considerations on SL RLM/RLF	Intel Corporation	available	2019-11-06 23:33:45	2019-11-08 05:02:49
R2-1914850	On HARQ feedback support for NR	Intel Corporation	available	2019-11-06 23:33:45	2019-11-08 05:02:49
R2-1914851	Remaining issues on sidelink	Intel Corporation	available	2019-11-06 23:33:45	2019-11-08 05:02:49
R2-1914852	SL UE capability aspects	Intel Corporation	available	2019-11-06 23:33:46	2019-11-08 05:02:49
R2-1914853	Cross-RAT scheduling for NR V2X	Intel Corporation	available	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914854	Discussion of the Working assumption on Measurement	Intel Corporation	available	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914855	Summary of open issues on RRC running CR-CHO ([107bis#54])	Intel Corporation	noted	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914856	Remaning issues on the support of	Intel Corporation	available	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914857	Use of extended DRX in RRC	Intel Corporation	available	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914858	Additional issues in D-PUR in	Intel Corporation	available	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914859	Non-BL UE operation in standalone	Intel Corporation	available	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914860	Introduction of Rel-16 eMTC	Intel Corporation	revised	2019-11-06 23:33:47	2019-11-08 05:02:49
R2-1914861	Non-BL UE in normal and	Intel Corporation	available	2019-11-06 23:33:50	2019-11-08 05:02:49
R2-1914862	UE capability for 2-step RACH	Intel Corporation	available	2019-11-06 23:33:50	2019-11-08 05:02:49
R2-1914863	Open issues on Configuration of MCG failure indication and timer	Intel Corporation	available	2019-11-06 23:33:50	2019-11-08 05:02:49
R2-1914864	Draft LS on Uplink LBT failure indication	Qualcomm Incorporated	revised	2019-11-06 23:52:13	2019-11-08 01:59:17
R2-1914865	Considerations for Geographical	InterDigital	available	2019-11-07 00:25:06	2019-11-08 00:34:06

R2-1914866	RAN2 Aspects of HARQ for NR	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:34:23
R2-1914867	Need for LCP Restriction on MCR	InterDigital, Apple, OPPO, Ericsson, Mediatek, CATT, Convida Wireless, Spreadtrum, Fraunhaufer HHI,	noted	2019-11-07 00:25:07	2019-11-08 00:34:41
R2-1914868	Remaining Aspects of UL/SL	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:34:59
R2-1914869	Multiple SL Configured Grants and	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:35:14
R2-1914870	RAN2 Aspects of CSI Reporting	InterDigital	noted	2019-11-07 00:25:07	2019-11-08 00:35:44
R2-1914871	RLM/RLF for NR V2X	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:35:57
R2-1914872	RAN2 Aspects of Simultaneous Configuration of Mode 1 and Mode	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:36:10
R2-1914873	Implementing Starvation Avoidance	InterDigital	noted	2019-11-07 00:25:07	2019-11-08 00:36:24
R2-1914874	Handling the SCG Configuration in RRC Resume	InterDigital, Ericsson, LG,	available	2019-11-07 00:25:07	2019-11-08 00:36:37
R2-1914875	Control Plane Aspects of DAPS HO	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:36:51
R2-1914876	On Combining RUDI and CHO	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:37:06
R2-1914877	Conditional PSCell addition/change	InterDigital	available	2019-11-07 00:25:07	2019-11-08 00:37:19
R2-1914878	Intra-UE Prioritization for	InterDigital	available	2019-11-07 00:29:05	2019-11-07 23:53:20
R2-1914879	L2 aspects of priority level	InterDigital	noted	2019-11-07 00:29:05	2019-11-07 23:53:20
R2-1914880	Intra UE Prioritization between SR	InterDigital	available	2019-11-07 00:29:05	2019-11-07 23:53:20
R2-1914881	Paging Procedure in NR-U	InterDigital	noted	2019-11-07 00:29:05	2019-11-07 23:53:20
R2-1914882	Handling UL LBT Failures	InterDigital	available	2019-11-07 00:29:05	2019-11-07 23:53:19
R2-1914883	RLM and RLF for NR-U	InterDigital	available	2019-11-07 00:29:05	2019-11-07 23:53:20
R2-1914884	PDCP security issue about duplicate detection	Samsung, LG Electronics Inc., Nokia, Nokia Shanghai Bell, LG	available	2019-11-07 00:30:54	2019-11-08 00:10:38
R2-1914885	Down-scoping of DAPS HO scenarios for NR	Qualcomm Incorporated	noted	2019-11-07 00:34:46	2019-11-08 01:59:17
R2-1914886	On Maximum Number of CHO Candidate Cells and Nodes	Charter Communications, Inc	withdrawn	2019-11-07 00:37:18	2019-11-07 21:00:26
R2-1914887	CR on PDCP security issue	Samsung, LG Electronics Inc., Nokia, Nokia Shanghai Bell, LG	not treated	2019-11-07 00:43:52	2019-11-08 00:10:38
R2-1914888	Compliance Check for CHO Target	MediaTek Inc.	available	2019-11-07 01:00:23	2019-11-08 07:34:48
R2-1914889	Measurement Report for	MediaTek Inc.	available	2019-11-07 01:01:37	2019-11-08 07:34:48
R2-1914890	Report of Email Discussion 107bis#68 Power Saving RRM	MediaTek Inc.	noted	2019-11-07 01:04:27	2019-11-08 07:34:49
R2-1914891	NR Paging Frame Calculation	MediaTek Inc.	noted	2019-11-07 01:06:09	2019-11-08 07:34:49
R2-1914892	CN Type Indication for Cell	MediaTek Inc.	available	2019-11-07 01:07:30	2019-11-08 07:34:49
R2-1914893	Discussion on RRC reestablishment initiated by failure	SHARP	available	2019-11-07 01:16:09	2019-11-07 01:24:22
R2-1914894	Allow Delta Configuration of ParametersListFmt2 and ParametersListEDTFmt2 in SIB2-NB	MediaTek Inc., ZTE Corporation, Sanechips, Huawei, HiSilicon	revised	2019-11-07 01:17:51	2019-11-08 07:34:49
R2-1914895	Support of dormancy SCG	OPPO	available	2019-11-07 01:25:16	2019-11-08 05:21:55
R2-1914896	Draft LS on support of dormancy SCG	OPPO	available	2019-11-07 01:25:16	2019-11-08 05:21:55
R2-1914897	PDCP Running CR for NR IIOT	PDCP Rapporteur (LG Electronics	not pursued	2019-11-07 01:27:21	2019-11-07 21:19:17
R2-1914898	PDCP open issues for IIOT	PDCP Rapporteur (LG Electronics	noted	2019-11-07 01:27:21	2019-11-08 01:00:16
R2-1914899	Redundant retransmission in PDCP duplication	LG Electronics Inc., LG Uplus	available	2019-11-07 01:27:21	2019-11-08 01:00:16
R2-1914900	MAC CE format for PDCP	LG Electronics	available	2019-11-07 01:27:21	2019-11-08 01:00:16
R2-1914901	Handling of RLC stuck problem with PDCP duplication	LG Electronics Inc., LG Uplus	available	2019-11-07 01:27:21	2019-11-08 01:00:16
R2-1914902	Reduced PDCCH monitoring in CA	LG Electronics	available	2019-11-07 01:27:21	2019-11-08 01:00:16

R2-1914903	ON Duration adaptation	LG Electronics Inc., LG Uplus,	available	2019-11-07 01:27:22	2019-11-08 01:00:16
R2-1914904	Conditional presence on ue-CapabilityInfo and servCellIndexRangeSCG for inter-	NTT DOCOMO, INC., Ericsson	agreed	2019-11-07 01:28:45	2019-11-08 06:39:56
R2-1914905	Measurement coordination on maxMeasIdentitiesSCG in MR-DC	ZTE Corporation, Sanechips, Ericsson, NEC,	noted	2019-11-07 01:37:46	2019-11-08 04:35:08
R2-1914906	Corrections on maxMeasIdentitiesSCG in MR-DC	ZTE Corporation, Sanechips, Ericsson, NEC,	not treated	2019-11-07 01:37:46	2019-11-08 04:35:08
R2-1914907	CR to introduce timer for DRX based SFTD measurement	ZTE Corporation, Sanechips, MediaTek Inc.	agreed	2019-11-07 01:37:48	2019-11-08 04:35:08
R2-1914908	Correction on absence of gapPurpose	ZTE Corporation, Sanechips	agreed	2019-11-07 01:37:49	2019-11-08 04:35:08
R2-1914909	Consideration on DRX coordination in ANR	ZTE Corporation, Sanechips, NEC	noted	2019-11-07 01:37:50	2019-11-08 04:35:08
R2-1914910	Corrections on DRX coordination in ANR	ZTE Corporation, Sanechips, NEC	not treated	2019-11-07 01:37:50	2019-11-08 04:35:08
R2-1914911	[107bis#34]Correction on ambiguity of UE FDD&TDD FR1&FR2 capabilities	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd	revised	2019-11-07 01:37:53	2019-11-11 01:31:13
R2-1914912	Remaining issues for UTRAN measurement	ZTE Corporation, Sanechips	available	2019-11-07 01:37:54	2019-11-08 04:35:08
R2-1914913	Discussion on measurement relaxation rule in time domain	ZTE Corporation, Sanechips	available	2019-11-07 01:37:54	2019-11-08 05:04:45
R2-1914914	Report of [107#81][NR TEI16] Need-	MediaTek Inc.	noted	2019-11-07 01:49:43	2019-11-08 06:52:49
R2-1914915	Further discussion on NeedForGap	MediaTek Inc. Huawei, HiSilicon	noted	2019-11-07 01:53:38	2019-11-08 06:52:49
R2-1914916	Dual SMTC in IDLE mode	MediaTek Inc.	noted	2019-11-07 01:58:04	2019-11-08 06:52:49
R2-1914917	Discussion on early measurement configuration upon state transition	MediaTek Inc.	noted	2019-11-07 01:59:49	2019-11-08 06:52:49
R2-1914918	Remaining issues on BH RLF	vivo	available	2019-11-07 02:01:41	2019-11-08 06:29:38
R2-1914919	[Draft] LS on BH RLF notification	vivo	available	2019-11-07 02:01:41	2019-11-08 06:29:38
R2-1914920	Discussion on IAB BH RLF report	vivo	available	2019-11-07 02:01:41	2019-11-08 06:29:38
R2-1914921	Running CR to 37324 for	vivo (Rapporteur)	noted	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914922	Left Issues on NR SL RLC and	vivo	noted	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914923	Left issues for UL SL prioritization	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914924	Remaining issues on HARQ	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914925	Left LCP issues	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914926	CSI and RSRP reporting	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914927	Resource pool (re-)selection based	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914928	Discussion on SR and BSR	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914929	Discussion on Truncated Sidelink	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914930	Remaining issues on sidelink	vivo	available	2019-11-07 02:01:41	2019-11-08 06:55:25
R2-1914931	Remaining issues on PC5-RRC	vivo	available	2019-11-07 02:01:42	2019-11-08 06:55:25
R2-1914932	Discussion on sideink radio link management without physical layer	vivo	available	2019-11-07 02:01:42	2019-11-08 06:55:25
R2-1914933	Signaling procedure for QoS and	vivo	available	2019-11-07 02:01:42	2019-11-08 06:55:25
R2-1914934	Mode switch for QoS guarantee in	vivo	available	2019-11-07 02:01:42	2019-11-08 06:55:25
R2-1914935	Signaling content for QoS and	vivo	available	2019-11-07 02:01:42	2019-11-08 06:55:25
R2-1914936	Running CR to 37.340 for CA_DC enhancements	vivo, Ericsson	endorsed	2019-11-07 02:01:42	2019-11-08 06:56:45
R2-1914937	Power control for NR DC	vivo	noted	2019-11-07 02:01:42	2019-11-08 06:56:45
R2-1914938	Remaining issues for Validity Area	vivo	available	2019-11-07 02:01:42	2019-11-08 06:56:45
R2-1914939	Early Measurement Reporting for	vivo	available	2019-11-07 02:01:42	2019-11-08 06:56:45
R2-1914940	UE measurement behaviour regarding autonomous state	vivo	available	2019-11-07 02:01:42	2019-11-08 06:56:45
R2-1914941	IDC impact for early measurement	vivo	withdrawn	2019-11-07 02:01:42	
R2-1914942	Speed Up CA/DC setup during RRC Connection Re-establishment	vivo	available	2019-11-07 02:01:42	2019-11-08 06:56:45
R2-1914943	Dormancy-like behavior on SCell	vivo	available	2019-11-07 02:01:43	2019-11-08 06:56:45
R2-1914944	UE behavior for suspended SCG	vivo	available	2019-11-07 02:01:43	2019-11-08 06:56:45
R2-1914945	Remaining issues on MCG fast	vivo	available	2019-11-07 02:01:43	2019-11-08 06:53:32

R2-1914946	Remaining issues for Logged MDT	vivo	available	2019-11-07 02:01:43	2019-11-08 06:29:38
R2-1914947	UE capability parameters for	vivo	available	2019-11-07 02:01:43	2019-11-08 06:29:38
R2-1914948	Running CR to 38.306 for	vivo	available	2019-11-07 02:01:43	2019-11-08 06:29:38
R2-1914949	Autonomous Gap capability for CGI reporting	vivo, Ericsson, Huawei, HiSilicon	noted	2019-11-07 02:01:43	2019-11-08 06:29:38
R2-1914950	[Draft] Reply LS on autonomous	vivo	available	2019-11-07 02:01:43	2019-11-08 06:29:38
R2-1914951	Discussion on Suspended SCG	MediaTek Inc.	available	2019-11-07 02:02:27	2019-11-08 06:52:49
R2-1914952	Capability for early measurement reporting	MediaTek Inc.	available	2019-11-07 02:05:59	2019-11-08 06:52:49
R2-1914953	Capability for fast DC/CA setup	MediaTek Inc.	available	2019-11-07 02:08:04	2019-11-08 06:52:49
R2-1914954	UE Capability for NR-U Support	vivo	not treated	2019-11-07 02:17:46	2019-11-08 07:02:38
R2-1914955	Clarification on measurement gap configuration in NR SA	MediaTek Inc., Nokia (Rapporteur), Samsung, ZTE Corporation,	agreed	2019-11-07 02:28:33	2019-11-08 06:52:49
R2-1914956	Consideration on the Consumers of AMF service on Event Exposure	BUPT	available	2019-11-07 02:32:03	2019-11-07 04:07:24
R2-1914957	Enhancement to the Namf_Communication_	BUPT	available	2019-11-07 02:33:38	2019-11-07 04:07:24
R2-1914958	Clarification on the uplink skipping	vivo	noted	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914959	Propagation delay compensation for	vivo	noted	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914960	Remaining issues for EHC	vivo	available	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914961	Discussion on LCID restriction	vivo	available	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914962	Discussion on the periodicity misalignment between TSC traffic	vivo	available	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914963	Reference cell for the dedicated provisioning of timing information	vivo	noted	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914964	URLLC transmission within	vivo	available	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914965	SPS and CG configuration issue on the partial overlapping TSN traffic	vivo	available	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914966	Discussion on the MAC PDU	vivo	noted	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914967	Discussion on the support of	vivo	noted	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914968	Remaining issues for SR and	vivo	available	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914969	Discussion on the UE handling for the equal priority of uplink grants	vivo	available	2019-11-07 02:33:47	2019-11-08 06:35:26
R2-1914970	Issue on the Namf_Communication_	BUPT	available	2019-11-07 02:34:47	2019-11-07 04:07:24
R2-1914971	Issue on the Namf_Communication_AMFStatus ChangeUnSubscribe operation	BUPT	available	2019-11-07 02:36:07	2019-11-07 04:07:24
R2-1914972	Clarification on PSCell/SCell SI	MediaTek Inc.	not pursued	2019-11-07 02:37:15	2019-11-08 06:52:49
R2-1914973	location based mobility	NEC	available	2019-11-07 02:42:01	2019-11-08 05:02:53
R2-1914974	Service continuity between TN and	NEC	revised	2019-11-07 02:49:28	2019-11-08 05:02:53
R2-1914975	IAB backhaul RLF handling	NEC	available	2019-11-07 02:58:34	2019-11-08 05:02:53
R2-1914976	Flow control in IAB	NEC	available	2019-11-07 03:04:43	2019-11-08 05:02:53
R2-1914977	Consideration on E-CID in NR	Huawei, HiSilicon	available	2019-11-07 03:08:47	2019-11-08 03:29:17
R2-1914978	Discussion on sigalling design for NR DL positioning procedures	Huawei, HiSilicon	available	2019-11-07 03:08:47	2019-11-08 03:29:17
R2-1914979	Considerations on UL procedures	Huawei, HiSilicon	noted	2019-11-07 03:08:47	2019-11-08 03:29:17
R2-1914980	Further considerations on DL	Huawei, HiSilicon	available	2019-11-07 03:08:47	2019-11-08 03:29:17
R2-1914981	Discussion on broadcasting of	Huawei, HiSilicon	noted	2019-11-07 03:08:47	2019-11-08 03:29:17
R2-1914982	Discussion on demand SI in	Huawei, HiSilicon	available	2019-11-07 03:08:47	2019-11-08 03:29:17
R2-1914983	Correction on the EUTRAN	Huawei, HiSilicon	revised	2019-11-07 03:08:47	2019-11-08 03:29:17
R2-1914984	CHO execution with multiple	Futurewei	available	2019-11-07 03:38:48	2019-11-08 06:00:11
R2-1914985	Remaining issues on procedure	Futurewei	available	2019-11-07 03:38:48	2019-11-08 06:00:11
R2-1914986	Handling of multiple candidate cells	Futurewei	available	2019-11-07 03:38:48	2019-11-08 06:00:11
R2-1914987	Discussion on PDCCH-WUS missing problems during BWP	Xiaomi Communications	revised	2019-11-07 03:54:16	2019-11-08 00:27:40
R2-1914988	Procedures on how the PDCCH-WUS works with C-DRX	Xiaomi Communications	available	2019-11-07 03:58:50	2019-11-08 00:29:49
R2-1914989	Text Proposal for adding the Phase Bias Indicator to the SSR Phase	Swift Navigation, Ericsson	noted	2019-11-07 04:00:40	2019-11-07 22:29:24
R2-1914990	Some remaining issues on the CSI and SRS reporting	Xiaomi Communications	available	2019-11-07 04:03:46	2019-11-08 02:11:32

R2-1914991	Timing of Key Derivation in	Futurewei	available	2019-11-07 04:03:54	2019-11-08 05:05:20
R2-1914992	Draft LS on the Timing of AS Key Derivation in Conditional Handover	Futurewei	available	2019-11-07 04:03:55	2019-11-08 05:05:20
R2-1914993	Handling of Key Derivation in Conditional PSCell	Futurewei	available	2019-11-07 04:03:55	2019-11-08 05:05:20
R2-1914994	Adaptation of QoS Flow to DRB Mapping for MDBV Enforcement	Futurewei	available	2019-11-07 04:03:55	2019-11-08 05:05:20
R2-1914995	Reception of End-Marker upon QoS	Futurewei	noted	2019-11-07 04:03:55	2019-11-08 05:05:20
R2-1914996	Proposal for clarification and	KDDI Corporation	noted	2019-11-07 04:11:59	2019-11-08 01:54:11
R2-1914997	Configuration of PDCP duplication	Sharp	available	2019-11-07 04:54:35	2019-11-07 08:21:16
R2-1914998	Discussion on sidelink SR trigger	Fujitsu	available	2019-11-07 04:59:26	2019-11-08 07:59:47
R2-1914999	MAC CE structure for PDCP	Fujitsu	available	2019-11-07 04:59:26	2019-11-08 07:59:47
R2-1915000	NW-based per-packet PDCP	Fujitsu	available	2019-11-07 04:59:26	2019-11-08 07:59:47
R2-1915001	Considerations on MsgB reception	Fujitsu	available	2019-11-07 04:59:26	2019-11-08 07:59:47
R2-1915002	On open questions to 2-step CF-	Fujitsu	available	2019-11-07 04:59:26	2019-11-08 07:59:47
R2-1915003	SR_COUNTER initialization due to RRC reconfiguration	Fujitsu, LG Electronics Inc.	available	2019-11-07 04:59:26	2019-11-08 07:59:47
R2-1915004	Deactivation of Primary Path	Sharp	available	2019-11-07 04:59:27	2019-11-07 08:21:16
R2-1915005	RA Prioritization for MPS for 2-step RACH	Perspecta Labs, ECD, AT&T, T-Mobile, Sprint, Ericsson,	revised	2019-11-07 05:04:40	2019-11-07 23:07:51
R2-1915006	PRACH prioritization parameters for MPS and MCS	Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint,	endorsed	2019-11-07 05:22:57	2019-11-07 23:07:51
R2-1915007	PRACH prioritization procedure for MPS and MCS	Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint,	endorsed	2019-11-07 05:27:11	2019-11-07 23:07:51
R2-1915008	Discussion on RACH report	SHARP	available	2019-11-07 05:55:07	2019-11-07 06:58:35
R2-1915009	Further discussion on RLF recovery in CHO	SHARP	available	2019-11-07 05:59:40	2019-11-07 06:58:35
R2-1915010	Fast SN Activation in Handover to EN-DC	Qualcomm Incorporated	available	2019-11-07 06:04:58	2019-11-08 01:59:17
R2-1915011	Paging monitoring in NR-U	Qualcomm Incorporated	noted	2019-11-07 06:17:56	2019-11-08 06:06:07
R2-1915012	[Draft] LS on clarification and	KDDI Corporation	noted	2019-11-07 06:19:15	2019-11-08 01:54:11
R2-1915013	Remaining issues on priority handling in NR V2X	Spreadtrum Communications	available	2019-11-07 06:23:01	2019-11-08 03:34:51
R2-1915014	[Draft] LS on priority indicaition in SCI	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:51
R2-1915015	LBT Failures Handling in Non-Connected State	Spreadtrum Communications, Huawei, HiSilicon	available	2019-11-07 06:23:03	2019-11-08 03:34:51
R2-1915016	Inconsecutive UL LBT Failures Handling	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:51
R2-1915017	Handling of periodicity misalignment between CG and	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:51
R2-1915018	Equal priority handling for CG and CG collision	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:51
R2-1915019	Consideration on selective PDCP duplication	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:51
R2-1915020	Consideration on early measurement reporting	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:51
R2-1915021	Early measurement in NR-U	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:52
R2-1915022	Measurement report enhancement in conditional handover	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:52
R2-1915023	RRC signaling size restriction in CHO	Spreadtrum Communications	available	2019-11-07 06:23:03	2019-11-08 03:34:52
R2-1915024	Remaining issues for Conditional PSCell Change	Spreadtrum Communications	available	2019-11-07 06:23:04	2019-11-08 03:34:52
R2-1915025	Clarification on NR suitable cell for NR re-establishment	Spreadtrum Communications	not pursued	2019-11-07 06:23:04	2019-11-08 03:34:52

R2-1915026	Enhancements of resuming MR-DC configuration with RRC	Spreadtrum Communications	available	2019-11-07 06:23:06	2019-11-08 03:34:52
R2-1915027	Left issues on LCP procedure	Spreadtrum Communications	available	2019-11-07 06:23:06	2019-11-08 03:34:52
R2-1915028	Consideration on activation and deactivation of PDCP duplication	Spreadtrum Communications	available	2019-11-07 06:23:06	2019-11-08 03:34:52
R2-1915029	Skipping	KDDI Corporation	not pursued	2019-11-07 06:23:19	2019-11-08 01:54:11
R2-1915030	TB construction during LCP	MediaTek Inc.	available	2019-11-07 06:28:52	2019-11-08 06:07:34
R2-1915031	KgNB derivation upon mobility	Qualcomm Incorporated	agreed	2019-11-07 06:47:12	2019-11-07 07:07:03
R2-1915032	Summary of email discussion [107bis#46][NR TEI16] Voice	Qualcomm Incorporated	noted	2019-11-07 06:47:13	2019-11-08 07:57:52
R2-1915033	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom,	endorsed	2019-11-07 06:47:14	2019-11-08 07:57:52
R2-1915034	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom,	endorsed	2019-11-07 06:47:15	2019-11-08 07:57:52
R2-1915035	[Draft] LS on RRC establishment cause value in EPS voice fallback	Qualcomm Incorporated	revised	2019-11-07 06:47:16	2019-11-08 07:57:52
R2-1915036	Discussion on RAN1 agreements related to PUR	Nokia Solutions & Networks (I)	available	2019-11-07 06:53:05	2019-11-08 04:40:30
R2-1915037	Combination of CHO and RUDI	ETRI	available	2019-11-07 07:04:32	2019-11-08 07:41:16
R2-1915038	Faster Handover Failure Recovery	ETRI	available	2019-11-07 07:04:32	2019-11-08 07:41:16
R2-1915039	Remaining FFSs on Data	ETRI	available	2019-11-07 07:04:33	2019-11-08 07:41:16
R2-1915040	Bye Message for DAPS Handover	ETRI	available	2019-11-07 07:04:33	2019-11-08 07:41:16
R2-1915041	Source Cell Release in DAPS	ETRI	available	2019-11-07 07:04:33	2019-11-08 07:41:16
R2-1915042	Further consideration on access	III	available	2019-11-07 07:27:29	2019-11-08 04:30:19
R2-1915043	Mobility state in RLF	Qualcomm Incorporated	available	2019-11-07 07:37:03	2019-11-08 01:31:01
R2-1915044	RACH Report	Qualcomm Incorporated	available	2019-11-07 07:39:42	2019-11-08 01:31:01
R2-1915045	RACH Failure information	Qualcomm Incorporated	available	2019-11-07 07:42:10	2019-11-08 01:31:01
R2-1915046	Management Based Logged MDT Configuration for RRC_INACTIVE	Qualcomm Incorporated	available	2019-11-07 07:43:53	2019-11-08 01:31:01
R2-1915047	Clarification on PO calculation	Nokia, Nokia Shanghai Bell	not pursued	2019-11-07 07:45:10	2019-11-08 06:13:29
R2-1915048	Cross-RAT RLF report	Qualcomm Incorporated	available	2019-11-07 07:46:32	2019-11-08 01:31:01
R2-1915049	Cross-system RLF report	Qualcomm Incorporated	available	2019-11-07 07:48:00	2019-11-08 01:31:01
R2-1915050	Logged MDT Configuration and Reporting for MR-DC	Qualcomm Incorporated	available	2019-11-07 07:49:49	2019-11-08 01:31:01
R2-1915051	CR on multiple SMTC for idle	Nokia, Nokia Shanghai Bell	not treated	2019-11-07 07:50:17	2019-11-08 06:13:29
R2-1915052	Fallback procedure for INACTIVE	Samsung	available	2019-11-07 07:51:25	2019-11-08 00:10:38
R2-1915053	UE History Information	Qualcomm Incorporated	available	2019-11-07 07:51:27	2019-11-08 01:31:01
R2-1915054	UE History Information	Qualcomm Incorporated	reserved	2019-11-07 07:51:38	
R2-1915055	Discussion about Successful HO in MRO	Qualcomm Incorporated	available	2019-11-07 07:53:27	2019-11-08 01:31:01
R2-1915056	Open issues in DCCA WI	Nokia, Nokia Shanghai Bell	noted	2019-11-07 07:54:47	2019-11-08 06:13:29
R2-1915057	Wideband operation in NR-U	Nokia, Nokia Shanghai Bell	available	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915058	Paging in NR-U	Nokia, Nokia Shanghai Bell	noted	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915059	early measurements and 2-step resume	Nokia, Nokia Shanghai Bell	available	2019-11-07 07:55:30	2019-11-08 06:13:29

R2-1915060	Early measurement handling during reselection	Nokia, Nokia Shanghai Bell	noted	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915061	UE capabilities for early measurements	Nokia, Nokia Shanghai Bell	available	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915062	Fast Scell Activation	Nokia, Nokia Shanghai Bell	available	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915063	Configuration of MCG failure recovery	Nokia, Nokia Shanghai Bell	available	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915064	CR on how to introduce x-scheduling with different	Nokia, Nokia Shanghai Bell	noted	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915065	Multiple SMTC for Idle	Nokia, Nokia Shanghai Bell	noted	2019-11-07 07:55:30	2019-11-08 06:13:29
R2-1915066	Unnecessary deciphering for	Samsung	available	2019-11-07 07:56:26	2019-11-08 00:10:38
R2-1915067	CR on unnecessary deciphering for	Samsung	not treated	2019-11-07 07:59:24	2019-11-08 00:10:38
R2-1915068	Trigger Conditions for low-latency	ITRI	available	2019-11-07 08:01:29	2019-11-08 05:29:44
R2-1915069	RA variables for 2-step RACH	ITRI	available	2019-11-07 08:01:29	2019-11-08 05:29:44
R2-1915070	Msg1 transmission opportunities	ITRI	available	2019-11-07 08:01:29	2019-11-08 05:29:44
R2-1915071	T312 mechanism for conditional	ITRI	available	2019-11-07 08:01:30	2019-11-08 05:29:44
R2-1915072	Discussion on the paging opportunities overlapping for the	ITRI	available	2019-11-07 08:01:30	2019-11-08 05:29:44
R2-1915073	Discussion on TAI list provisioning	ITRI	available	2019-11-07 08:01:30	2019-11-08 05:29:44
R2-1915074	Discussion on the information for	ITRI	available	2019-11-07 08:01:30	2019-11-08 05:29:44
R2-1915075	Feedback for EHC algorithm	Samsung	noted	2019-11-07 08:03:07	2019-11-08 00:10:38
R2-1915076	Configuration limitation for	OPPO	agreed	2019-11-07 08:06:32	2019-11-08 05:19:30
R2-1915077	SDAP control PDU handling in Rel-	Samsung	available	2019-11-07 08:06:43	2019-11-08 00:10:38
R2-1915078	Left issues on SDAP Rx behaviour on remapping	OPPO, Ericsson, Apple, Qualcomm Incorporated, Intel Corporation, ITL, InterDigital, MediaTek Inc., Samsung, Beijing Xiaomi Software Tech, Nokia, Nokia Shanghai Bell, ASUSTeK, Spreadtrum Communications, Convida	noted	2019-11-07 08:11:18	2019-11-08 06:29:54
R2-1915079	UE radio capability ID exchange over X2/Xn and S1/NG interface	ZTE Corporation, Sanechips	noted	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915080	Introduction of UE radio capability ID in inter-node RRC messages	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915081	TP on RACH capacity calculation based on typical cell size	ZTE Corporation, Sanechips	revised	2019-11-07 08:24:32	2019-11-08 03:01:07
R2-1915082	Remaining issues in NTN-TN service continuity	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915083	Location report to help apply country specific policies	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915084	Satellite type differentiation	ZTE Corporation, Sanechips	revised	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915085	Consideration on ephemeris data handling	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-08 02:36:49
R2-1915086	Remaining issues in efficient state transition by UE assistance	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915087	Remaining issues in C-DRX and Scell related UE assistance	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915088	Remaining issues on SI request procedure in RRC_CONNECTED	ZTE Corporation, Sanechips	noted	2019-11-07 08:24:32	2019-11-07 12:58:57
R2-1915089	Consideration on the PCI Range	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-08 05:00:36
R2-1915090	Overview of the Connected State Issues	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-08 05:00:36
R2-1915091	Consideration on the HRNN and Access control	ZTE Corporation, Sanechips	available	2019-11-07 08:24:32	2019-11-08 05:00:36
R2-1915092	Scheduling enhancements for TSC	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39

R2-1915093	Discussion on confirmation MAC	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915094	Discussion on Ethernet Header	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915095	Consideration on UE autonomous retx for the deprioritized MAC PDU	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915096	Issues on ignoring the received UL grant for deprioritized PDU	OPPO,Sony,Huawei, HiSilicon, ZTE Corporation,	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915097	Intra-UE prioritization involving	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915098	Discussion on SR cancelling on intra-UE prioritization involving SR	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915099	Intra-UE prioritization between	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915100	Discussion on data duplication	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915101	Discussion on UE-based data	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915102	Cell restriction for PDCP	OPPO	available	2019-11-07 08:30:56	2019-11-08 05:26:39
R2-1915103	LBT impact to Multi-PUSCH scheduling	Lenovo, Motorola Mobility	noted	2019-11-07 08:30:58	2019-11-07 13:44:00
R2-1915104	Multiple active Configured Grants	Lenovo, Motorola Mobility	available	2019-11-07 08:32:45	2019-11-07 13:44:00
R2-1915105	UE behavior upon consistent LBT failure	Lenovo, Motorola Mobility	available	2019-11-07 08:34:33	2019-11-07 13:44:00
R2-1915106	SL HARQ protocol operation	Lenovo, Motorola Mobility	available	2019-11-07 08:36:16	2019-11-07 13:44:00
R2-1915107	SR trigger for NR SL	Lenovo, Motorola Mobility	available	2019-11-07 08:38:01	2019-11-07 13:44:00
R2-1915108	SL LCP procedure considering the MCR requirements	Lenovo, Motorola Mobility	available	2019-11-07 08:39:36	2019-11-07 13:44:00
R2-1915109	Details of SCell Beam Failure Recovery Procedure	Lenovo, Motorola Mobility	available	2019-11-07 08:41:03	2019-11-07 13:44:00
R2-1915110	Discussion on BAP configuration	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915111	Further consideration on bearer	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915112	Consideration on routing in IAB	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915113	Discussion on re-routing in IAB	ZTE, Sanechips	noted	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915114	Further consideration on flow	ZTE, Sanechips	noted	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915115	Discussion on BAP control PDU	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:59:19
R2-1915116	Discussion on low latency	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915117	Discussion on case-1 OTA timing	ZTE, Sanechips	noted	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915118	Consideration on the Extended	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915119	Discussion on IAB BH RLF	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:59:19
R2-1915120	Discussion on BH RLC channel	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915121	Discussion on IAB node connection	ZTE, Sanechips	available	2019-11-07 08:42:20	2019-11-08 06:54:57
R2-1915122	PDCP version in EN-DC	Ericsson	agreed	2019-11-07 09:03:13	2019-11-07 09:09:15
R2-1915123	Discussion on leftover issues of Inter-RAT measurement	Huawei, HiSilicon, China	available	2019-11-07 09:20:19	2019-11-08 07:09:43
R2-1915124	Discussion on SRVCC capability	Huawei, HiSilicon, China	available	2019-11-07 09:20:19	2019-11-08 07:09:43
R2-1915125	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, HiSilicon, China	revised	2019-11-07 09:20:19	2019-11-08 07:09:43
R2-1915126	Consideration on UL low-latency scheduling	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:08:41
R2-1915127	Pre-emptive BSR in multiple connection scenario	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:08:41
R2-1915128	Cell selection for IAB RLF recovery	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:08:41
R2-1915129	RLF notification to downstream IAB node	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:08:41
R2-1915130	Remaining issues for failure handling	Lenovo, Motorola Mobility	noted	2019-11-07 09:20:38	2019-11-08 03:08:41
R2-1915131	Remaining issue for SL-BSR	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:04:51
R2-1915132	Considerations on QoS based resource pool for NR V2X	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:04:51
R2-1915133	Remaining issue on support non-integer periodicity for TSN traffic	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:04:51
R2-1915134	SLRB configuration for NR V2X UE	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:04:51

R2-1915135	Discussion on QoS management for NR V2X	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 03:04:51
R2-1915136	Paging probability information based UE grouping	Lenovo, Motorola Mobility	available	2019-11-07 09:20:38	2019-11-08 04:27:22
R2-1915137	Consideration on WUS configuration	Lenovo, Motorola Mobility	available	2019-11-07 09:20:39	2019-11-08 04:27:22
R2-1915138	Remaining issue on ANR reporting	Lenovo, Motorola Mobility	available	2019-11-07 09:20:39	2019-11-08 04:27:22
R2-1915139	Solution for intra-UE prioritization	Huawei, HiSilicon	available	2019-11-07 09:26:39	2019-11-07 22:35:10
R2-1915140	Remaining issues on 4-step RACH	Huawei, HiSilicon	noted	2019-11-07 09:26:43	2019-11-07 22:35:10
R2-1915141	Handling of UL LBT failure	Huawei, HiSilicon	available	2019-11-07 09:26:43	2019-11-08 07:41:26
R2-1915142	Enhancement on two-step Random	Huawei, HiSilicon	available	2019-11-07 09:26:43	2019-11-07 22:35:10
R2-1915143	Discussion on PDU overwriting	Huawei, HiSilicon	available	2019-11-07 09:26:43	2019-11-07 22:35:10
R2-1915144	Support of multiple active CGs for	Huawei, HiSilicon	available	2019-11-07 09:26:43	2019-11-08 07:41:26
R2-1915145	Impacts of Cross-COT HARQ	Huawei, HiSilicon	noted	2019-11-07 09:26:43	2019-11-07 22:35:10
R2-1915146	Handling MIB_SIB1 Acquisition	Huawei, HiSilicon	noted	2019-11-07 09:26:43	2019-11-08 07:41:26
R2-1915147	BSR and SR reporting in Cross RAT V2X operation	Lenovo, Motorola Mobility	available	2019-11-07 09:28:13	2019-11-07 16:03:43
R2-1915148	Cross RAT SL Configuration	Lenovo, Motorola Mobility	available	2019-11-07 09:29:57	2019-11-07 16:03:43
R2-1915149	HARQ feedback impact on RAN2	Lenovo, Motorola Mobility	available	2019-11-07 09:31:21	2019-11-07 16:03:43
R2-1915150	RLM Procedure and RLF Recovery handling	Lenovo, Motorola Mobility	available	2019-11-07 09:32:40	2019-11-07 16:03:43
R2-1915151	Transmitter UE behavior in Mode 1 and Mode 2	Lenovo, Motorola Mobility	available	2019-11-07 09:34:01	2019-11-07 16:03:43
R2-1915152	SL and UL BWP Numerology Mismatch	Lenovo, Motorola Mobility	available	2019-11-07 09:35:17	2019-11-07 16:03:43
R2-1915153	Failure handling for conditional	OPPO	available	2019-11-07 09:48:11	2019-11-08 04:11:29
R2-1915154	SRB handling for DAPS handover	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915155	Further considerations on capability	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915156	Clarification on HRNN reporting	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915157	SCell BFR MAC CE design	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915158	MAC CE design for eMIMO	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915159	Further considerations for T312-	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915160	Compliance check for CHO	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915161	CHO configuration handling upon	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915162	UE capabilities for DAPS HO	OPPO	available	2019-11-07 09:48:12	2019-11-08 04:11:29
R2-1915163	Recovery for deprioritized data	NTT DOCOMO,	available	2019-11-07 09:49:09	2019-11-07 09:58:34
R2-1915164	L2 impacts on supporting IIoT traffic	NTT DOCOMO,	available	2019-11-07 09:54:34	2019-11-07 09:58:34
R2-1915165	(De)Prioritizing the Access for IAB	Samsung	available	2019-11-07 09:59:41	2019-11-08 05:39:37
R2-1915166	Discussion on CG and SPS in NTN	OPPO	available	2019-11-07 10:02:41	2019-11-08 04:04:14
R2-1915167	Discussion on DRX operation in	OPPO	available	2019-11-07 10:02:41	2019-11-08 04:04:14
R2-1915168	Discussion on time advance in	OPPO	available	2019-11-07 10:02:41	2019-11-08 04:04:14
R2-1915169	Discussion on UL scheduling	OPPO	available	2019-11-07 10:02:41	2019-11-08 04:04:14
R2-1915170	Discussion on handover for NTN	OPPO	available	2019-11-07 10:02:41	2019-11-08 04:04:14
R2-1915171	NR RAT-Dependent Positioning	LG Electronics	available	2019-11-07 10:03:50	2019-11-07 12:57:44
R2-1915172	On indicating LBT failure for NR-U	Samsung	available	2019-11-07 10:04:09	2019-11-08 05:39:37
R2-1915173	Resource Pool Configuration	LG Electronics	available	2019-11-07 10:05:39	2019-11-07 12:58:41
R2-1915174	Considering valid PLMN being equivalent to the RPLMN in IDLE	Samsung	noted	2019-11-07 10:06:38	2019-11-08 05:39:37
R2-1915175	NR V2X System Information	LG Electronics	available	2019-11-07 10:06:57	2019-11-07 12:59:41
R2-1915176	SLRB Configuration in NR V2X	LG Electronics	available	2019-11-07 10:08:46	2019-11-07 13:00:29
R2-1915177	Remaining issue on detecting UL LBT Failures	PANASONIC R&D Center	available	2019-11-07 10:08:50	2019-11-07 17:05:44
R2-1915178	Simultaneous Mode 1 and Mode 2	LG Electronics	available	2019-11-07 10:10:39	2019-11-07 13:01:53
R2-1915179	Impact of disabling HARQ on DRX	PANASONIC R&D Center	available	2019-11-07 10:11:51	2019-11-07 17:05:44
R2-1915180	[Draft] Response LS on additional high layer information for sidelink	LG Electronics Inc.	withdrawn	2019-11-07 10:14:32	
R2-1915181	Consideration on dormancy behavior	LG Electronics Inc.	available	2019-11-07 10:16:11	2019-11-08 05:33:43
R2-1915182	Consideration on UE assistance	LG Electronics	available	2019-11-07 10:16:11	2019-11-08 05:33:43
R2-1915183	Remaining issues on PDCCH-	LG Electronics	available	2019-11-07 10:16:11	2019-11-08 05:33:43
R2-1915184	Temporary RS for fast SCell activation	LG Electronics Inc.	available	2019-11-07 10:16:11	2019-11-08 05:33:43

R2-1915185	RLM for NR-U	Samsung	available	2019-11-07 10:19:57	2019-11-08 05:39:37
R2-1915186	Discussion on SL radio link management	Nokia, Nokia Shanghai Bell	available	2019-11-07 10:22:55	2019-11-07 20:01:44
R2-1915187	Mobility challenges for NR V2X platooning/groupcast	Nokia, Nokia Shanghai Bell	available	2019-11-07 10:26:24	2019-11-07 20:01:44
R2-1915188	Network Based Monitoring and Reporting of QoS parameters for	Nokia, Nokia Shanghai Bell	available	2019-11-07 10:28:04	2019-11-07 20:01:44
R2-1915189	Discussion on SSB measurement	Huawei, HiSilicon	available	2019-11-07 10:30:31	2019-11-08 03:39:00
R2-1915190	Discussion on feeder link switch for	Huawei, HiSilicon	available	2019-11-07 10:30:31	2019-11-08 03:39:00
R2-1915191	Discussion on mobility with	Huawei, HiSilicon	available	2019-11-07 10:30:31	2019-11-08 03:39:00
R2-1915192	Service continuity between TN and	Huawei, HiSilicon	available	2019-11-07 10:30:32	2019-11-08 03:39:00
R2-1915193	On NR V2X Sidelink transmissions during Handover or Uu PHY layer	Nokia, Nokia Shanghai Bell	noted	2019-11-07 10:30:43	2019-11-07 20:01:44
R2-1915194	Discussion on application of SLRB configuration during UE state	Nokia, Nokia Shanghai Bell	available	2019-11-07 10:32:26	2019-11-07 20:01:44
R2-1915195	Discussion on the support of	Nokia Denmark	available	2019-11-07 10:34:12	2019-11-07 20:01:44
R2-1915196	BAP mapping support for routing	CMCC	available	2019-11-07 10:40:19	2019-11-08 03:29:23
R2-1915197	Details on determining consistent	CMCC	available	2019-11-07 10:40:19	2019-11-08 03:29:23
R2-1915198	Further considerations on	CMCC	available	2019-11-07 10:40:19	2019-11-08 03:29:23
R2-1915199	Impact analysis of NR CA frame	CMCC	noted	2019-11-07 10:40:19	2019-11-08 03:29:21
R2-1915200	Further consideration on PRACH	CMCC	available	2019-11-07 10:40:19	2019-11-08 03:29:21
R2-1915201	Discussion on the flexible configuration of Maximum Data	CMCC, Huawei, Hisilicon	available	2019-11-07 10:40:19	2019-11-08 03:29:21
R2-1915202	Mobility-state-based cell	CMCC,	available	2019-11-07 10:40:19	2019-11-08 03:29:21
R2-1915203	[107bis#86][NR L2 meas] running	CMCC	endorsed	2019-11-07 10:40:20	2019-11-08 03:29:22
R2-1915204	Summary of open points on L2	CMCC	noted	2019-11-07 10:40:22	2019-11-15 10:13:09
R2-1915205	Discussion and TP for Number of active UEs for CU/DU split	CMCC	available	2019-11-07 10:40:22	2019-11-08 03:29:22
R2-1915206	Discussion and TP for End-to-End RAN Part of Packet Delay	CMCC	available	2019-11-07 10:40:22	2019-11-08 03:29:22
R2-1915207	Remaining Issues on Supporting M1 to M9 in L2 measurements	CMCC	available	2019-11-07 10:40:22	2019-11-08 03:29:22
R2-1915208	UE capability for SON MDT WI	CMCC	noted	2019-11-07 10:40:22	2019-11-08 03:29:22
R2-1915209	TS 38.306 CR on UE capabilities	CMCC	available	2019-11-07 10:40:22	2019-11-08 03:29:23
R2-1915210	Discussion on power saving for	CMCC	available	2019-11-07 10:40:22	2019-11-08 03:29:23
R2-1915211	Consideration of successful HO	CMCC	available	2019-11-07 10:40:22	2019-11-08 06:24:15
R2-1915212	Further discussion on handling of	CMCC	available	2019-11-07 10:40:22	2019-11-08 06:24:15
R2-1915213	Further discussion on IE design of TimeReferenceInfo used for IIOT	CMCC	available	2019-11-07 10:40:22	2019-11-08 06:24:15
R2-1915214	Further discussion of the details of reporting UE orientation sensor	CMCC,Huawei	noted	2019-11-07 10:40:23	2019-11-08 06:24:15
R2-1915215	Discussion on the new RA-RNTI	CMCC	available	2019-11-07 10:40:23	2019-11-08 05:57:16
R2-1915216	Discussion on 2-step CFRA	CMCC	available	2019-11-07 10:40:23	2019-11-08 05:57:16
R2-1915217	Discussion on the maximum number of configured CHO	CMCC	available	2019-11-07 10:40:23	2019-11-08 05:57:16
R2-1915218	Discussion on fast handover failure	CMCC	available	2019-11-07 10:40:23	2019-11-08 05:57:16
R2-1915219	Further consideration on EN-DC cell reselection	CMCC, Huawei, vivo, ZTE, OPPO,	noted	2019-11-07 10:40:23	2019-11-08 03:29:23
R2-1915220	Discussion on support of NR RAN	CMCC	available	2019-11-07 10:40:23	2019-11-08 03:29:23
R2-1915221	Support of dynamic HARQ process	Samsung	noted	2019-11-07 10:41:02	2019-11-08 04:47:13
R2-1915222	Applicability of NR-U features to	Samsung	available	2019-11-07 10:41:02	2019-11-08 04:47:13
R2-1915223	To reduce SCell activation delay in NR	Samsung	available	2019-11-07 10:41:02	2019-11-08 04:47:13
R2-1915224	Support of unaligned frame boundary for inter-band TDD CA	Samsung	noted	2019-11-07 10:41:02	2019-11-08 04:47:13
R2-1915225	TA handling in 2-step RACH	Samsung	available	2019-11-07 10:41:02	2019-11-08 04:47:13
R2-1915226	Local route selection in IAB	Sony	available	2019-11-07 10:46:01	2019-11-07 21:15:50
R2-1915227	IAB System information handling	Sony	available	2019-11-07 10:46:01	2019-11-07 21:15:50
R2-1915228	How to handle the deprioritized PDU for uplink Intra-UE	Sony	available	2019-11-07 10:46:01	2019-11-07 21:15:50
R2-1915229	Consideration on	Sony	available	2019-11-07 10:46:01	2019-11-07 21:15:50
R2-1915230	Location report in NTN	Sony	available	2019-11-07 10:46:01	2019-11-07 21:15:50
R2-1915231	Fallback to 4-step RACH with BI	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915232	Power Saving techniques, UE	SONY	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915233	UE power saving for inter	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915234	Details of Relaxed monitoring for	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50

R2-1915235	UE-group wake-up signal for	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915236	Cell selection/reselection with NPN	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915237	Mobility enhancements for Connectivity to 5GC for MTC and	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915238	Discussion on differnt RAT dependent NR Positioning	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915239	Applying un-used RNTIs for MsgB	Sony	noted	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915240	Differentiating MsgB with and	Sony	not treated	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915241	PUR L1 ACK and application layer	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915242	RNTI ambiguity for CFRA and	Sony	available	2019-11-07 10:46:02	2019-11-07 21:15:50
R2-1915243	Expected signalling flows for SN-	NEC	available	2019-11-07 10:50:23	2019-11-08 07:47:54
R2-1915244	Network configuration for fast MCG recovery	NEC	available	2019-11-07 10:50:23	2019-11-08 07:47:54
R2-1915245	UE-assisted Activation/Deactivation for UL	III	available	2019-11-07 10:53:04	2019-11-08 05:39:37
R2-1915246	Transfer of segmented	Samsung	available	2019-11-07 11:00:03	2019-11-08 00:42:43
R2-1915247	MAC CE design for support of multiple beam indication for single	Samsung	available	2019-11-07 11:00:03	2019-11-08 00:42:43
R2-1915248	Reduction of signaling and latency	Samsung	available	2019-11-07 11:00:03	2019-11-08 00:42:43
R2-1915249	Discussion on the additional UE capability filtering to limit the total	Samsung	available	2019-11-07 11:00:03	2019-11-08 00:42:43
R2-1915250	Additional UE capability filtering to limit the total number of carriers in	Samsung	not treated	2019-11-07 11:00:03	2019-11-08 00:42:43
R2-1915251	Additional UE capability filtering to limit the total number of carriers in	Samsung	not treated	2019-11-07 11:00:04	2019-11-08 00:42:43
R2-1915252	Change on transfer-type of handoverCommandMessage for	Samsung	not pursued	2019-11-07 11:00:05	2019-11-08 00:42:43
R2-1915253	Clarification regarding conditions of setting omitEN-DC for mrdc-	Samsung	not pursued	2019-11-07 11:00:07	2019-11-08 00:42:43
R2-1915254	MAC running CR for NR eMIMO	Samsung	not treated	2019-11-07 11:00:09	2019-11-12 11:00:03
R2-1915255	Consideration on the variables for 2-step RACH	ZTE Corporation, Sanechips	withdrawn	2019-11-07 11:25:38	
R2-1915256	Running CR to 38.321 on Integrated Access and Backhaul for NR	Samsung Electronics	revised	2019-11-07 11:26:37	2019-11-07 13:47:41
R2-1915257	RAN2 agreements for Rel-16 additional enhancements for NB-	Document Rapporteur	noted	2019-11-07 11:26:53	2019-11-07 11:29:08
R2-1915258	Way forward on pre-emptive BSR	Samsung, Lenovo, Nokia, Nokia Shanghai Bell, Huawei, Futurewei, LG, Sequans Communications,	revised	2019-11-07 11:29:29	2019-11-07 13:13:14
R2-1915259	Summary of email discussion [107bis#47][NR TEI16] Overheating	Huawei, Huawei Device	available	2019-11-07 11:30:51	2019-11-13 09:31:01
R2-1915260	36.331 CR for addressing overheating issue in (NG)EN-DC	Huawei, Huawei Device	not treated	2019-11-07 11:30:51	2019-11-13 09:31:01
R2-1915261	38.331 CR for addressing overheating issue in (NG)EN-DC	Huawei, Huawei Device	not treated	2019-11-07 11:30:52	2019-11-13 09:31:01
R2-1915262	On the enhancement of SRS carrier	Huawei, HiSilicon	available	2019-11-07 11:30:52	2019-11-08 04:59:16
R2-1915263	Further discussion on the impact of	Huawei, HiSilicon	available	2019-11-07 11:30:52	2019-11-08 04:59:16
R2-1915264	Remaining issues on UE assistance information for power	Huawei, HiSilicon	available	2019-11-07 11:30:52	2019-11-08 04:59:16
R2-1915265	Remaining issues on UE capability	Huawei, HiSilicon	noted	2019-11-07 11:30:52	2019-11-08 04:59:16
R2-1915266	Remaining issues on UE capability	Huawei, HiSilicon	available	2019-11-07 11:30:52	2019-11-08 04:59:16
R2-1915267	Downlink hop-by-hop flow control	Samsung Electronics	noted	2019-11-07 11:32:34	2019-11-07 13:37:40
R2-1915268	Draft CR for 2-step CFRA	ZTE Corporation, Sanechips	available	2019-11-07 11:32:42	2019-11-08 07:11:53
R2-1915269	On the need for bearer ID in the BAP header	Samsung Electronics	noted	2019-11-07 11:34:38	2019-11-07 13:32:23
R2-1915270	Discussion on NR SL lower layer	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57
R2-1915271	Remaining issues on RLC AM and	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57
R2-1915272	Support of HARQ procedure over	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57
R2-1915273	Discussion on configured grant left	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57
R2-1915274	Discussion on SL link management	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57

R2-1915275	Discussion on NR SL QoS	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57
R2-1915276	Discussion on PDCP left issues	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57
R2-1915277	Discussion on priority configuration	Ericsson	available	2019-11-07 11:35:19	2019-11-07 12:55:57
R2-1915278	Upstream routing ID	Samsung Electronics	available	2019-11-07 11:36:07	2019-11-07 13:29:55
R2-1915279	Running CR for 36.300 on CA/DC Enhancements	Ericsson	revised	2019-11-07 11:43:45	2019-11-07 17:10:53
R2-1915280	Running CR for 38.300 for CA/DC Enhancements	Ericsson	revised	2019-11-07 11:43:45	2019-11-07 17:10:53
R2-1915281	Running CR for 36.331 for CA/DC Enhancements	Ericsson	endorsed	2019-11-07 11:43:45	2019-11-19 08:10:50
R2-1915282	Running CR for 38.331 on CA/DC Enhancements	Ericsson	endorsed	2019-11-07 11:43:45	2019-11-19 08:10:50
R2-1915283	Idle measurement configuration in UE Inactive AS context	Ericsson	available	2019-11-07 11:43:45	2019-11-07 17:10:53
R2-1915284	Remaining issues for early measurement results and	Ericsson	noted	2019-11-07 11:43:45	2019-11-07 17:10:53
R2-1915285	Applicability of early measurement solutions for LTE	Ericsson	noted	2019-11-07 11:43:45	2019-11-07 17:10:53
R2-1915286	Delta configurations for early measurement configurations	Ericsson	available	2019-11-07 11:43:45	2019-11-07 17:10:53
R2-1915287	Correction for P-Max in FR2	Ericsson, NTT DOCOMO INC.	agreed	2019-11-07 11:49:11	2019-11-08 05:45:52
R2-1915288	A second SSB periodicity in Idle	Ericsson	noted	2019-11-07 11:49:13	2019-11-08 05:45:52
R2-1915289	cDRX enhancement for CA	Ericsson, Qualcomm Inc., Samsung, Verizon, Deutsche	available	2019-11-07 11:49:13	2019-11-08 05:45:52
R2-1915290	Introduction of secondary DRX	Ericsson	available	2019-11-07 11:49:13	2019-11-12 16:44:15
R2-1915291	Introduction of secondary DRX	Ericsson	available	2019-11-07 11:49:13	2019-11-12 16:44:15
R2-1915292	Email report [107bis#49][NR TEI16] cDRX enhancement for CA	Ericsson	noted	2019-11-07 11:49:13	2019-11-12 16:44:15
R2-1915293	RAN2 impact of WUS in connected	Ericsson	available	2019-11-07 11:49:13	2019-11-08 05:45:52
R2-1915294	UE Assistance Information for	Ericsson	available	2019-11-07 11:49:13	2019-11-08 05:45:52
R2-1915295	UE Assistance Information for	Ericsson	available	2019-11-07 11:49:13	2019-11-08 05:45:52
R2-1915296	RRM measurement relaxation	Ericsson	available	2019-11-07 11:49:13	2019-11-08 05:45:52
R2-1915297	Stop using redirectedCarrierOffsetDedicated	Huawei, HiSilicon	revised	2019-11-07 11:50:52	2019-11-08 04:02:59
R2-1915298	Introduction of additional enhancements for NB-IoT in TS	Huawei	revised	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915299	Introduction of additional	Huawei	revised	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915300	Discussion on SON ANR	Huawei, HiSilicon	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915301	Discussion on SON RACH and	Huawei, HiSilicon	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915302	Introduction of UE specific DRX for	Huawei, HiSilicon	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915303	Introduction of UE specific DRX for	Huawei	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915304	Introduction of UE specific DRX for	Huawei	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915305	Introduction of UE specific DRX for	Huawei	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915306	Introduction of UE specific DRX for	Huawei	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915307	Addressing Editor's Notes and FFSs in 36.300 running CR for NB-	Huawei, HiSilicon	available	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915308	Clarification on default configuration and SRB1 for UP-EDT	Huawei, HiSilicon	revised	2019-11-07 11:50:53	2019-11-08 04:02:59
R2-1915309	Discussion on remaining aspects of MT-EDT	Huawei, HiSilicon	noted	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915310	Discussion on configuration for WUS grouping	Huawei, HiSilicon	available	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915311	FFSes on D-PUR	Huawei, HiSilicon	noted	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915312	Handling of D-PUR configuration for CP solution	Huawei, HiSilicon	available	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915313	[Draft] LS on handling of D-PUR configuration for the CP solution	Huawei	available	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915314	Multiple TBs scheduling in NB-IoT	Huawei, HiSilicon	noted	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915315	Discussion on paging of RRC_INACTIVE for eMTC	Huawei, HiSilicon	noted	2019-11-07 11:50:55	2019-11-08 04:02:59

R2-1915316	Access Stratum Release Assistance Indicator for eMTC and	Huawei, HiSilicon	available	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915317	Report of email discussion [107bis#89][NB-IoT R16] Open	Huawei	noted	2019-11-07 11:50:55	2019-11-11 08:22:17
R2-1915318	Support of RRC connection Re-establishment for the Control plane	Huawei, HiSilicon	noted	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915319	Discussion on SA2 reply LS on WUS assistance information	Huawei, HiSilicon	noted	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915320	[Draft] Reply LS on WUS assistance information	Huawei	available	2019-11-07 11:50:55	2019-11-08 04:02:59
R2-1915321	Details of hop-by-hop flow control	Nokia, Nokia Shanghai Bell	noted	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915322	Buffer status reporting for IAB	Nokia, Nokia Shanghai Bell	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915323	eLCID space and handling of IAB specific MAC Ces	Nokia, Nokia Shanghai Bell	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915324	Signalling for IAB timing	Nokia, Nokia Shanghai Bell	noted	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915325	Signalling for radio aware scheduling	Nokia, Nokia Shanghai Bell	noted	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915326	RNTI design for MsgB reception	Nokia, Nokia Shanghai Bell	noted	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915327	2-step RACH only BWP	Nokia, Nokia Shanghai Bell	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915328	HARQ ACK resources for successRAR	Nokia, Nokia Shanghai Bell	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915329	Draft LS on HARQ ACK resources for successRAR	Nokia, Nokia Shanghai Bell	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915330	CFRA for 2-step RACH	Nokia, Nokia Shanghai Bell	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915331	Summary of email discussion [107bis#61][NR][eMIMO]	Nokia, Nokia Shanghai Bell	noted	2019-11-07 11:56:10	2019-11-11 05:24:18
R2-1915332	Remaining details of SCell BFR	Nokia, Nokia Shanghai Bell	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915333	CFRA resource handling for BFR upon TAT expiry	Nokia, Nokia Shanghai Bell,	available	2019-11-07 11:56:10	2019-11-08 06:59:19
R2-1915334	New CG Confirmation MAC CE	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:04
R2-1915335	Configured Grant with Periodicity of any Integer Number of Slots	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:04
R2-1915336	MAC CE for RLC Activation and	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:03
R2-1915337	Configuration of Multiple CG/SPS	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:03
R2-1915338	MAC Running CR for NR IIOT	Samsung	endorsed	2019-11-07 12:04:04	2019-11-08 07:36:04
R2-1915339	Initial Value of RX_DELIV	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:04
R2-1915340	Prioritization of SR Transmission	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:04
R2-1915341	Reference Cell for Reference SFN	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:04
R2-1915342	Priority Value of an Uplink Grant	Samsung	available	2019-11-07 12:04:04	2019-11-08 07:36:04
R2-1915343	Remaining issues with extending LCID space on the backhaul	Samsung Electronics	available	2019-11-07 12:21:13	2019-11-07 13:22:28
R2-1915344	Considerations on control plane for DAPS	Huawei, HiSilicon, China	available	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915345	Further consideration on reply LSs from RAN1 and RAN4	Huawei, HiSilicon, China	available	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915346	Discussion on handover	Huawei, HiSilicon	available	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915347	Discussion on PDCP duplication	Huawei, HiSilicon	available	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915348	Discussion on UE capability	Huawei, HiSilicon	available	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915349	Clarification of DAPS handover	Huawei, HiSilicon	available	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915350	Draft CR for 36.323 on supporting DAPS handover	Huawei, HiSilicon,	revised	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915351	Draft CR for 38.323 on supporting DAPS handover	Huawei, HiSilicon,	endorsed	2019-11-07 12:28:49	2019-11-08 06:51:10
R2-1915352	Stop timer T310 in	Ericsson	not pursued	2019-11-07 12:30:19	2019-11-07 21:49:43
R2-1915353	(IPA) Handling of AS-Config in HandoverPreparationInformation	Ericsson	revised	2019-11-07 12:30:20	2019-11-07 21:49:43
R2-1915354	(IPA) Corrections on scg-RB-	Ericsson	revised	2019-11-07 12:30:22	2019-11-07 21:49:43
R2-1915355	Clarification on timer T304 for	Ericsson	merged	2019-11-07 12:30:23	2019-11-07 21:49:43

R2-1915356	Email discussion on remaining issues for correction on the	Ericsson	noted	2019-11-07 12:30:25	2019-11-13 09:34:52
R2-1915357	Email discussion on security key	Ericsson	noted	2019-11-07 12:30:25	2019-11-13 09:34:53
R2-1915358	Correction on security key	Ericsson	revised	2019-11-07 12:30:25	2019-11-13 09:34:52
R2-1915359	Correction on security key	Ericsson	revised	2019-11-07 12:30:26	2019-11-13 09:34:52
R2-1915360	Corrections to power limitations in (NG)EN-DC	Ericsson, Qualcomm Incorporated, MediaTek Inc.,	agreed	2019-11-07 12:30:28	2019-11-07 21:49:43
R2-1915361	(IPA) Correction of SRB3 handling	Ericsson	revised	2019-11-07 12:30:30	2019-11-07 21:49:43
R2-1915362	(IPA) Correction to integrity protection in DRB addition and	Ericsson	revised	2019-11-07 12:30:31	2019-11-07 21:49:43
R2-1915363	Correction on MCG measurements	Ericsson	revised	2019-11-07 12:30:33	2019-11-07 21:49:43
R2-1915364	Correction on	Ericsson	not pursued	2019-11-07 12:30:34	2019-11-07 21:49:43
R2-1915365	(IPA) Correction on sending Failure Information via SRB3	Ericsson, ZTE Corporation (Rapporteur),	revised	2019-11-07 12:30:35	2019-11-07 21:49:43
R2-1915366	Correction on the condition of	Ericsson	revised	2019-11-07 12:30:37	2019-11-13 09:34:52
R2-1915367	(IPA) Correction to SIB5 acquisition for idle mode measurements	Ericsson	revised	2019-11-07 12:30:39	2019-11-07 21:49:43
R2-1915368	(IPA)Correction on inter-frequency neighbour cell measurements	Ericsson	withdrawn	2019-11-07 12:30:42	
R2-1915369	Stop timer T313 in	Ericsson	not treated	2019-11-07 12:30:43	2019-11-07 21:49:43
R2-1915370	(IPA) Miscellaneous correction for	Ericsson	revised	2019-11-07 12:30:45	2019-11-07 21:49:43
R2-1915371	Unaligned frame boundary with slot alignment and partial SFN	Ericsson	noted	2019-11-07 12:30:47	2019-11-07 21:49:43
R2-1915372	NR-DC power control	Ericsson	noted	2019-11-07 12:30:47	2019-11-07 21:49:43
R2-1915373	Sending on-demand SIB(s) request over SRB3	Ericsson	noted	2019-11-07 12:30:47	2019-11-07 21:49:43
R2-1915374	[107bis#07][NR R16] Running CR on 38.300 for on-demand SI procedure in RRC_CONNECTED	Ericsson	endorsed	2019-11-07 12:30:47	2019-11-13 09:34:52
R2-1915375	[107bis#07][NR R16] Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED	Ericsson	revised	2019-11-07 12:30:47	2019-11-13 09:34:52
R2-1915376	Draft Reply LS on resource coordination between NG-RAN	Ericsson	revised	2019-11-07 12:30:47	2019-11-07 21:49:43
R2-1915377	Inter-node resource coordination in	Ericsson	available	2019-11-07 12:30:47	2019-11-07 21:49:43
R2-1915378	Discussion on SL Mode 2 left	Ericsson	available	2019-11-07 12:30:48	2019-11-07 21:49:43
R2-1915379	Discussion on SL information	Ericsson	available	2019-11-07 12:30:48	2019-11-07 21:49:43
R2-1915380	Running CR for 38.322 for NR V2X	Ericsson	revised	2019-11-07 12:30:48	2019-11-07 21:49:43
R2-1915381	Discussion on SL AS configuration	Ericsson	available	2019-11-07 12:30:48	2019-11-07 21:49:43
R2-1915382	Remaining issues on capability	Ericsson	available	2019-11-07 12:30:48	2019-11-07 21:49:43
R2-1915383	Handling of SL in Uu RRC state	Ericsson	available	2019-11-07 12:30:48	2019-11-07 21:49:43
R2-1915384	Network and cell (re)selection in SNPN access mode	Nokia, Nokia Shanghai Bell	noted	2019-11-07 12:32:43	2019-11-08 07:21:28
R2-1915385	RRC considerations to support SNPNs	Nokia, Nokia Shanghai Bell	available	2019-11-07 12:32:44	2019-11-08 07:21:28
R2-1915386	Discussion on PCI list	Nokia, Nokia Shanghai Bell	available	2019-11-07 12:32:44	2019-11-08 07:21:28
R2-1915387	Report from Email Discussion	Nokia	noted	2019-11-07 12:32:44	2019-11-08 07:25:54
R2-1915388	Draft RRC CR for NPN	Nokia	endorsed	2019-11-07 12:32:44	2019-11-12 11:00:03
R2-1915389	Discussion on PLMN and Cell selection enhancements for NR-U	Nokia, Nokia Shanghai Bell	noted	2019-11-07 12:32:44	2019-11-08 07:13:35
R2-1915390	RLM/RLF measurement on NR-U	Nokia, Nokia Shanghai Bell	available	2019-11-07 12:32:44	2019-11-08 07:13:35
R2-1915391	Draft TS 38.340 (BAP)	Huawei	withdrawn	2019-11-07 12:38:12	2019-11-08 05:12:28

R2-1915392	Even further views on NR V2X System Information	Nokia, Nokia Shanghai Bell	available	2019-11-07 12:48:27	2019-11-07 13:07:20
R2-1915393	Running CR on 36.321 for eMTC	Ericsson	revised	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915394	Remaining issues in Msg4-based MT EDT	Ericsson	reserved	2019-11-07 12:53:44	
R2-1915395	Scheduling enhancements for LTE-MTC and NB-IoT	Ericsson	noted	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915396	MPDCCH performance	Ericsson	noted	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915397	Remaining issues for ETWS/CMAS notification delivery	Ericsson	available	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915398	UE capabilities for enhancements	Ericsson	noted	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915399	Reception type for ETWS/CMAS for non-BL UE in CE in	Ericsson	withdrawn	2019-11-07 12:53:44	
R2-1915400	S-Criterion interpretation for non-	Ericsson	noted	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915401	Cell Reselection improvement for	Ericsson	available	2019-11-07 12:53:44	2019-11-07 23:50:16
R2-1915402	Coexistence with NR for LTE-M	Ericsson	available	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915403	eDRX in RRC_INACTIVE for LTE-	Ericsson	available	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915404	Running CR on 36.321 for NB-IoT	Ericsson	revised	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915405	PUR periodicity and UE multiplexing	Ericsson	available	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915406	PUR with DCI scheduling	Ericsson	withdrawn	2019-11-07 12:53:44	
R2-1915407	PUR - Remaining open issues	Ericsson	noted	2019-11-07 12:53:44	2019-11-07 23:43:36
R2-1915408	On the need for PUR L1 ACK application layer response	Ericsson	noted	2019-11-07 12:53:44	2019-11-07 23:43:36
R2-1915409	Draft LS reply PUR transmission for NB-IoT/eMTC	Ericsson	revised	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915410	Coexistence with NR for NB-IoT	Ericsson	available	2019-11-07 12:53:44	2019-11-07 23:43:35
R2-1915411	Discussion on remaining issues of Immediate MDT	ZTE Corporation, Sanechips	available	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915412	Discussion on remaining issues of Logged MDT	ZTE Corporation, Sanechips	available	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915413	Immediate MDT continuity upon handover procedure	ZTE Corporation, Sanechips	noted	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915414	Restriction on MDT measurement and report	ZTE Corporation, Sanechips	available	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915415	Clarification on out-of-coverage measurement and report	ZTE Corporation, Sanechips	noted	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915416	Clarification on connected UE counting in CA	ZTE Corporation, Sanechips	available	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915417	Further consideration on INACTIVE UE counting	ZTE Corporation, Sanechips	available	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915418	Discussion on PRB usage of a cell	ZTE Corporation, Sanechips	available	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915419	Further considerations on RACH optimization	ZTE Corporation, Sanechips	available	2019-11-07 12:53:59	2019-11-08 05:53:22
R2-1915420	Discussion on RLF report	ZTE Corporation, Sanechips	available	2019-11-07 12:54:00	2019-11-08 05:53:22
R2-1915421	Enhancement on Msg1 based SI request	ZTE Corporation, Sanechips	not treated	2019-11-07 12:54:00	2019-11-08 05:53:22
R2-1915422	Consideration on SR and DRX in NTN	ZTE Corporation, Sanechips	available	2019-11-07 12:54:03	2019-11-08 05:53:22
R2-1915423	On SSB-ToMeasure clarifications	Ericsson	available	2019-11-07 13:00:04	2019-11-07 18:06:03
R2-1915424	CR to 38.331 on SSB-ToMeasure	Ericsson	not pursued	2019-11-07 13:00:04	2019-11-07 18:06:03
R2-1915425	CR to 36.331 on SSB-ToMeasure	Ericsson	not pursued	2019-11-07 13:00:05	2019-11-07 18:06:03
R2-1915426	CR to 36.331 on performing L3 filtering for NR related	Ericsson	revised	2019-11-07 13:00:08	2019-11-07 18:06:03
R2-1915427	CR to 38.331 on A2 event definition	Ericsson	not pursued	2019-11-07 13:00:11	2019-11-07 18:06:03
R2-1915428	CR to 36.331 on A2 event definition	Ericsson	not treated	2019-11-07 13:00:14	2019-11-07 18:06:03
R2-1915429	Triggering conditions for A1-A6	Ericsson	available	2019-11-07 13:00:16	2019-11-07 18:06:03
R2-1915430	CR to 38.331 on Triggering conditions for A1 to A6 events in	Ericsson	not treated	2019-11-07 13:00:16	2019-11-07 18:06:03
R2-1915431	CR to 38.306 on Triggering conditions for A1 to A6 events in	Ericsson	not treated	2019-11-07 13:00:35	2019-11-07 18:06:03
R2-1915432	Open issues of L2 measurements	Ericsson	available	2019-11-07 13:00:39	2019-11-07 18:06:03

R2-1915433	Open issues related to RACH	Ericsson	noted	2019-11-07 13:00:40	2019-11-07 18:06:03
R2-1915434	Open issues related to RLF report	Ericsson	available	2019-11-07 13:00:40	2019-11-07 18:06:03
R2-1915435	Successful handover report in NR	Ericsson	available	2019-11-07 13:00:40	2019-11-07 18:06:03
R2-1915436	Open issues of CEF report	Ericsson	noted	2019-11-07 13:00:40	2019-11-07 18:06:03
R2-1915437	107bis#87 email discussion report	Ericsson	noted	2019-11-07 13:00:40	2019-11-07 18:06:03
R2-1915438	Running CR to 38.331 on NR SON	Ericsson	endorsed	2019-11-07 13:00:40	2019-11-07 18:06:03
R2-1915439	Discussion on QoS flow in SLRB	Apple	available	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915440	Disucssion on PC5 RRC left	Apple	available	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915441	Draft LS on keep alive function	Apple	available	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915442	UL-SL Prioritization under SL	Apple	available	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915443	SL Synchronization under Async	Apple	noted	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915444	Maximum Data Rate Enumeration for UP Integrity Protection	Apple, ZTE Corporation,	available	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915445	Draft LS on Maximum Data Rate Enumeration for UP Integrity	Apple	available	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915446	Handling of fallbacks for combined contiguous and non-contiguous CA	Apple	noted	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915447	CR to TS38.331 on FR2 intra band contiguous and non-contiguous CA	Apple	not treated	2019-11-07 13:08:58	2019-11-08 05:14:27
R2-1915448	CR to TS38.306 on FR2 intra band contiguous and non-contiguous CA	Apple	not treated	2019-11-07 13:08:59	2019-11-08 05:14:27
R2-1915449	Introduction to additional enhancements NB-IoT Rel-16	BlackBerry UK Limited	revised	2019-11-07 13:19:45	2019-11-07 13:24:48
R2-1915450	Loading Control in the RACH Type Selection	PANASONIC R&D Center	available	2019-11-07 13:22:45	2019-11-07 15:24:44
R2-1915451	Remaining issues on the PDCP anchor relocation for DPAS based	NEC	available	2019-11-07 13:24:44	2019-11-08 05:07:31
R2-1915452	DL PDCP handling for RLC UM	NEC	available	2019-11-07 13:24:45	2019-11-08 05:07:31
R2-1915453	Further consideration on capability coordination for DAPS based	NEC	available	2019-11-07 13:24:45	2019-11-08 05:57:44
R2-1915454	RLF report for CHO	NEC	noted	2019-11-07 13:24:45	2019-11-08 05:07:31
R2-1915455	Combination of CHO and DAPS	NEC	available	2019-11-07 13:24:45	2019-11-08 05:07:31
R2-1915456	Remaining issues for routing	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915457	Remaining issues for bearer	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915458	Flow control for IAB networks	Huawei, HiSilicon	noted	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915459	Way forward and TP for the pre-	Huawei, HiSilicon	revised	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915460	RACH related issues for IAB	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915461	Backhaul RLF Recovery	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915462	Discussion on F1AP over LTE in	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915463	Running CR to 36.331 on Integrated Access and Backhaul for NR of	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:47
R2-1915464	TP for TS 38.304 and 36.304 on the	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:48
R2-1915465	T_delta of IAB DL transmission	Huawei, HiSilicon	noted	2019-11-07 13:29:56	2019-11-08 07:00:48
R2-1915466	Discussion on the BAP PDU format	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:48
R2-1915467	Support of UE PDCP duplication	Huawei, HiSilicon	available	2019-11-07 13:29:56	2019-11-08 07:00:48
R2-1915468	Draft CR to 36.331 on Integrated Access and Backhaul for (NG)EN-	Ericsson	revised	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915469	Running CR to TS 38.331 on IAB	Ericsson	revised	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915470	Draft CR to TS 38.331 on IAB for TDD UL DL Change of	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915471	On Multi-connectivity for IAB	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915472	Backhaul Adaptation Protocol	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915473	Further Discussion on BAP Layer	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915474	Remaining Issues Related to Flow	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915475	Way forward on pre-emptive BSR	Ericsson, Sony	noted	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915476	IP Address Assignment for IAB	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915477	Further details on Backhaul link RLF Notification Types to	Ericsson, Song	withdrawn	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915478	Summary for Email Discussion [107bis#40] [IAB] SI Broadast,	Ericsson	noted	2019-11-07 13:34:22	2019-11-15 10:12:47
R2-1915479	Cell reservations, UAC, and initial access aspects in IAB networks	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915480	RRC Connection Re-establishment cause values for IAB nodes	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915481	Security for inter-IAB node	Ericsson	available	2019-11-07 13:34:22	2019-11-07 21:25:32
R2-1915482	Correction on the Msg3 based on	Huawei, HiSilicon	agreed	2019-11-07 13:36:06	2019-11-08 07:00:48

R2-1915483	Correction on the configuration of split SRB	Huawei, HiSilicon,	revised	2019-11-07 13:36:07	2019-11-08 07:00:48
R2-1915484	Correction for random access initiation due to reconfiguration with	Huawei, HiSilicon,	not pursued	2019-11-07 13:36:09	2019-11-08 07:00:48
R2-1915485	Enhancement on BSR format for	Huawei, HiSilicon	not treated	2019-11-07 13:36:10	2019-11-08 07:00:48
R2-1915486	Correction on header compression, integrity protection and ciphering	Huawei, HiSilicon	not pursued	2019-11-07 13:36:11	2019-11-08 07:00:48
R2-1915487	Correction on initial BWP	Huawei, HiSilicon	withdrawn	2019-11-07 13:36:12	
R2-1915488	Correction on camping conditions	Huawei, HiSilicon	agreed	2019-11-07 13:36:14	2019-11-08 07:00:48
R2-1915489	Correction on CORESET location	Huawei, HiSilicon	revised	2019-11-07 13:36:16	2019-11-08 07:00:48
R2-1915490	On Autonomous Transmission of Pending MAC PDUs	Nokia, Nokia Shanghai Bell	available	2019-11-07 13:41:07	2019-11-07 15:04:38
R2-1915491	Intra-UE Prioritization with Per-Grant Priority Indication: MAC	Nokia, Nokia Shanghai Bell	noted	2019-11-07 13:41:07	2019-11-07 15:04:38
R2-1915492	Intra-UE Prioritization between SR and PUSCH	Nokia, Nokia Shanghai Bell	available	2019-11-07 13:41:07	2019-11-07 15:04:38
R2-1915493	Network Coordination for Uplink PDCP Duplication	Nokia, Nokia Shanghai Bell, LG Electronics, III, Spreadtrum, NTT Docomo, Fujitsu, Mediatek, CATT, Samsung, Asia	noted	2019-11-07 13:41:07	2019-11-07 15:04:38
R2-1915494	[Draft] LS on Network Coordination for UL PDCP Duplication	Nokia, Nokia Shanghai Bell	revised	2019-11-07 13:41:07	2019-11-07 15:04:38
R2-1915495	Configuration and Control for Uplink PDCP Duplication	Nokia, Nokia Shanghai Bell	noted	2019-11-07 13:41:07	2019-11-07 15:04:38
R2-1915496	On per-DRB DAPS Handover in NR and LTE	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915497	On RLF reporting for CHO and DAPS	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915498	On when to decode and non-compliance with target cell	Nokia, Nokia Shanghai Bell	noted	2019-11-07 14:08:31	2019-11-08 06:56:52
R2-1915499	Failure Handling via CHO recovery	Nokia, Nokia Shanghai Bell	noted	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915500	DraftCR for early RLF and fast handover failure recovery for	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915501	Remaining details of DAPS failure handling	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915502	DraftCR for introducing the fallback to source cell in DAPS handover	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915503	On what is still possible for SL RLF detection	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915504	Missing reportAddNeighMeas in periodic measurement reporting	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:08:31	2019-11-07 21:59:37
R2-1915505	SMTC setting in MR-DC PSCell change	Nokia, Nokia Shanghai Bell	revised	2019-11-07 14:17:51	2019-11-07 19:53:04
R2-1915506	Clarifying the alignment of capability filtering across LTE and	Nokia, Nokia Shanghai Bell	agreed	2019-11-07 14:17:53	2019-11-07 19:53:04
R2-1915507	Report for [107bis#36] [NR R15] FR2 CA Fallbacks (Nokia)	Nokia, Nokia Shanghai Bell	revised	2019-11-07 14:17:56	2019-11-07 19:53:04
R2-1915508	Report for [107bis#35] [NR R15] Consequences if not supported	Nokia, Nokia Shanghai Bell	postponed	2019-11-07 14:17:56	2019-11-13 09:31:01
R2-1915509	On the capability coordination of measurement reporting criteria for	Nokia, Nokia Shanghai Bell	noted	2019-11-07 14:17:59	2019-11-07 19:53:04
R2-1915510	Clarifying the interpretation behind the encapsulation of the filter	Nokia, Nokia Shanghai Bell	noted	2019-11-07 14:17:59	2019-11-07 19:53:04
R2-1915511	On the modelling of dormant SCG	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:17:59	2019-11-07 19:53:04
R2-1915512	[DRAFT] Response LS on SL	LG Electronics	available	2019-11-07 14:24:48	2019-11-08 06:25:25
R2-1915513	Discussion on assistance information for resource allocation	LG Electronics Inc.	available	2019-11-07 14:24:49	2019-11-08 06:25:25
R2-1915514	Remaining issues on SL RLF	LG Electronics	noted	2019-11-07 14:24:49	2019-11-08 06:25:25
R2-1915515	Remaining issues on SL RLM	LG Electronics	available	2019-11-07 14:24:49	2019-11-08 06:25:25
R2-1915516	Discussion on groupcast HARQ in	LG Electronics	available	2019-11-07 14:24:49	2019-11-08 06:25:25
R2-1915517	Discussion on measurement and	LG Electronics	available	2019-11-07 14:24:49	2019-11-08 06:25:25

R2-1915518	Discussion on remaining issues of	LG Electronics	available	2019-11-07 14:24:50	2019-11-08 06:25:25
R2-1915519	CAPAC for UL configured grant with SRB data	ZTE Corporation, Sanechips	available	2019-11-07 14:30:29	2019-11-07 22:01:58
R2-1915520	Further details on PDCCH WUS	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:32:53	2019-11-07 21:34:15
R2-1915521	Dedicated RRM Measurement Relaxation	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:32:53	2019-11-07 21:34:15
R2-1915522	Further details on RRM measurement relaxation	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:32:53	2019-11-07 21:34:15
R2-1915523	On UE assistance	Nokia, Nokia Shanghai Bell	available	2019-11-07 14:32:53	2019-11-07 21:34:15
R2-1915524	(IPA) Correction on inter-frequency neighbour cell measurements	Ericsson	revised	2019-11-07 14:34:40	2019-11-07 21:49:44
R2-1915525	Correction to Pcompensation for	Huawei, HiSilicon	withdrawn	2019-11-07 14:35:14	2019-11-08 07:30:57
R2-1915526	Correction to nonCriticalExtension of RRCConnectionRelease	Huawei, HiSilicon	agreed	2019-11-07 14:35:16	2019-11-08 07:30:57
R2-1915527	Report of email discussion [107bis#71][PowerSaving] 38.321	Huawei, HiSilicon	noted	2019-11-07 14:35:17	2019-11-14 10:58:40
R2-1915528	Running CR for Introduction of Rel-16 NR UE power saving in TS	Huawei, HiSilicon	available	2019-11-07 14:35:17	2019-11-14 10:58:40
R2-1915529	On SrxlevRef adaptation in relaxed	Huawei, HiSilicon	available	2019-11-07 14:35:17	2019-11-08 07:30:57
R2-1915530	Reducing the number of neighbour	Huawei, HiSilicon	available	2019-11-07 14:35:17	2019-11-08 07:30:57
R2-1915531	Remaining issues of DL quality	Huawei, HiSilicon	available	2019-11-07 14:35:17	2019-11-08 07:30:57
R2-1915532	DRAFT LS on channel quality	Huawei, HiSilicon	available	2019-11-07 14:35:17	2019-11-08 07:30:57
R2-1915533	MPDCCH performance	Huawei, HiSilicon	noted	2019-11-07 14:35:18	2019-11-08 07:30:57
R2-1915534	ETWS/CMAS in connected mode	Huawei, HiSilicon	noted	2019-11-07 14:35:18	2019-11-08 07:30:56
R2-1915535	DRAFT LS to RAN1 on the use of SI-RNTI for the ETWS/CMAS	Huawei, HiSilicon	noted	2019-11-07 14:35:18	2019-11-08 07:30:57
R2-1915536	Enhancements to idle mode	Huawei, HiSilicon	noted	2019-11-07 14:35:18	2019-11-08 07:30:57
R2-1915537	Use of RSS for measurement	Huawei, HiSilicon	available	2019-11-07 14:35:18	2019-11-08 07:30:57
R2-1915538	Way forward on pre-emptive BSR	Samsung, Lenovo, Nokia, Nokia Shanghai Bell, Huawei, Futurewei, LG, Sequans Communications,	noted	2019-11-07 14:51:04	2019-11-07 14:53:50
R2-1915539	Considerations on the RRM measurement relaxation	PANASONIC R&D Center	available	2019-11-07 15:02:06	2019-11-07 15:24:44
R2-1915540	SI update notification and PWS notification in WUS	PANASONIC R&D Center	available	2019-11-07 15:07:57	2019-11-07 15:24:44
R2-1915541	Measurement reporting while CHO is configured	PANASONIC R&D Center	available	2019-11-07 15:11:28	2019-11-07 15:24:44
R2-1915542	CA duplication using NR PDCP in	Ericsson	available	2019-11-07 15:20:17	2019-11-07 15:31:28
R2-1915543	System Information in NTN	Nomor Research GmbH	available	2019-11-07 15:26:44	2019-11-07 15:30:23
R2-1915544	Remaining issues on consistent	MediaTek Inc.	available	2019-11-07 15:45:44	2019-11-07 17:24:34
R2-1915545	Indicating SFN LSB in the payload	MediaTek Inc.	available	2019-11-07 15:45:44	2019-11-07 17:24:34
R2-1915546	Ethernet Header Compression	MediaTek Inc.	available	2019-11-07 15:45:44	2019-11-07 17:24:34
R2-1915547	Propagation Delay Compensation	MediaTek Inc.	noted	2019-11-07 15:45:44	2019-11-07 17:24:34
R2-1915548	Running CR for 38.331 for Power	MediaTek Inc.	available	2019-11-07 15:45:44	2019-11-12 16:52:19
R2-1915549	Open issues related to the running	MediaTek Inc.	noted	2019-11-07 15:45:44	2019-11-12 16:52:19
R2-1915550	Periodic CSI and SRS with wake-	MediaTek Inc.	available	2019-11-07 15:45:44	2019-11-07 17:24:34
R2-1915551	On T312 in NR and its relationship with T310	Nokia, Nokia Shanghai Bell	available	2019-11-07 16:09:56	2019-11-07 21:59:37
R2-1915552	Resource Pool Sharing between Mode 1 and Mode 2 UEs	Fraunhofer HHI, Fraunhofer IIS	available	2019-11-07 16:14:12	2019-11-07 18:05:24
R2-1915553	Further D-PUR configuration	Gemalto N.V.	available	2019-11-07 16:14:48	2019-11-07 16:16:06
R2-1915554	PC5-RRC Procedures for NR V2X	Fraunhofer HHI, Fraunhofer IIS	available	2019-11-07 16:17:39	2019-11-07 18:05:24
R2-1915555	Resource Allocation for Mode 2 NR V2X	Fraunhofer HHI, Fraunhofer IIS	available	2019-11-07 16:19:02	2019-11-07 18:05:24
R2-1915556	UE capabilities for CHO	Nokia, Nokia Shanghai Bell	available	2019-11-07 16:23:24	2019-11-07 19:53:04
R2-1915557	UE capabilities for DAPS handover	Nokia, Nokia Shanghai Bell	available	2019-11-07 16:23:24	2019-11-07 19:53:04

R2-1915558	Stage 2 for Multi-RTT positioning	Qualcomm Incorporated	noted	2019-11-07 16:24:38	2019-11-08 07:00:24
R2-1915559	Reconfiguration failure in NE-DC	Google Inc.	agreed	2019-11-07 16:24:43	2019-11-08 03:12:04
R2-1915560	Running LPP CR for PPP-RTK support (SSR)	Qualcomm Incorporated	endorsed	2019-11-07 16:25:42	2019-11-08 07:00:24
R2-1915561	Running LTE RRC CR for PPP-RTK support (SSR)	Qualcomm Incorporated	endorsed	2019-11-07 16:26:59	2019-11-08 07:00:24
R2-1915562	Remaining details on broadcast assistance data delivery	Qualcomm Incorporated	available	2019-11-07 16:28:22	2019-11-08 07:00:24
R2-1915563	Assistance Data for DL-only UE-based mode	Qualcomm Incorporated	available	2019-11-07 16:30:00	2019-11-08 07:00:24
R2-1915564	Details of pre-emptive BSR design	Samsung Electronics	available	2019-11-07 16:32:37	2019-11-07 16:43:19
R2-1915565	Further details on uplink	Ericsson	available	2019-11-07 16:33:42	2019-11-07 21:17:44
R2-1915566	DRX adaptions for NTN	Ericsson, Nomor Research GmbH, THALES	revised	2019-11-07 16:33:42	2019-11-07 21:17:44
R2-1915567	Remaining details on Random	Ericsson	revised	2019-11-07 16:33:42	2019-11-07 21:17:44
R2-1915568	On RACH less for NTN	Ericsson	available	2019-11-07 16:33:42	2019-11-07 21:17:44
R2-1915569	Correction to full configuration	Google Inc.	revised	2019-11-07 16:45:26	2019-11-08 03:12:04
R2-1915570	Summary of E-mail discusion [107bis#33][NR R15] Exchanging	Huawei, HiSilicon	noted	2019-11-07 16:50:04	2019-11-23 15:57:59
R2-1915571	LS on handover without SN	Huawei, HiSilicon	revised	2019-11-07 16:50:04	2019-11-23 15:57:59
R2-1915572	Draft CR on not up-to-date SN	Huawei, HiSilicon	available	2019-11-07 16:50:04	2019-11-08 07:59:43
R2-1915573	Clarification on PDCP version	Huawei, HiSilicon	not treated	2019-11-07 16:50:04	2019-11-07 19:50:06
R2-1915574	Clarification on PDCP version	Huawei, HiSilicon	not treated	2019-11-07 16:50:10	2019-11-07 19:50:06
R2-1915575	Correction to DRB addition/modification for the LTE	Huawei, HiSilicon	not treated	2019-11-07 16:50:12	2019-11-07 19:50:06
R2-1915576	Clarification on sending of sk-	Huawei, HiSilicon	not treated	2019-11-07 16:50:15	2019-11-07 19:50:06
R2-1915577	Correction to key derivation for the UE configured with sk-counter	Huawei, HiSilicon	revised	2019-11-07 16:50:17	2019-11-07 19:50:06
R2-1915578	Correction on the need for	Huawei, HiSilicon	not treated	2019-11-07 16:50:19	2019-11-07 19:50:06
R2-1915579	Correction on the pre-condition for reconfiguration with sync of SCG	Huawei, HiSilicon	revised	2019-11-07 16:50:21	2019-11-07 19:50:06
R2-1915580	Correction on the SCG RRCReconfigurationComplete for	Huawei, HiSilicon	not treated	2019-11-07 16:50:22	2019-11-07 19:50:06
R2-1915581	Correction on AS-Context	Huawei, HiSilicon	merged	2019-11-07 16:50:24	2019-11-07 19:50:06
R2-1915582	Correction on AS-Config	Huawei, HiSilicon	agreed	2019-11-07 16:50:26	2019-11-07 19:50:06
R2-1915583	Addition of	Huawei, HiSilicon	not pursued	2019-11-07 16:50:27	2019-11-07 19:50:06
R2-1915584	Addition of	Huawei, HiSilicon	not treated	2019-11-07 16:50:29	2019-11-07 19:50:06
R2-1915585	Clarification on the (NG)EN-DC	Huawei, HiSilicon	not pursued	2019-11-07 16:50:33	2019-11-07 19:50:06
R2-1915586	Clarification on the en-DC and ng-	Huawei, HiSilicon	revised	2019-11-07 16:50:36	2019-11-07 19:50:06
R2-1915587	Clarification on ne-DC capability	Huawei, HiSilicon	revised	2019-11-07 16:50:37	2019-11-07 19:50:06
R2-1915588	PDCP configuration generation	Huawei, HiSilicon	revised	2019-11-07 16:50:40	2019-11-07 19:50:06
R2-1915589	Correction for the establishment of LTE RLC bearers for (NG)EN-DC	Huawei, HiSilicon	revised	2019-11-07 16:50:41	2019-11-07 19:50:06
R2-1915590	Correction on measurement	Huawei, HiSilicon	agreed	2019-11-07 16:50:44	2019-11-07 19:50:06
R2-1915591	PUCCH configuration for MR-DC	Huawei, HiSilicon	noted	2019-11-07 16:50:46	2019-11-07 19:54:46
R2-1915592	Correction on PUCCH	Huawei, HiSilicon	postponed	2019-11-07 16:50:46	2019-11-07 19:54:46
R2-1915593	Draft LS to RAN1 for clarification of	Huawei, HiSilicon	revised	2019-11-07 16:50:47	2019-11-07 19:54:46
R2-1915594	Correction on SIB1 description	Huawei, HiSilicon	revised	2019-11-07 16:50:47	2019-11-07 19:54:46
R2-1915595	Enhancement of RRC_INACTIVE	Google Inc.	available	2019-11-07 16:50:51	2019-11-08 03:12:04
R2-1915596	Consideration of preemptive BSR	Kyocera	available	2019-11-07 16:52:08	2019-11-08 05:18:51
R2-1915597	Further discussion on-demand SI	Huawei, HiSilicon	noted	2019-11-07 16:52:15	2019-11-11 13:28:47
R2-1915598	Possible issues on Backhaul RLF	Kyocera	available	2019-11-07 16:56:20	2019-11-08 05:18:51
R2-1915599	Hand-over rate in Earth fixed vs. Earth moving cells in NTN LEO	THALES	available	2019-11-07 16:56:41	2019-11-07 21:22:52
R2-1915600	Recovery due to LBT failures	Kyocera	available	2019-11-07 16:59:54	2019-11-08 05:18:51
R2-1915601	PC5 L2/L3 protocols for unicast and	Kyocera	available	2019-11-07 17:02:21	2019-11-08 05:18:51
R2-1915602	RA type switch and fallback in 2-	Ericsson	noted	2019-11-07 17:08:00	2019-11-07 21:39:27
R2-1915603	New msgB format for 2-step RA	Ericsson	available	2019-11-07 17:08:01	2019-11-07 21:39:27
R2-1915604	Preamble group handling for 2-step	Ericsson	available	2019-11-07 17:08:01	2019-11-07 21:39:27
R2-1915605	CFRA in 2-step RA	Ericsson	available	2019-11-07 17:08:01	2019-11-07 21:39:27
R2-1915606	Beam-specific 2-step RA support	Ericsson	available	2019-11-07 17:08:01	2019-11-07 21:39:27
R2-1915607	msgB RNTI design for 2-step RA	Ericsson	noted	2019-11-07 17:08:01	2019-11-07 21:39:27

R2-1915608	Introduction of additional enhancements for NB-IoT	Qualcomm Incorporated	revised	2019-11-07 17:09:06	2019-11-07 21:10:44
R2-1915609	Introduction of additional enhancements for eMTC	Qualcomm Incorporated	revised	2019-11-07 17:09:06	2019-11-07 21:10:44
R2-1915610	Proposals for WUS group open issues	Qualcomm Incorporated	noted	2019-11-07 17:09:06	2019-11-07 21:10:44
R2-1915611	Proposal for 2-bit downlink channel quality reporting in MSG3 for	Qualcomm Incorporated	revised	2019-11-07 17:09:06	2019-11-07 21:10:44
R2-1915612	LTE-M indication discussion paper	Qualcomm Incorporated	noted	2019-11-07 17:09:06	2019-11-07 21:10:44
R2-1915613	RNTI for ETWS/CMAS indication in connected mode for non-BL UEs	Qualcomm Incorporated	noted	2019-11-07 17:09:06	2019-11-07 21:10:44
R2-1915614	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm Incorporated	revised	2019-11-07 17:09:06	2019-11-07 21:10:44
R2-1915615	Remaining issues for EHC in TSC	ZTE Corporation, Sanechips	available	2019-11-07 17:14:53	2019-11-08 06:22:31
R2-1915616	UE behaviour on Logged MDT configuration events	Nokia, Nokia Shanghai Bell	noted	2019-11-07 17:15:24	2019-11-07 22:06:33
R2-1915617	Avoiding conflicting MDT configurations in DC	Nokia, Nokia Shanghai Bell	available	2019-11-07 17:15:25	2019-11-08 07:57:38
R2-1915618	Impact of SNPN on PLMN check for MDT	Nokia, Nokia Shanghai Bell	noted	2019-11-07 17:15:25	2019-11-07 22:06:00
R2-1915619	RACH report and its reporting procedure	Nokia, Nokia Shanghai Bell	available	2019-11-07 17:15:25	2019-11-08 08:16:16
R2-1915620	Scheduled IP Throughput configuration for NR MDT	Nokia, Nokia Shanghai Bell	available	2019-11-07 17:15:25	2019-11-07 22:06:00
R2-1915621	Beam measurements linked to successful and failed handovers	Nokia, Nokia Shanghai Bell	noted	2019-11-07 17:15:25	2019-11-07 22:06:00
R2-1915622	Measurement event for interference forced inter-RAT/inter-freq HO	Nokia, Nokia Shanghai Bell	available	2019-11-07 17:15:25	2019-11-07 22:06:00
R2-1915623	QoE measurements collection support in Rel-16	Nokia, Nokia Shanghai Bell	noted	2019-11-07 17:15:25	2019-11-07 22:06:00
R2-1915624	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	revised	2019-11-07 17:15:25	2019-11-07 22:06:00
R2-1915625	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	revised	2019-11-07 17:15:29	2019-11-07 22:06:00
R2-1915626	Miscellaneous non-controversial	Ericsson	withdrawn	2019-11-07 17:20:24	
R2-1915627	Presence and absence of TAC in	Ericsson	withdrawn	2019-11-07 17:20:26	
R2-1915628	Definition of NR standalone	Ericsson	withdrawn	2019-11-07 17:20:28	
R2-1915629	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai	withdrawn	2019-11-07 17:20:30	
R2-1915630	Correction to channelBWs	Ericsson	withdrawn	2019-11-07 17:20:33	
R2-1915631	Rel-16 RRC planning	Ericsson	withdrawn	2019-11-07 17:20:34	
R2-1915632	Clarification of submission of	Ericsson	withdrawn	2019-11-07 17:20:34	
R2-1915633	Correction to early measurement	Ericsson	withdrawn	2019-11-07 17:20:37	
R2-1915634	Correction to maximum number of carriers for idle mode	Ericsson	withdrawn	2019-11-07 17:20:39	
R2-1915635	Correction on reestablishRLC and	Ericsson	withdrawn	2019-11-07 17:20:41	
R2-1915636	Ambiguities in channel bandwidth	Ericsson	withdrawn	2019-11-07 17:20:43	
R2-1915637	Full configuration in inter-RAT	Google Inc.	not treated	2019-11-07 17:25:02	2019-11-08 03:12:04
R2-1915638	Formula for mapping UE to WUS group	ZTE Corporation, Sanechips	available	2019-11-07 17:25:10	2019-11-08 06:24:16
R2-1915639	Configuration details for WUS grouping	ZTE Corporation, Sanechips	available	2019-11-07 17:36:22	2019-11-08 06:29:39
R2-1915640	Unresolved issues for BFR on	Ericsson	available	2019-11-07 17:39:21	2019-11-08 07:19:11
R2-1915641	BFR MAC CE for SpCell	Ericsson	available	2019-11-07 17:39:21	2019-11-08 07:19:11
R2-1915642	Addition of indication for successful	Ericsson	not treated	2019-11-07 17:39:21	2019-11-07 19:28:01
R2-1915643	New BSR trigger for EN-DC	Ericsson	available	2019-11-07 17:39:23	2019-11-07 19:28:01
R2-1915644	Introduction of Additional SRS	Ericsson	postponed	2019-11-07 17:39:23	2019-11-07 19:28:01
R2-1915645	Draft LS on S-KgNB/KSN Derivation in Conditional PSCell	Futurewei	available	2019-11-07 17:51:03	2019-11-08 05:05:20
R2-1915646	Use case and Signaling for RSS	Ericsson	available	2019-11-07 17:51:13	2019-11-07 22:43:55
R2-1915647	New SIB for hosting posSI	Ericsson	available	2019-11-07 17:51:13	2019-11-07 22:43:55
R2-1915648	Quality Report in eMTC Remaining	Ericsson	available	2019-11-07 17:51:13	2019-11-07 22:43:55
R2-1915649	RSS Signalling Configuration	Ericsson	available	2019-11-07 17:51:13	2019-11-07 22:43:55
R2-1915650	Remaining Issues for ANR	Ericsson	available	2019-11-07 17:51:13	2019-11-07 22:43:55

R2-1915651	Additional path reporting for downlink NR positioning measurements	Ericsson, T-Mobile, Nokia, Nokia Shanghai Bell, Deutsche	revised	2019-11-07 17:51:13	2019-11-07 22:43:55
R2-1915652	LPP, RRC and UE Rx-Tx Aspects of NR RAT dependent positioning	Ericsson	noted	2019-11-07 17:51:13	2019-11-07 22:43:55
R2-1915653	Corrections of terminology for	Ericsson	agreed	2019-11-07 17:51:13	2019-11-07 22:43:55
R2-1915654	GNSS Integer Ambiguity Level Indications	Ericsson, Swift Navigation,ESA	noted	2019-11-07 17:51:14	2019-11-07 22:43:55
R2-1915655	Corrections for Positioning	Ericsson	agreed	2019-11-07 17:51:14	2019-11-07 22:43:55
R2-1915656	On Demand Delivery of Positioning	Ericsson	available	2019-11-07 17:51:15	2019-11-07 22:43:55
R2-1915657	Specify UDC Header is part of Data Field	Ericsson, Samsung, Nokia, Nokia Shanghai Bell, Huawei,	agreed	2019-11-07 17:51:15	2019-11-07 22:43:55
R2-1915658	UE-based configuration options	Ericsson	available	2019-11-07 17:51:17	2019-11-07 22:43:55
R2-1915659	System support for NB-IoT Paging across Multiple Carriers	VODAFONE Group Plc	postponed	2019-11-07 17:52:24	2019-11-07 18:56:48
R2-1915660	Miscellaneous non-controversial	Ericsson	withdrawn	2019-11-07 17:52:32	
R2-1915661	Presence and absence of TAC in	Ericsson	withdrawn	2019-11-07 17:52:34	
R2-1915662	Definition of NR standalone	Ericsson	withdrawn	2019-11-07 17:52:35	
R2-1915663	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai	revised	2019-11-07 17:52:36	2019-11-07 23:12:33
R2-1915664	Correction to channelBWs	Ericsson	revised	2019-11-07 17:52:38	2019-11-07 23:12:33
R2-1915665	Rel-16 RRC planning	Ericsson	endorsed	2019-11-07 17:52:39	2019-11-07 23:12:33
R2-1915666	Clarification of submission of	Ericsson	not treated	2019-11-07 17:52:39	2019-11-07 23:12:33
R2-1915667	Correction to early measurement	Ericsson	revised	2019-11-07 17:52:41	2019-11-07 23:12:33
R2-1915668	Correction to maximum number of carriers for idle mode	Ericsson	not pursued	2019-11-07 17:52:42	2019-11-07 23:12:33
R2-1915669	Correction on reestablishRLC and	Ericsson	merged	2019-11-07 17:52:43	2019-11-07 23:12:33
R2-1915670	Ambiguities in channel bandwidth	Ericsson	noted	2019-11-07 17:52:44	2019-11-08 07:08:51
R2-1915671	Miscellaneous non-controversial	Ericsson	revised	2019-11-07 17:54:17	2019-11-07 23:12:33
R2-1915672	Presence and absence of TAC in	Ericsson	agreed	2019-11-07 17:54:19	2019-11-07 23:12:33
R2-1915673	Definition of NR standalone	Ericsson	revised	2019-11-07 17:54:21	2019-11-07 23:12:33
R2-1915674	CR to 36.306 - On explicit NR FR1 related CGI reporting capability	Ericsson	not pursued	2019-11-07 17:57:04	2019-11-07 18:06:03
R2-1915675	CR to 36.331 - On explicit NR FR1 related CGI reporting capability	Ericsson	not treated	2019-11-07 17:57:05	2019-11-07 18:06:03
R2-1915676	CR to 38.306 - On NR CGI	Ericsson	merged	2019-11-07 17:57:07	2019-11-07 18:06:03
R2-1915677	CR to 38.331 - On NR CGI	Ericsson	not treated	2019-11-07 17:57:09	2019-11-07 18:06:03
R2-1915678	System support for NB-IoT Paging across Multiple Carriers	VODAFONE Group Plc	not treated	2019-11-07 17:59:00	2019-11-07 18:56:48
R2-1915679	Network control for non-BL UE in BR mode	ZTE Corporation, Sanechips	available	2019-11-07 18:23:21	2019-11-08 05:52:32
R2-1915680	Introducing multiple BC-FS	Ericsson	not treated	2019-11-07 18:24:49	2019-11-07 19:52:33
R2-1915681	Returning multiple BC+FS in CG-	Ericsson	available	2019-11-07 18:24:51	2019-11-07 19:52:33
R2-1915682	Correction to Feature Set Combination and Band combination	Ericsson	revised	2019-11-07 18:24:51	2019-11-07 19:52:33
R2-1915683	Security requirements for split	Ericsson,	revised	2019-11-07 18:24:53	2019-11-07 19:52:32
R2-1915684	Use of splitSRB-WithOneUL-Path	Ericsson	revised	2019-11-07 18:24:55	2019-11-07 19:52:32
R2-1915685	Use of splitSRB-WithOneUL-Path	Ericsson	not treated	2019-11-07 18:24:56	2019-11-07 19:52:32
R2-1915686	Use of splitSRB-WithOneUL-Path	Ericsson	noted	2019-11-07 18:24:58	2019-11-07 19:52:32
R2-1915687	Open issues for supended SCG	Ericsson	noted	2019-11-07 18:24:58	2019-11-07 19:52:32
R2-1915688	Configuration of dormancy	Ericsson	noted	2019-11-07 18:24:58	2019-11-07 19:52:32
R2-1915689	Correction to pdsch-RepetitionMultiSlots and pusch-	Ericsson	agreed	2019-11-07 18:24:58	2019-11-07 19:52:32
R2-1915690	Running CR for the introduction of	Ericsson	available	2019-11-07 18:34:06	2019-11-07 22:43:55
R2-1915691	Remaining issues for accurate reference time delivery	Nokia, Nokia Shanghai Bell	noted	2019-11-07 19:01:41	2019-11-08 07:38:44
R2-1915692	CG/SPS alignment with TSN periodicity	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 20:51:46
R2-1915693	Further discussion on CG periodicities and CG and SPS	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 20:51:46
R2-1915694	SPS collisions with multiple SPS configurations	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 20:51:46

R2-1915695	Padding removal	Nokia, Nokia Shanghai Bell, vivo, OPPO, Mediatek,	revised	2019-11-07 19:01:41	2019-11-07 20:51:46
R2-1915696	Joint IP and Ethernet Header compression	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 20:51:46
R2-1915697	Ethernet Header compression profiles	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 20:51:46
R2-1915698	Further details of feedback mechanism	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 20:51:46
R2-1915699	Route priority and local routing	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 21:33:46
R2-1915700	BH link failure handling	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 21:33:46
R2-1915701	Remaining issues of routing and bearer mapping configuration in IAB	Nokia, Nokia Shanghai Bell,	noted	2019-11-07 19:01:41	2019-11-08 07:35:40
R2-1915702	Remaining issues of routing and bearer mapping configuration in IAB	Nokia, Nokia Shanghai Bell	noted	2019-11-07 19:01:41	2019-11-07 21:33:46
R2-1915703	RAN2 aspects of F1AP over LTE signalling	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-07 21:33:46
R2-1915704	[DRAFT] LS on F1AP over LTE leg signalling for IAB	Nokia, Nokia Shanghai Bell	revised	2019-11-07 19:01:41	2019-11-07 21:33:46
R2-1915705	Routing ID design for uplink	Nokia, Nokia Shanghai Bell	available	2019-11-07 19:01:41	2019-11-13 10:15:47
R2-1915706	Remaining issues regarding UE assistance information	Samsung Telecommunicati	noted	2019-11-07 19:38:39	2019-11-07 23:50:20
R2-1915707	Correction of UE assistance information	Samsung Telecommunicati	revised	2019-11-07 19:38:39	2019-11-07 23:50:20
R2-1915708	Correction of UE assistance information	Samsung Telecommunicati	revised	2019-11-07 19:38:40	2019-11-07 23:50:20
R2-1915709	Clarification regarding QoS handling in MRDC with 5G CN	Samsung Telecommunicati	revised	2019-11-07 19:38:41	2019-11-08 07:31:45
R2-1915710	Clarification regarding inter-node transfer of UE capability containers	Samsung Telecommunicati	revised	2019-11-07 19:38:43	2019-11-08 07:31:45
R2-1915711	Adding comment to avoid improper extension of per BC capabilities for	Samsung Telecommunicati	not pursued	2019-11-07 19:38:44	2019-11-08 07:31:45
R2-1915712	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	noted	2019-11-07 19:42:12	2019-11-08 07:25:17
R2-1915713	[Draft] Reply LS on Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	revised	2019-11-07 19:42:13	2019-11-08 07:25:17
R2-1915714	Too strong interference during CLI-RSSI measurement	Qualcomm Incorporated	available	2019-11-07 19:42:13	2019-11-08 07:25:17
R2-1915715	Report of [107bis#58]CLI measurements UE capabilities	Qualcomm Incorporated	noted	2019-11-07 19:42:13	2019-11-09 07:24:03
R2-1915716	Introduction of Cross Link Interference (CLI) handling and	Qualcomm Incorporated	endorsed	2019-11-07 19:42:13	2019-11-08 07:35:09
R2-1915717	Introduction of Rel-16 eMTC enhancements	Qualcomm Incorporated	revised	2019-11-07 19:42:13	2019-11-08 07:25:17
R2-1915718	Discussion on reply LS from SA2 on MT-EDT	Qualcomm Incorporated	available	2019-11-07 19:42:13	2019-11-08 07:25:17
R2-1915719	[DRAFT] Reply LS on Mobile-terminated Early Data Transmission	Qualcomm Incorporated	revised	2019-11-07 19:42:13	2019-11-08 07:25:17
R2-1915720	MT-EDT related Editor's Notes and FFSes in RRC running CR	Qualcomm Incorporated	available	2019-11-07 19:42:13	2019-11-08 07:25:17
R2-1915721	PUR related Editor's Notes and FFSes in RRC running CR	Qualcomm Incorporated	noted	2019-11-07 19:42:13	2019-11-08 07:25:17
R2-1915722	Correction to field conditions in NE-DC	Ericsson	agreed	2019-11-07 19:45:35	2019-11-07 19:52:33
R2-1915723	Hop-by-Hop Flow control for IAB	Futurewei Technologies	noted	2019-11-07 19:52:46	2019-11-08 03:52:49
R2-1915724	SLRB configuration during UE state	Intel Corporation	available	2019-11-07 19:53:54	2019-11-08 05:02:49
R2-1915725	Support of non-standardized PQI in	Intel Corporation	available	2019-11-07 19:53:54	2019-11-08 05:02:49
R2-1915726	Remaining aspects for SL RLC	Intel Corporation	available	2019-11-07 19:53:54	2019-11-08 05:02:49

R2-1915727	On the support of simultaneous configuration of mode1 and mode2	Intel Corporation	available	2019-11-07 19:53:54	2019-11-08 05:02:49
R2-1915728	Remaining aspects for SL PDCP	Intel Corporation	available	2019-11-07 19:53:54	2019-11-08 05:02:49
R2-1915729	UE capabilities for features	Intel Corporation	available	2019-11-07 19:53:54	2019-11-08 05:02:49
R2-1915730	Remaining issues for early measurements upon UE mobility	Samsung Telecommunicati	noted	2019-11-07 19:55:57	2019-11-08 08:30:00
R2-1915731	Resumption based on early measurement results	Samsung Telecommunicati	available	2019-11-07 19:55:57	2019-11-08 08:38:38
R2-1915732	Immediate MDT, inter-node aspects	Samsung Telecommunicati	available	2019-11-07 19:55:57	2019-11-07 23:50:20
R2-1915733	Logged MDT, inter-node aspects (SN configuration)	Samsung Telecommunicati	available	2019-11-07 19:55:57	2019-11-08 11:13:25
R2-1915734	MDT for early measurments (Logged, immediate)	Samsung Telecommunicati	available	2019-11-07 19:55:57	2019-11-07 23:50:20
R2-1915735	Review of UE information in NR, alignment and harmonisation	Samsung Telecommunicati	reserved	2019-11-07 19:55:57	
R2-1915736	CHO configuration/ execution, remaining aspects	Samsung Telecommunicati	available	2019-11-07 19:55:57	2019-11-08 12:54:09
R2-1915737	Main issues remaining for SN initiated SN change	Samsung Telecommunicati	revised	2019-11-07 19:55:57	2019-11-08 11:26:53
R2-1915738	Capability coordination for DAPS, required UE capability details and	Samsung Telecommunicati	available	2019-11-07 19:55:57	2019-11-08 08:30:00
R2-1915739	Further considerations on mobility	Intel Corporation	available	2019-11-07 19:58:47	2019-11-08 04:37:49
R2-1915740	Configured grant confirmation MAC	Intel Corporation	available	2019-11-07 19:58:47	2019-11-08 04:37:49
R2-1915741	TSC assistance information	Intel Corporation	available	2019-11-07 19:58:47	2019-11-08 04:37:49
R2-1915742	Intra UE prioritization of UL Data	Intel Corporation	available	2019-11-07 19:58:47	2019-11-08 04:37:49
R2-1915743	RRC Connection	Intel Corporation	noted	2019-11-07 19:58:47	2019-11-08 04:37:49
R2-1915744	Benefits of inter-IAB node metric	AT&T	noted	2019-11-07 20:00:41	2019-11-08 03:53:32
R2-1915745	Remaining details of F1AP over LTE	AT&T, KDDI, LG, ZTE, Verizon, KT	available	2019-11-07 20:00:41	2019-11-08 03:53:32
R2-1915746	CR to 36.331 for F1AP over LTE	AT&T, KDDI, LG, ZTE, Verizon, KT	available	2019-11-07 20:00:41	2019-11-08 03:53:32
R2-1915747	CR to 38.331 for F1AP over LTE	AT&T, KDDI, LG, ZTE, Verizon, KT	available	2019-11-07 20:00:41	2019-11-08 03:53:33
R2-1915748	UL BAP address and BAP path ID	AT&T	available	2019-11-07 20:00:41	2019-11-08 03:53:33
R2-1915749	Control of pre-emptive SR/BSR functionality for low-latency	AT&T	noted	2019-11-07 20:00:41	2019-11-08 03:53:33
R2-1915750	Consideration of IAB features that may potentially require security	AT&T	available	2019-11-07 20:00:41	2019-11-08 03:53:33
R2-1915751	Further Pre-configured UL	Sierra Wireless,	available	2019-11-07 20:03:56	2019-11-08 03:20:28
R2-1915752	Report on Email discussion [107bis#84][NR MDT] MR DC	Ericsson	noted	2019-11-07 20:04:22	2019-11-08 00:33:02
R2-1915753	Mobility history information	Ericsson	available	2019-11-07 20:04:22	2019-11-08 00:33:02
R2-1915754	Logged MDT Configuration & Reporting handling in DC scenarios	Ericsson	available	2019-11-07 20:04:22	2019-11-08 00:33:02
R2-1915755	Leftover issues for Logged MDT in	Ericsson	noted	2019-11-07 20:04:22	2019-11-08 00:33:02
R2-1915756	CR on introducing UE capability for	Ericsson	not treated	2019-11-07 20:04:22	2019-11-08 00:33:02
R2-1915757	UE Location Report capability	Ericsson	available	2019-11-07 20:04:25	2019-11-08 00:33:02
R2-1915758	Maximum processing time for	Ericsson	available	2019-11-07 20:04:25	2019-11-08 00:33:02
R2-1915759	Remaining aspects on Capability	Ericsson	noted	2019-11-07 20:04:25	2019-11-08 00:33:02
R2-1915760	Introduction of RRC Segmentation - Downlink	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated,	not treated	2019-11-07 20:04:25	2019-11-08 00:33:02
R2-1915761	Introduction of RRC Segmentation - Downlink	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated,	not treated	2019-11-07 20:04:27	2019-11-08 00:33:02

R2-1915762	Segmentation in DL	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, Verizon, KT, Sprint, Charter Communications,	noted	2019-11-07 20:04:28	2019-11-08 00:33:02
R2-1915763	Introduction of RRC Segmentation - Downlink	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated,	not treated	2019-11-07 20:04:28	2019-11-08 00:33:02
R2-1915764	Introduction of RRC Segmentation - Downlink	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated,	not treated	2019-11-07 20:04:30	2019-11-08 00:33:02
R2-1915765	Remaining details of UL LBT failure mechanism	Qualcomm Incorporated	noted	2019-11-07 20:47:54	2019-11-08 06:06:07
R2-1915766	Issue of loop topology after RLF	SHARP	available	2019-11-07 20:59:25	2019-11-07 23:29:48
R2-1915767	Validity of CHO configurations	SHARP	noted	2019-11-07 21:01:25	2019-11-07 23:29:48
R2-1915768	RLC aspects of DAPS handover	Ericsson	available	2019-11-07 21:05:20	2019-11-07 22:34:06
R2-1915769	Reception type for ETWS/CMAS for non-BL UE in CE in	Ericsson	available	2019-11-07 21:07:03	2019-11-07 23:43:35
R2-1915770	Conditional measurement	InterDigital	available	2019-11-07 21:14:52	2019-11-07 21:53:36
R2-1915771	Further considerations for the WUS	InterDigital	available	2019-11-07 21:14:58	2019-11-07 21:53:36
R2-1915772	RRC release assistance for Control and User Plane CIoT EPS	Ericsson	available	2019-11-07 21:45:02	2019-11-08 01:04:56
R2-1915773	Discussion on RLC bi-directional	Apple	available	2019-11-07 21:46:48	2019-11-08 05:14:46
R2-1915774	Discussion on remaining issues on	Apple	available	2019-11-07 21:46:48	2019-11-08 05:14:46
R2-1915775	Discussion on HARQ feedback for	Apple	available	2019-11-07 21:46:48	2019-11-08 05:14:46
R2-1915776	Draft Reply LS on Sidelink HARQ	Apple	available	2019-11-07 21:46:48	2019-11-08 05:14:46
R2-1915777	UE Mobility for Simultaneous Mode	Apple	available	2019-11-07 21:46:48	2019-11-08 05:14:46
R2-1915778	Resource allocations for UEs with simultaneous mode 1 & mode 2	Apple	available	2019-11-07 21:46:48	2019-11-08 05:14:46
R2-1915779	Discussion on SLRB configuration	Apple	available	2019-11-07 21:46:49	2019-11-08 05:14:46
R2-1915780	On-demand system information and dedicated signalling	MediaTek Inc., Ericsson	available	2019-11-07 21:47:47	2019-11-08 04:53:39
R2-1915781	Introduction of RACS [36.300]	MediaTek Inc.	endorsed	2019-11-07 21:50:23	2019-11-08 04:53:39
R2-1915782	RRC release assistance for Control and User Plane CIoT EPS	Ericsson	withdrawn	2019-11-07 21:51:00	
R2-1915783	Further details on Backhaul link RLF Notification Types to	Ericsson	available	2019-11-07 21:52:02	2019-11-07 21:55:24
R2-1915784	Introduction of RACS [38.300]	MediaTek Inc.	endorsed	2019-11-07 21:53:06	2019-11-08 04:53:39
R2-1915785	Processing time for segmented UE	MediaTek Inc.	noted	2019-11-07 21:54:41	2019-11-08 04:53:39
R2-1915786	2-step RA 38.331 Running CR	Ericsson (Email disc rapporteur)	endorsed	2019-11-07 21:55:34	2019-11-07 21:59:49
R2-1915787	Report on email [107bis#77][2-step RACH] RRC details and running	Ericsson (Email disc rapporteur)	noted	2019-11-07 21:55:34	2019-11-07 21:59:49
R2-1915788	Report for email discussion [107bis#64][PRN] Suitable and	Qualcomm Incorporated	noted	2019-11-07 21:57:36	2019-11-07 22:03:34
R2-1915789	Introduction of UECapabilityInformation segmentation in 36.331	MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO,	available	2019-11-07 21:58:03	2019-11-08 04:53:39
R2-1915790	Work plan for RACS-RAN work	MediaTek Inc.,	noted	2019-11-07 22:00:01	2019-11-08 04:53:39
R2-1915791	Support (or not) of PC5-RRC for	MediaTek Inc.	noted	2019-11-07 22:01:33	2019-11-08 04:53:39
R2-1915792	Capturing RLM for NR sidelink in	MediaTek Inc.	available	2019-11-07 22:03:16	2019-11-08 04:53:39
R2-1915793	RLM and state modelling based on	MediaTek Inc.	available	2019-11-07 22:04:47	2019-11-08 04:53:39

R2-1915794	Early security re-activation	Ericsson, LG electronics Inc, Sierra Wireless, Qualcomm Inc	noted	2019-11-07 22:05:11	2019-11-08 06:33:22
R2-1915795	Early security re-activation at RRC Connection Resume - Alternative 1	Ericsson, LG Electronics Inc, Sierra Wireless, Qualcomm Inc	not treated	2019-11-07 22:05:11	2019-11-08 06:33:22
R2-1915796	Early security re-activation at RRC Connection Resume - Alternative 2	Ericsson, LG Electronics, Sierra Wireless, Qualcomm Inc	not treated	2019-11-07 22:05:13	2019-11-08 06:33:22
R2-1915797	Early security re-activation at RRC Connection Resume	Ericsson, LG Electronics Inc, Sierra Wireless, Qualcomm Inc.	not treated	2019-11-07 22:05:14	2019-11-08 06:33:22
R2-1915798	Asynchronous synchronisation	MediaTek Inc.	available	2019-11-07 22:06:41	2019-11-08 04:53:39
R2-1915799	Validity areas based on cell lists	MediaTek Inc.	available	2019-11-07 22:07:52	2019-11-08 04:53:39
R2-1915800	Running 38.304 CR for PRN	Qualcomm Incorporated	available	2019-11-07 22:09:34	2019-11-07 22:18:44
R2-1915801	Group WUS	Ericsson	available	2019-11-07 22:15:24	2019-11-08 01:02:42
R2-1915802	Adapting the BFD mechanism for consistent LBT failure detection	Google Inc.	available	2019-11-07 22:18:37	2019-11-08 00:40:26
R2-1915803	CAPC for configured grants in NR-	Google Inc.	available	2019-11-07 22:20:31	2019-11-08 00:40:26
R2-1915804	Draft Reply LS on Sending CAG ID in NAS layer	Qualcomm Incorporated	revised	2019-11-07 22:26:13	2019-11-07 22:29:33
R2-1915805	Support for NPN HRNN broadcast	Qualcomm Incorporated	available	2019-11-07 22:31:23	2019-11-07 22:33:20
R2-1915806	System support for Wake Up Signal	VODAFONE Group Plc	not treated	2019-11-07 22:33:16	2019-11-07 22:42:17
R2-1915807	Views on cell reselection for CAGs	Qualcomm Incorporated	available	2019-11-07 22:34:28	2019-11-07 22:37:42
R2-1915808	Extended MAC CE ID	Qualcomm Incorporated	available	2019-11-07 22:45:23	2019-11-07 22:47:08
R2-1915809	RoHC and EHC configuration on same PDCP entity	Qualcomm Incorporated	available	2019-11-07 22:57:07	2019-11-07 22:58:41
R2-1915810	Draft LS on need for Ethernet padding compression	Qualcomm Incorporated	revised	2019-11-07 23:02:43	2019-11-07 23:04:28
R2-1915811	Views on handling of PDUs and data of deprioritized grants	Qualcomm Incorporated	available	2019-11-07 23:08:56	2019-11-07 23:10:59
R2-1915812	Discussion of RAN1 LS on propagation delay compensation	Qualcomm Incorporated	noted	2019-11-07 23:12:35	2019-11-07 23:15:22
R2-1915813	Feedback Frame Format for EHC and CIoT link	Qualcomm Incorporated	noted	2019-11-07 23:21:51	2019-11-07 23:24:00
R2-1915814	More granularity for PDCP discardTimer	Qualcomm Incorporated,	available	2019-11-07 23:26:56	2019-11-07 23:29:11
R2-1915815	PDCP duplication enhancements and RLC AM	Qualcomm Incorporated	available	2019-11-07 23:36:39	2019-11-07 23:38:43
R2-1915816	Discussion on multiple configured	OPPO	available	2019-11-07 23:43:10	2019-11-08 01:43:59
R2-1915817	Views on UE autonomous transmission using CG	Qualcomm Incorporated	noted	2019-11-07 23:43:56	2019-11-07 23:45:17
R2-1915818	MAC CE structure for PDCP duplication enhancement	Qualcomm Incorporated	available	2019-11-07 23:47:24	2019-11-07 23:52:35
R2-1915819	Coexistence of measurement relaxation and early measurements	LG Electronics, Ericsson,	available	2019-11-07 23:48:35	2019-11-08 05:15:03
R2-1915820	RRM measurement relaxation	LG Electronics	available	2019-11-07 23:48:35	2019-11-08 05:15:03
R2-1915821	Considerations on validity area in NR	LG Electronics	available	2019-11-07 23:48:35	2019-11-08 05:15:03
R2-1915822	Handling early measurement results upon cell reselection	LG Electronics	available	2019-11-07 23:48:35	2019-11-08 05:15:03
R2-1915823	Remaining issues on early measurement configuration	LG Electronics	available	2019-11-07 23:48:35	2019-11-08 05:15:03
R2-1915824	Cell identification information in	LG Electronics	available	2019-11-07 23:48:35	2019-11-08 05:15:03
R2-1915825	Left issue on LCP for NR V2X	OPPO	available	2019-11-07 23:50:05	2019-11-08 01:43:59
R2-1915826	Left issues on SR and BSR	OPPO	available	2019-11-07 23:55:21	2019-11-08 01:43:59

R2-1915827	Views on SPS collisions and some CG issues	Qualcomm Incorporated	available	2019-11-07 23:55:38	2019-11-07 23:57:20
R2-1915828	Simultaneous use of mode 1 and	KT Corp.	available	2019-11-08 00:00:41	2019-11-08 00:09:16
R2-1915829	Open issues on system information	OPPO	available	2019-11-08 00:02:51	2019-11-08 01:43:59
R2-1915830	MAC prioritization for Intra-UE prioritization	Qualcomm Incorporated	noted	2019-11-08 00:05:23	2019-11-08 00:06:56
R2-1915831	Value of UE-based PDCP duplication	Qualcomm Incorporated	available	2019-11-08 00:09:26	2019-11-08 00:11:35
R2-1915832	Clarification on candidate NR	NTT DOCOMO,	postponed	2019-11-08 00:25:09	2019-11-08 06:39:56
R2-1915833	Discussion on Scell handling for	Huawei, HiSilicon	available	2019-11-08 00:34:24	2019-11-08 04:19:36
R2-1915834	Correction on Scell handling for CA	Huawei, HiSilicon	not treated	2019-11-08 00:34:24	2019-11-08 04:19:36
R2-1915835	Correction on Scell handling for CA	Huawei, HiSilicon	not treated	2019-11-08 00:34:27	2019-11-08 04:19:36
R2-1915836	Correction on Scell handling for CA	Huawei, HiSilicon	not treated	2019-11-08 00:34:29	2019-11-08 04:19:36
R2-1915837	Correction to the handling of stored AS context upon CN type change	Huawei, HiSilicon	merged	2019-11-08 00:34:31	2019-11-08 04:19:36
R2-1915838	Correction on RRC_INACTIVE state	Huawei, HiSilicon	revised	2019-11-08 00:34:35	2019-11-08 04:19:09
R2-1915839	Discussion on segment number for	Huawei, HiSilicon	noted	2019-11-08 00:34:36	2019-11-08 04:19:09
R2-1915840	Technical considerations on new	Huawei, HiSilicon	noted	2019-11-08 00:34:37	2019-11-08 04:19:09
R2-1915841	Discussion on potential impacts to other WGs due to new QMC	Huawei, HiSilicon	available	2019-11-08 00:34:37	2019-11-08 04:19:09
R2-1915842	Report of email discussion 107b-51	Huawei	noted	2019-11-08 00:34:37	2019-11-08 04:19:09
R2-1915843	Correction on non-3GPP paging	Huawei, HiSilicon	revised	2019-11-08 00:34:37	2019-11-08 04:19:09
R2-1915844	Discussion on configuration aspect for CHO	Huawei, HiSilicon, China	available	2019-11-08 00:34:39	2019-11-08 04:20:04
R2-1915845	Discussion on execution aspect for CHO	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:04
R2-1915846	Discussion on combination of simultaneous connectivity and	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:04
R2-1915847	Discussion on MN initiated	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:04
R2-1915848	Discussion on conditional PScell	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:04
R2-1915849	Draft LS to RAN3 on conditional	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:04
R2-1915850	Report of email discussion	Huawei	noted	2019-11-08 00:34:39	2019-11-11 13:28:48
R2-1915851	Running 38.331 CR for introducing	Huawei, Ericsson	endorsed	2019-11-08 00:34:39	2019-11-11 13:28:48
R2-1915852	Discussion on open issues for	Huawei, HiSilicon	noted	2019-11-08 00:34:39	2019-11-08 04:20:54
R2-1915853	Discussion on logging NR neighbour cell measurements for	Huawei, HiSilicon, CMCC	noted	2019-11-08 00:34:39	2019-11-08 04:20:54
R2-1915854	Introduction of NR neighbour cell measurements for LTE MDT and	Huawei, HiSilicon, CMCC	available	2019-11-08 00:34:39	2019-11-08 04:20:54
R2-1915855	Discussion on remaining aspects on logged MDT and Accessibility	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:54
R2-1915856	Discussion on remaining aspects	Huawei, HiSilicon	postponed	2019-11-08 00:34:39	2019-11-08 04:20:54
R2-1915857	Discussion on remaining aspects on MDT and mobility history	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:32
R2-1915858	Discussion on delay measurement	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:32
R2-1915859	Discussion on SA5 defined measurements for the immediate	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:32
R2-1915860	Discussion on the throughput	Huawei, HiSilicon	available	2019-11-08 00:34:39	2019-11-08 04:20:32
R2-1915861	Discussion on remaining aspects	Huawei, HiSilicon	available	2019-11-08 00:34:40	2019-11-08 04:20:32
R2-1915862	Remaining issues in PDCP	LG Electronics	available	2019-11-08 00:37:57	2019-11-08 01:00:16
R2-1915863	Handling of DRB integrity	LG Electronics	available	2019-11-08 00:37:57	2019-11-08 01:00:16
R2-1915864	Handling of EHC protocol at PDCP	LG Electronics	available	2019-11-08 00:37:58	2019-11-08 01:00:16
R2-1915865	Latency reduction enhancements for SCG RACH procedure	Qualcomm Incorporated	available	2019-11-08 00:38:14	2019-11-08 05:47:46
R2-1915866	Enhancements to PUCCH-UCI and	Ericsson	noted	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915867	Remaining issues on Configured	Ericsson	noted	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915868	Channel access priority for	Ericsson	available	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915869	DRX enhancement for NR-U	Ericsson	available	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915870	Handling consistent UL LBT	Ericsson	available	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915871	RACH enhancements for NR-U	Ericsson	noted	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915872	2-step Random Access for NR-U	Ericsson	available	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915873	Running MAC CR for NR-U	Ericsson	endorsed	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915874	Rapporteur input on Running MAC	Ericsson	noted	2019-11-08 00:39:52	2019-11-08 00:52:56
R2-1915875	Introduction of wideband PRG size	Huawei, HiSilicon	postponed	2019-11-08 00:44:31	2019-11-08 03:05:05

R2-1915876	Introduction of wideband PRG size	Huawei, HiSilicon	postponed	2019-11-08 00:44:32	2019-11-08 03:05:05
R2-1915877	UDC reconfiguration for RRC connection re-establishment case	Huawei, HiSilicon	postponed	2019-11-08 00:44:33	2019-11-08 03:05:05
R2-1915878	Discussion on DL MIMO efficiency	Huawei, HiSilicon	noted	2019-11-08 00:44:35	2019-11-08 03:05:05
R2-1915879	Introduction of DL MIMO efficiency	Huawei, HiSilicon	revised	2019-11-08 00:44:35	2019-11-08 03:05:05
R2-1915880	Introduction of DL MIMO efficiency	Huawei, HiSilicon	revised	2019-11-08 00:44:36	2019-11-08 03:05:05
R2-1915881	Introduction of cross link interfernce	Huawei, HiSilicon	revised	2019-11-08 00:44:38	2019-11-08 03:05:05
R2-1915882	Introduction of cross link interfernce	Huawei, HiSilicon	available	2019-11-08 00:44:39	2019-11-08 03:05:05
R2-1915883	Improvements for non-BL UEs	Apple (UK)	noted	2019-11-08 00:48:19	2019-11-08 00:52:34
R2-1915884	Missing RACH aspect for DC	Nokia, Nokia Shanghai Bell, ZTE Corporation	revised	2019-11-08 00:49:43	2019-11-08 02:11:37
R2-1915885	UL LBT failure detection	Nokia, Nokia Shanghai Bell, InterDigital,	noted	2019-11-08 00:49:45	2019-11-08 02:11:37
R2-1915886	UL LBT failure report	Nokia, Nokia Shanghai Bell	available	2019-11-08 00:49:45	2019-11-08 02:11:37
R2-1915887	Multiple configured grants for NR-U	Nokia, Nokia Shanghai Bell	noted	2019-11-08 00:49:45	2019-11-08 02:11:37
R2-1915888	LCP restriction for SRBs	Nokia, Nokia Shanghai Bell, Futurewei, Interdigital, Huawei,	noted	2019-11-08 00:49:45	2019-11-08 02:11:37
R2-1915889	Stage-2 running CR for 2-step RACH	Nokia (rapporteur),	endorsed	2019-11-08 00:49:45	2019-11-08 02:11:37
R2-1915890	Clarification for aggregated bandwidth for overheating	Huawei, HiSilicon,	agreed	2019-11-08 00:54:47	2019-11-08 05:00:15
R2-1915891	Clarification on the feature set	Huawei, HiSilicon	agreed	2019-11-08 00:54:49	2019-11-08 05:00:15
R2-1915892	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331)	Huawei, HiSilicon	postponed	2019-11-08 00:54:50	2019-11-08 05:00:15
R2-1915893	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306)	Huawei, HiSilicon	postponed	2019-11-08 00:54:51	2019-11-08 05:00:15
R2-1915894	On the RAN2 signalling support for new introduced channel bandwidth	Huawei, HiSilicon	available	2019-11-08 00:54:52	2019-11-08 05:00:15
R2-1915895	CR to 38.331 on support of 70MHz channel bandwidth -option1 with	Huawei, HiSilicon,	revised	2019-11-08 00:54:52	2019-11-08 05:00:15
R2-1915896	CR to 38.306 on support of 70MHz channel bandwidth -option1 with	Huawei, HiSilicon,	revised	2019-11-08 00:54:53	2019-11-08 05:00:15
R2-1915897	CR to 38.331 on support of 70MHz channel bandwidth -option2	Huawei, HiSilicon,	not treated	2019-11-08 00:54:54	2019-11-08 05:00:15
R2-1915898	CR to 38.306 on support of 70MHz channel bandwidth -option2	Huawei, HiSilicon,	not treated	2019-11-08 00:54:55	2019-11-08 05:00:15
R2-1915899	On the capability of EN-DC power	Huawei, HiSilicon	postponed	2019-11-08 00:54:57	2019-11-08 05:00:15
R2-1915900	CR to clarify the power class for	Huawei, HiSilicon	postponed	2019-11-08 00:54:57	2019-11-08 05:00:15
R2-1915901	Forward compatibility discussion on channel bandwidths parameter	Huawei, HiSilicon	available	2019-11-08 00:54:58	2019-11-08 05:00:15
R2-1915902	CR on forward compatibility for	Huawei, HiSilicon	not treated	2019-11-08 00:54:58	2019-11-08 05:00:15
R2-1915903	CR on CSI UE capabilities	Huawei, HiSilicon	postponed	2019-11-08 00:55:00	2019-11-08 06:18:52
R2-1915904	CR on CSI UE capabilities	Huawei, HiSilicon	postponed	2019-11-08 00:55:01	2019-11-08 06:18:52
R2-1915905	Corrections on PDCCH blind	Huawei, HiSilicon	agreed	2019-11-08 00:55:04	2019-11-08 05:00:15
R2-1915906	Discussion on performing ROHC	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915907	Discussion on EHC feedback	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915908	Dicussion on padding removal	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915909	When to apply the target network	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915910	Need of discard indication	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915911	Need of PDCP status report	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915912	Discussion on DAPS HO for UM	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915913	Scheduling enhancement in NTN	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915914	Extension of the LCID	LG Electronics	available	2019-11-08 01:03:31	2019-11-08 03:57:36
R2-1915915	Considerations on failure handling	Potevio	available	2019-11-08 01:04:57	2019-11-08 03:47:36
R2-1915916	Deprioritized PDU Retransmission	Apple (UK)	available	2019-11-08 01:09:12	2019-11-08 02:15:03
R2-1915917	Contents of a new CG confirmation MAC CE for multiple CG	LG Electronics Inc.	available	2019-11-08 01:09:52	2019-11-11 02:28:37
R2-1915918	Remaining issues in intra-UE	LG Electronics	available	2019-11-08 01:09:52	2019-11-11 02:28:37
R2-1915919	Measurement gap skipping for TSN	LG Electronics	available	2019-11-08 01:09:52	2019-11-11 02:28:37

R2-1915920	Additional opportunity for Msg1 in 4-	LG Electronics	available	2019-11-08 01:09:52	2019-11-11 02:28:37
R2-1915921	Dynamic DL opportunity enhancement based on channel	LG Electronics Inc.	available	2019-11-08 01:09:52	2019-11-11 02:28:37
R2-1915922	Discussion on SCell BFR	LG Electronics	available	2019-11-08 01:09:52	2019-11-11 02:28:37
R2-1915923	Enhancements of SR cancellation	LG Electronics	available	2019-11-08 01:09:52	2019-11-11 02:28:37
R2-1915924	Open Issues on PDCCH-WUS	Apple	available	2019-11-08 01:10:37	2019-11-08 04:32:53
R2-1915925	UE Assistance Information for	Apple	available	2019-11-08 01:10:37	2019-11-08 04:30:20
R2-1915926	UE Assistance Information for	Apple	available	2019-11-08 01:10:37	2019-11-08 04:30:20
R2-1915927	UE Assistance Information for MR-	Apple	available	2019-11-08 01:10:37	2019-11-08 04:30:20
R2-1915928	RAN1 Impact on MsgB Design	Apple	available	2019-11-08 01:10:37	2019-11-08 04:30:20
R2-1915929	2-Step CFRA	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915930	Further Detail on CHO Release	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915931	DAPS HO UP	Apple	withdrawn	2019-11-08 01:10:38	
R2-1915932	DRB specific DAPS HO	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915933	SCG Suspension	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915934	SCell BFR Operation	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915935	PCell BFR Operation	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915936	Positioning SIB Acquisition in	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915937	Preamble Selection for RACH	Apple	available	2019-11-08 01:10:38	2019-11-08 04:30:20
R2-1915938	Sidelink and Uplink Prioritization in	Samsung	available	2019-11-08 01:11:43	2019-11-08 04:45:46
R2-1915939	Layer2 ID and cast type in SL MAC	Samsung	available	2019-11-08 01:11:43	2019-11-08 04:45:46
R2-1915940	Discussion on V2X specific validity	Samsung	available	2019-11-08 01:11:43	2019-11-08 04:45:46
R2-1915941	TX profile for selected sidelink RAT	Samsung	available	2019-11-08 01:11:43	2019-11-08 04:45:46
R2-1915942	Some remaining issues on the UE assistance information	Xiaomi Communications	available	2019-11-08 01:12:36	2019-11-08 06:26:45
R2-1915943	Remaining Issues for PDCP Duplication Enhancements for IIOT	Apple (UK) Limited	available	2019-11-08 01:14:24	2019-11-08 02:15:03
R2-1915944	Discussion on Configuration of MCG Fast Recovery	CATT	available	2019-11-08 01:18:11	2019-11-08 03:29:28
R2-1915945	DRX enhancement for NR-U	Xiaomi Communications	available	2019-11-08 01:18:28	2019-11-08 01:31:57
R2-1915946	UE based PDCP Duplication	Apple (UK)	available	2019-11-08 01:19:13	2019-11-08 02:15:03
R2-1915947	Discussion on MT EDT support for	LG Electronics	available	2019-11-08 01:20:03	2019-11-08 05:33:38
R2-1915948	RRC message for UP CIoT 5GS	LG Electronics	available	2019-11-08 01:20:03	2019-11-11 07:05:16
R2-1915949	Report of Email discussion [106#65][R16 eMTC] UE identifier	LG Electronics UK	noted	2019-11-08 01:20:03	2019-11-11 07:05:16
R2-1915950	Draft LS on UE Identifier in UP	LG Electronics	available	2019-11-08 01:20:03	2019-11-11 07:05:16
R2-1915951	Discussion on D-PUR request and	LG Electronics	available	2019-11-08 01:20:03	2019-11-08 05:33:38
R2-1915952	Paging response usign D-PUR	LG Electronics	available	2019-11-08 01:20:03	2019-11-08 05:33:38
R2-1915953	Support for S-PUR	LG Electronics	available	2019-11-08 01:20:03	2019-11-08 05:33:38
R2-1915954	Consideration on the report of BWP information and on demand request	Beijing Xiaomi Mobile Software	available	2019-11-08 01:21:51	2019-11-08 01:31:57
R2-1915955	UE Radio Capabilities	Apple (UK)	available	2019-11-08 01:22:09	2019-11-08 02:15:03
R2-1915956	Consideration on SR transmission colliding with PUSCH transmission	Xiaomi Communications	available	2019-11-08 01:26:21	2019-11-08 01:31:57
R2-1915957	General considerations on idle and	Huawei, HiSilicon	available	2019-11-08 01:28:24	2019-11-08 02:29:56
R2-1915958	General considerations on	Huawei, HiSilicon	available	2019-11-08 01:28:24	2019-11-08 02:29:56
R2-1915959	Considerations on SI Validity	Huawei, HiSilicon	available	2019-11-08 01:28:24	2019-11-08 02:29:56
R2-1915960	DRAFT LS to SA3 on Conditional	CATT	available	2019-11-08 01:32:09	2019-11-08 06:14:44
R2-1915961	DRAFT LS to RAN3 on Conditional	CATT	available	2019-11-08 01:32:09	2019-11-08 06:14:44
R2-1915962	Report on Email Discussion [107b#52][NR MobE] Open issues	CATT	revised	2019-11-08 01:32:09	2019-11-08 06:14:44
R2-1915963	Further details of CHO	China Telecom	available	2019-11-08 01:36:59	2019-11-08 02:33:23
R2-1915964	Remaining issues on accurate	NTTDOCOMO,	available	2019-11-08 01:37:05	2019-11-08 05:48:54
R2-1915965	Handling of releasing source stacks for DAPS	China Telecommunicati	available	2019-11-08 01:41:28	2019-11-08 02:33:23
R2-1915966	Discussion on Sidelink Configured	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:48
R2-1915967	Discussion on remaining issues of	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:48
R2-1915968	Discussion on HARQ support for	Huawei, HiSilicon	noted	2019-11-08 01:45:40	2019-11-08 07:00:48
R2-1915969	Remaining issues on NR SL and	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:48
R2-1915970	Further discussion on SLRB	Huawei, HiSilicon	noted	2019-11-08 01:45:40	2019-11-08 07:00:48
R2-1915971	Remaining issues on cell	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:48
R2-1915972	SLRB configurations handling	Huawei, HiSilicon	noted	2019-11-08 01:45:40	2019-11-08 07:00:48
R2-1915973	Further details of Uu RRC	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:49
R2-1915974	Discussion on related aspects of	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:51

R2-1915975	On potential RAN2 impacts related to security design for NR SL	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:47
R2-1915976	[Draft] LS on potential RAN2 impacts related to NR SL security	Huawei	available	2019-11-08 01:45:40	2019-11-08 07:00:47
R2-1915977	Discussion on the NR sidelink	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:47
R2-1915978	Discussion about mode	Huawei, HiSilicon	available	2019-11-08 01:45:40	2019-11-08 07:00:47
R2-1915979	Running CR to 36.331 for NR V2X	Huawei, HiSilicon	endorsed	2019-11-08 01:45:40	2019-11-15 10:12:47
R2-1915980	TP on NR-V2X for TR 37.985 -	Huawei, HiSilicon	endorsed	2019-11-08 01:45:40	2019-11-08 07:00:47
R2-1915981	Summary of email discussion [107bis#96][V2X] RLC AM	Huawei (Rapporteur)	noted	2019-11-08 01:45:40	2019-11-15 05:41:52
R2-1915982	Summary of email discussion [107bis#91][V2X] - Miscellaneous	Huawei (Rapporteur)	noted	2019-11-08 01:45:40	2019-11-15 10:12:47
R2-1915983	Running CR to TS 38.331 for 5G	Huawei, HiSilicon	endorsed	2019-11-08 01:45:40	2019-11-15 10:12:47
R2-1915984	Discussion on Sidelink L3 RSRP	Huawei, HiSilicon	available	2019-11-08 01:45:41	2019-11-08 07:00:47
R2-1915985	Draft Stage-2 CR for Conditional	CATT	available	2019-11-08 01:48:47	2019-11-08 06:38:42
R2-1915986	Running CR to Introduce NR MDT for RAN Data Collection and Utilization	CMCC, Nokia, Nokia Shanghai Bell (Rapporteur)	endorsed	2019-11-08 01:48:52	2019-11-08 06:22:55
R2-1915987	Leftovers for TS 37.320 to support	CMCC	noted	2019-11-08 01:48:52	2019-11-08 06:22:55
R2-1915988	[DRAFT] LS on Logged	CMCC	revised	2019-11-08 01:48:52	2019-11-08 06:22:55
R2-1915989	Cell selection and reselection for	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915990	Access and mobility control for	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915991	CAG ID transmission during both	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915992	Draft Reply LS on CAG ID	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915993	Approaches comparison of supporting TSN periodicities of non-	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915994	Supported periodicity values for CG	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915995	Repetitions Transmission for SPS	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915996	Down selection on the PDCP	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915997	Message Mergence for fast HO	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1915998	Discussion of UL data transmission	CMCC	revised	2019-11-08 01:48:52	
R2-1915999	Left issues of the new confirmation	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1916000	Handling for CG resource collision	CMCC	available	2019-11-08 01:48:52	2019-11-08 05:57:16
R2-1916001	Discussion on impact of PDCCH-WUS on timer-based BWP	CMCC	available	2019-11-08 01:48:52	2019-11-08 03:29:29
R2-1916002	Discussion on UE assistance	CMCC	available	2019-11-08 01:48:52	2019-11-08 03:29:29
R2-1916003	Discussion on human-readable network name	China Telecommunicati	withdrawn	2019-11-08 01:50:58	
R2-1916004	Sidelink RSRP reporting	MediaTek Inc.	noted	2019-11-08 02:03:19	2019-11-08 06:07:34
R2-1916005	Sidelink RLF enhancement	MediaTek Inc.	available	2019-11-08 02:03:19	2019-11-08 06:07:34
R2-1916006	Remaining issues on user plane	LG Electronics	available	2019-11-08 02:08:37	2019-11-08 05:06:15
R2-1916007	Open issue of uplink MDBV	Huawei, HiSilicon	available	2019-11-08 02:09:52	2019-11-08 06:14:09
R2-1916008	Correction on PRACH procedure	Huawei, HiSilicon	revised	2019-11-08 02:09:52	2019-11-08 06:15:04
R2-1916009	Correction on description of BFR	Huawei, HiSilicon	not pursued	2019-11-08 02:09:53	2019-11-08 06:15:04
R2-1916010	Stopping ra-ResponseWindow for	Huawei, HiSilicon	available	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916011	Summary of [107bis#48][TEI16UP] Correction on PRACH re-	Huawei, HiSilicon	noted	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916012	Correction on autonomous RACH retransmission for SRS switching	Huawei, HiSilicon	endorsed	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916013	Remaining issues on PDU format	Huawei, HiSilicon	available	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916014	MsgA resource configuration and	Huawei, HiSilicon	available	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916015	Remaining issues on MsgB	Huawei, HiSilicon	available	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916016	Discussion on MsgB-RNTI design	Huawei, HiSilicon	available	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916017	Remaining issues on the msgA	Huawei, HiSilicon	available	2019-11-08 02:09:54	2019-11-08 06:15:04
R2-1916018	Further Discussions on Fallback	Huawei, HiSilicon	available	2019-11-08 02:09:54	2019-11-08 06:15:34
R2-1916019	Discussion on RRC configurations of L1 parameters for eURLLC	Huawei, HiSilicon	noted	2019-11-08 02:09:54	2019-11-08 06:15:34
R2-1916020	Running 38.331 CR for	Huawei, HiSilicon	revised	2019-11-08 02:09:55	2019-11-08 06:15:34
R2-1916021	Overview of MAC impacts of	Huawei, HiSilicon	noted	2019-11-08 02:09:55	2019-11-08 06:15:34
R2-1916022	Running 38.321 CR for	Huawei, HiSilicon	revised	2019-11-08 02:09:55	2019-11-08 06:15:34
R2-1916023	Running 38.300 CR for	Huawei, HiSilicon	postponed	2019-11-08 02:09:55	2019-11-08 06:15:34
R2-1916024	RNTI for msgB	LG Electronics	available	2019-11-08 02:10:54	2019-11-08 05:06:15
R2-1916025	Considerations on simultaneous	ITL	available	2019-11-08 02:14:19	2019-11-08 05:22:30
R2-1916026	Reselection to a Cell with Valid	MediaTek Inc.	noted	2019-11-08 02:15:27	2019-11-08 07:34:49
R2-1916027	Draft LS to RAN1 on RNTI for	LG Electronics	available	2019-11-08 02:16:13	2019-11-08 05:06:15
R2-1916028	Consideration on 2-step CFRA	LG Electronics	available	2019-11-08 02:17:42	2019-11-08 05:06:15

R2-1916029	Logical channel based RA type	LG Electronics	available	2019-11-08 02:18:58	2019-11-08 05:06:15
R2-1916030	Running CR to 38.300 on 5G V2X	LG Electronics	revised	2019-11-08 02:18:58	2019-11-15 09:21:19
R2-1916031	Running CR to 36.300 on 5G V2X	LG Electronics	withdrawn	2019-11-08 02:18:58	
R2-1916032	Clarification on informative timer	Huawei, HiSilicon	not treated	2019-11-08 02:23:33	2019-11-08 07:00:47
R2-1916033	Clarification on the using of	Huawei, HiSilicon	not treated	2019-11-08 02:23:34	2019-11-08 07:00:47
R2-1916034	Corrections on the PDCP	Huawei, HiSilicon	revised	2019-11-08 02:23:37	2019-11-08 07:00:47
R2-1916035	Correction on initial BWP	Huawei, HiSilicon	revised	2019-11-08 02:23:38	2019-11-08 07:00:47
R2-1916036	Remaining issues on random	ETRI	available	2019-11-08 02:24:54	2019-11-08 05:46:17
R2-1916037	Remaining issues of SCell BFR	ASUSTeK	available	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916038	Discussion on association between sidelink data and resource	ASUSTeK	available	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916039	Discussion on resource allocation for sidelink HARQ ACK/NACK	ASUSTeK	available	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916040	Discussion on traditional uplink traffic and IAB uplink traffic	ASUSTeK	available	2019-11-08 02:29:12	2019-11-08 06:27:24
R2-1916041	Handling D-PUR configuration in	ASUSTeK	available	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916042	Remaining issues of D-PUR TA	ASUSTeK	available	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916043	Buffer status indicated by BSR in	ASUSTeK	noted	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916044	Issue related to CG overridden by	ASUSTeK	revised	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916045	CG overridden	ASUSTeK	not pursued	2019-11-08 02:29:12	2019-11-08 05:07:36
R2-1916046	Release of UE assistance	OPPO	available	2019-11-08 02:30:27	2019-11-08 03:35:58
R2-1916047	Correction on RRC Resume	OPPO	not treated	2019-11-08 02:30:27	2019-11-08 03:35:58
R2-1916048	Discussion on human-readable network name	China Telecom, Huawei, HiSilicon	available	2019-11-08 02:30:29	2019-11-08 02:33:23
R2-1916049	Consideration of beam for NR OTDOA	Samsung R&D Institute UK	available	2019-11-08 02:34:00	2019-11-08 04:53:21
R2-1916050	Considerations for NR E-CID	Samsung R&D Institute UK	available	2019-11-08 02:34:00	2019-11-08 04:53:21
R2-1916051	Measurement aspects for CHO	Samsung R&D Institute UK	available	2019-11-08 02:34:00	2019-11-08 04:53:21
R2-1916052	Clarification on failure handling using CHO	Samsung R&D Institute UK	withdrawn	2019-11-08 02:34:00	
R2-1916053	Normal handover using conditional handover configuration	Samsung R&D Institute UK	available	2019-11-08 02:34:00	2019-11-08 04:53:21
R2-1916054	On the supporting of relaxed measurement state for UE power	Samsung R&D Institute UK	available	2019-11-08 02:34:00	2019-11-08 04:53:21
R2-1916055	EN-DC support in IAB	Samsung R&D Institute UK	available	2019-11-08 02:34:01	2019-11-08 04:53:21
R2-1916056	NR-DC support in IAB (signaling perspective)	Samsung R&D Institute UK	available	2019-11-08 02:34:01	2019-11-08 04:53:21
R2-1916057	Remaining issues on IAB RLF	Samsung R&D Institute UK	available	2019-11-08 02:34:01	2019-11-08 04:53:21
R2-1916058	Delivering T_delta for IAB node	Samsung R&D Institute UK	available	2019-11-08 02:34:01	2019-11-08 04:53:21
R2-1916059	Discussion on UE capability	China Telecom	available	2019-11-08 02:38:20	2019-11-08 06:55:54
R2-1916060	RNTI design for msgB	Qualcomm Incorporated	noted	2019-11-08 02:40:17	2019-11-08 05:26:06
R2-1916061	Cell Selection for Backhaul RLF Recovery	Futurewei Technologies	available	2019-11-08 02:41:29	2019-11-08 03:52:49
R2-1916062	Contention resolution for msgA with C-RNTI	Qualcomm Incorporated	available	2019-11-08 02:43:03	2019-11-08 05:26:06
R2-1916063	Discussion on the deployment for CAG	China Telecom, Huawei, HiSilicon	available	2019-11-08 02:43:45	2019-11-08 02:45:20
R2-1916064	msgB MAC PDU format	Qualcomm Incorporated	available	2019-11-08 02:44:39	2019-11-08 05:26:06
R2-1916065	Remaining issue on 2-step RACH fall back procedure	Qualcomm Incorporated	available	2019-11-08 02:46:28	2019-11-08 05:26:06
R2-1916066	Enhanced TCI States Activation/Deactivation PDSCH	Qualcomm Incorporated	available	2019-11-08 02:48:09	2019-11-08 05:26:06
R2-1916067	Procedures and MAC CE design for BFR for SCells	Qualcomm Incorporated	available	2019-11-08 02:49:43	2019-11-08 05:26:06
R2-1916068	Some Considerations on autonomous re-transmission for	ZTE Corporation, Sanechips	noted	2019-11-08 03:01:42	2019-11-08 04:37:24
R2-1916069	The remaining issues on BFR on SCell	ZTE Corporation, Sanechips	available	2019-11-08 03:01:42	2019-11-08 04:37:24

R2-1916070	The remaining issues on mPDCCH mTRP transmission	ZTE Corporation, Sanechips	noted	2019-11-08 03:01:42	2019-11-08 04:37:24
R2-1916071	The remaining issues on LCP restriction for CG	ZTE Corporation, Sanechips	available	2019-11-08 03:01:42	2019-11-08 04:37:25
R2-1916072	The CR to 38.321 for on UL grant reception in RAR	ZTE Corporation, Sanechips	not pursued	2019-11-08 03:01:42	2019-11-08 04:37:25
R2-1916073	Considerations on support of split bearer in the case of PDCP	ZTE Corporation, Sanechips	available	2019-11-08 03:01:43	2019-11-08 04:37:25
R2-1916074	Discussion on UE based PDCP Duplication activationdeactivation	ZTE Corporation, Sanechips	available	2019-11-08 03:01:43	2019-11-08 04:37:25
R2-1916075	Consideration on the multiplexing BSR MAC CE and URLLC data	ZTE Corporation, Sanechips	available	2019-11-08 03:01:43	2019-11-08 04:37:25
R2-1916076	Consideration on HARQ conflict between configured grant and	ZTE Corporation, Sanechips	available	2019-11-08 03:01:43	2019-11-08 04:37:25
R2-1916077	Discussion on the ambiguity in calculation of RA-RNTI	ZTE Corporation, Sanechips	available	2019-11-08 03:01:43	2019-11-08 04:39:30
R2-1916078	Discussion on UE behaviours for	Google Inc.	available	2019-11-08 03:06:00	2019-11-08 06:17:25
R2-1916079	Discussion of UL data transmission	CMCC	available	2019-11-08 03:06:16	2019-11-08 05:57:16
R2-1916080	Clarification on UE Inactive AS context	Google Inc.	not treated	2019-11-08 03:10:03	2019-11-08 06:17:25
R2-1916081	Correction on PUSCH-less Scell	Huawei, HiSilicon	not pursued	2019-11-08 03:10:24	2019-11-08 07:00:47
R2-1916082	Clarification on UE Inactive AS context	Google Inc.	revised	2019-11-08 03:13:30	2019-11-08 06:17:25
R2-1916083	Discussion on MSGB-RNTI design	Google	available	2019-11-08 03:15:31	2019-11-08 05:56:47
R2-1916084	Discussion on msgB HARQ	Google	available	2019-11-08 03:17:34	2019-11-08 05:56:47
R2-1916085	RLC re-establishment when PDCP is re-established	Qualcomm Incorporated	not pursued	2019-11-08 03:23:32	2019-11-08 05:26:06
R2-1916086	On Supporting Make-Before-Break	Samsung	withdrawn	2019-11-08 03:26:58	
R2-1916087	Introducing Make-Before-Break in	Samsung	available	2019-11-08 03:29:58	2019-11-08 05:39:45
R2-1916088	Open Issues on NR-U Uplink Transmission	Qualcomm Incorporated	noted	2019-11-08 03:34:19	2019-11-08 06:06:07
R2-1916089	On Triggering RRM Measurement	Samsung	available	2019-11-08 03:37:42	2019-11-08 05:39:45
R2-1916090	Remaining issue on Groupcast and	ITRI	available	2019-11-08 03:38:56	2019-11-08 03:53:02
R2-1916091	Remaining issue on UE-based	ITRI	available	2019-11-08 03:41:10	2019-11-08 03:53:02
R2-1916092	On NR-U Operation in DFS Channels	Charter Communications,	noted	2019-11-08 03:41:59	2019-11-08 04:50:29
R2-1916093	Accessibility Measurements for	Samsung	noted	2019-11-08 03:42:32	2019-11-08 05:39:45
R2-1916094	Remaining Issues on Consistent LBT Failure Detection in NRU	Charter Communications,	available	2019-11-08 03:44:12	2019-11-08 04:50:29
R2-1916095	Further Logged Information in NR	Samsung	available	2019-11-08 03:44:17	2019-11-08 05:39:45
R2-1916096	Discussion on the support of CA	vivo	available	2019-11-08 03:44:18	2019-11-08 06:35:26
R2-1916097	Discussion on Network identifier	vivo	available	2019-11-08 03:44:18	2019-11-08 06:35:26
R2-1916098	Discussion on the proximity	vivo	available	2019-11-08 03:44:18	2019-11-08 06:35:26
R2-1916099	IP address configuration for IAB	Samsung	available	2019-11-08 03:46:53	2019-11-08 05:46:15
R2-1916100	RLF Report Enhancement	Samsung	available	2019-11-08 03:47:37	2019-11-08 05:39:45
R2-1916101	UL mapping configuration	Samsung	available	2019-11-08 03:49:05	2019-11-08 05:46:15
R2-1916102	On supporting Event-triggered	Samsung	available	2019-11-08 03:49:50	2019-11-08 05:39:45
R2-1916103	On Providing Mobility State and Mobility History Information in NR	Samsung	available	2019-11-08 03:51:21	2019-11-08 05:39:45
R2-1916104	PDCP enhancement for NTN	LG Electronics	not treated	2019-11-08 03:52:41	2019-11-08 03:57:36
R2-1916105	Angle of Departure UE positioning technique	Nokia, Nokia Shanghai Bell	available	2019-11-08 03:56:37	2019-11-08 04:18:37
R2-1916106	On-demand and dynamic PRS configuration for DL-TDOA	Nokia, Nokia Shanghai Bell	available	2019-11-08 03:58:34	2019-11-08 04:18:37
R2-1916107	Dedicated positioning SIB delivery for on-demand SI in connected	Nokia, Nokia Shanghai Bell	noted	2019-11-08 04:01:24	2019-11-08 04:18:37
R2-1916108	PC5 groupcast handling	Qualcomm Incorporated	available	2019-11-08 04:03:45	2019-11-08 04:39:14
R2-1916109	plmn-IdentityList in CellAccessRelatedInfo broadcast in	Nokia, Nokia Shanghai Bell	not pursued	2019-11-08 04:03:54	2019-11-08 04:18:52
R2-1916110	Handling of new flow when the number of stored contexts are	SHARP Corporation	available	2019-11-08 04:05:49	2019-11-08 04:15:49
R2-1916111	On per DAPS handover	SHARP	available	2019-11-08 04:05:49	2019-11-08 08:02:03
R2-1916112	Stopping of SI acquisition for ETWS/CMAS	Nokia, Nokia Shanghai Bell	not pursued	2019-11-08 04:05:52	2019-11-08 04:19:07

R2-1916113	Handling of bwp-InactivityTimer upon BWP switching	LG Electronics Deutschland	available	2019-11-08 04:06:12	2019-11-11 02:28:37
R2-1916114	On Stopping of Paging Monitoring	MediaTek Inc.	available	2019-11-08 04:07:25	2019-11-08 04:09:47
R2-1916115	Remaining issues on RACH	Huawei, HiSilicon	available	2019-11-08 04:14:02	2019-11-08 04:19:31
R2-1916116	RACH resource configuration and	Huawei, HiSilicon	available	2019-11-08 04:14:02	2019-11-08 04:19:31
R2-1916117	Running CR for the introduction of SRVCC from 5G to 3G	China Unicom, Huawei, HiSilicon	revised	2019-11-08 04:19:17	2019-11-08 06:17:35
R2-1916118	Handling LBT failures for support of	ETRI	available	2019-11-08 04:23:05	2019-11-08 05:57:45
R2-1916119	Running CR to 36.321 on 5G V2X	LG Electronics	endorsed	2019-11-08 04:37:40	2019-11-14 10:58:40
R2-1916120	Running CR to 38.321 on 5G V2X	LG Electronics	endorsed	2019-11-08 04:37:40	2019-11-15 10:12:47
R2-1916121	Report of 107bis#93 open issues on	LG Electronics	noted	2019-11-08 04:37:40	2019-11-13 09:31:01
R2-1916122	Proposed LS on TX resource (re-	LG Electronics	available	2019-11-08 04:37:40	2019-11-13 09:31:01
R2-1916123	Remaining MAC issues and	LG Electronics	noted	2019-11-08 04:37:40	2019-11-08 04:49:53
R2-1916124	Proposed Response LS on additional high layer information for	LG Electronics Inc.	available	2019-11-08 04:37:40	2019-11-08 04:49:53
R2-1916125	PC5-RRC connection establishment and release with	LG Electronics Inc.	available	2019-11-08 04:37:40	2019-11-08 04:49:53
R2-1916126	PC5-RRC and Uu RRC	LG Electronics	available	2019-11-08 04:37:40	2019-11-08 04:49:53
R2-1916127	MAC header for SL-SCH	Qualcomm CDMA	available	2019-11-08 04:43:06	2019-11-08 04:45:34
R2-1916128	Remaining issues on CLI measurement	ZTE Corporation, Sanechips	noted	2019-11-08 04:43:43	2019-11-08 06:59:23
R2-1916129	Reply LS on signalling of sidelink	LG Electronics	available	2019-11-08 04:45:36	2019-11-08 06:25:25
R2-1916130	Sidelink HARQ operation in mode 1	ITL	available	2019-11-08 04:48:38	2019-11-08 04:55:56
R2-1916131	Retransmission of an RLC SDU with a poll after discard procedure	LG Electronics Inc., Ericsson, NTT Docomo, LG	available	2019-11-08 04:48:59	2019-11-08 05:36:30
R2-1916132	Consideration on the postponed decision on DL hop-by-hop flow control	LG Electronics, AT&T, Ericsson, Huawei, Verizon	noted	2019-11-08 04:48:59	2019-11-08 05:36:30
R2-1916133	Consideration on local re-routing	LG Electronics	available	2019-11-08 04:48:59	2019-11-08 05:36:30
R2-1916134	BSR MAC CE format for pre-BSR	LG Electronics	available	2019-11-08 04:48:59	2019-11-08 05:36:30
R2-1916135	Consideration on remaining FFS of	LG Electronics	available	2019-11-08 04:49:00	2019-11-08 05:36:30
R2-1916136	Remaining issues for DL flow	LG Electronics	noted	2019-11-08 04:49:00	2019-11-08 05:36:30
R2-1916137	LCG based UL grant	LG Electronics	available	2019-11-08 04:49:00	2019-11-08 05:36:30
R2-1916138	Way forward for CP bearer	LG Electronics	available	2019-11-08 04:49:00	2019-11-08 05:36:30
R2-1916139	Need of BAP buffer	LG Electronics	available	2019-11-08 04:49:00	2019-11-08 05:36:30
R2-1916140	Consideration on BAP Routing ID	LG Electronics	available	2019-11-08 04:49:00	2019-11-08 05:36:30
R2-1916141	Discussion on the flow control	ITL	available	2019-11-08 04:49:43	2019-11-08 04:55:56
R2-1916142	NE-DC dynamic power sharing capability	Qualcomm Incorporated	agreed	2019-11-08 04:51:55	2019-11-08 05:26:24
R2-1916143	NE-DC dynamic power sharing capability	Qualcomm Incorporated	revised	2019-11-08 04:51:59	2019-11-08 05:26:24
R2-1916144	DL BWP Configuration mandatory fields upon SCell addition	Qualcomm Incorporated	not treated	2019-11-08 04:52:01	2019-11-08 05:26:24
R2-1916145	Allow fallback band combinations for reporting SRS-TxSwitch	Qualcomm Incorporated	not treated	2019-11-08 04:52:02	2019-11-08 05:26:24
R2-1916146	Expectation when srs-TxSwitch capability is not supported	Qualcomm Incorporated	not pursued	2019-11-08 04:52:03	2019-11-08 05:26:24
R2-1916147	Discussion of the PUCCH & SRS Resource Release	Qualcomm Incorporated	available	2019-11-08 04:52:05	2019-11-08 05:26:24
R2-1916148	Discussion on DRX operation associated with disabling HARQ	LG Electronics Polska	available	2019-11-08 04:53:16	2019-11-08 05:48:55
R2-1916149	PC5-RRC and PC5-S interactions and their security in NR V2X	Qualcomm Incorporated	available	2019-11-08 04:54:32	2019-11-08 05:00:06
R2-1916150	Discussion on L2 measurement in	NTT DOCOMO	available	2019-11-08 04:55:35	2019-11-08 05:48:55
R2-1916151	Further consideration on capability	LG Electronics	available	2019-11-08 04:59:10	2019-11-08 05:44:29
R2-1916152	Further Considerations on multiple	Samsung	available	2019-11-08 04:59:48	2019-11-08 05:39:45
R2-1916153	MAC impacts of multiple CCAs in	LG Electronics	available	2019-11-08 05:03:03	2019-11-08 05:48:55
R2-1916154	Discussion on UE location information in SCG failure report	NTT DOCOMO INC. , Ericsson	noted	2019-11-08 05:03:15	2019-11-08 05:48:55
R2-1916155	Remaining issues of header	NTT DOCOMO	available	2019-11-08 05:03:38	2019-11-08 06:55:38
R2-1916156	UE autonomous transmission in a CG resource for deprioritized data	Huawei, HiSilicon	available	2019-11-08 05:05:14	2019-11-08 05:13:51
R2-1916157	Clarification of suspended SCG	LG Electronics Inc.	available	2019-11-08 05:05:51	2019-11-08 05:44:29

R2-1916158	Discussion on LTE and EN-DC Measurement Gap configuration	Nokia, Nokia Shanghai Bell	noted	2019-11-08 05:05:53	2019-11-08 06:51:03
R2-1916159	PDCP for PC5-S, PC5-RRC	Qualcomm CDMA	available	2019-11-08 05:06:31	2019-11-08 05:09:31
R2-1916160	Discussion and TP on MAC PDU	LG Electronics	available	2019-11-08 05:08:40	2019-11-08 05:48:55
R2-1916161	Resumption of suspended SCG	LG Electronics	available	2019-11-08 05:08:44	2019-11-08 05:44:29
R2-1916162	PC5-S, PC5-RRC RLC mode	Qualcomm CDMA	available	2019-11-08 05:10:18	2019-11-08 05:12:18
R2-1916163	Discussion on indication for	LG Electronics	available	2019-11-08 05:14:47	2019-11-08 05:48:55
R2-1916164	Draft TS 38.340 (BAP)	Huawei	revised	2019-11-08 05:15:50	2019-11-08 05:17:36
R2-1916165	PC5-RRC support for Groupcast	Qualcomm CDMA	available	2019-11-08 05:18:51	2019-11-08 05:22:30
R2-1916166	Management of Control Plane	LG Electronics	available	2019-11-08 05:20:17	2019-11-08 06:16:16
R2-1916167	Access control in IAB networks	LG Electronics	available	2019-11-08 05:20:17	2019-11-08 06:16:16
R2-1916168	BH RLF Notification Terminaton	LG Electronics	available	2019-11-08 05:20:17	2019-11-08 06:16:16
R2-1916169	Resolving open issues on BH RLF	LG Electronics	available	2019-11-08 05:20:17	2019-11-08 06:16:16
R2-1916170	Access control for PRN	LG Electronics	available	2019-11-08 05:20:17	2019-11-08 06:16:16
R2-1916171	MDT for DC	LG Electronics	available	2019-11-08 05:20:17	2019-11-08 06:16:16
R2-1916172	Clarification on CSI reporting in C-	Qualcomm Inc	agreed	2019-11-08 05:21:12	2019-11-08 06:26:14
R2-1916173	Correction to PHR in dual connectivity	Qualcomm Inc, Nokia, Nokia Shanghai Bell,	revised	2019-11-08 05:21:13	2019-11-08 06:26:14
R2-1916174	Correction to long truncated BSR	Qualcomm Inc	not pursued	2019-11-08 05:21:15	2019-11-08 06:26:14
R2-1916175	Configuration aspects of wakeup	Qualcomm Inc	available	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916176	Link management with WUS	Qualcomm Inc	noted	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916177	Prohibit timer for Release Request	Qualcomm Inc	available	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916178	Remaining issues on UE	Qualcomm Inc	available	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916179	UE indication on expected data	Qualcomm Inc,	available	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916180	Cross cell group wakeup message in MR-DC	Qualcomm Inc, Futurewei	available	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916181	Backoff indication in multi-beam	Qualcomm Inc	available	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916182	Enhancements to PHR in multi-	Qualcomm Inc	available	2019-11-08 05:21:16	2019-11-08 06:26:14
R2-1916183	New values for RLC and PDCP timers	Qualcomm Inc, LG Electronics	noted	2019-11-08 05:21:17	2019-11-08 06:26:14
R2-1916184	Correction on mini-slot scheduling	Fujitsu, Nokia (Rapporteur)	agreed	2019-11-08 05:21:58	2019-11-08 07:59:47
R2-1916185	Impacts of L1 priorities on data	Fujitsu	available	2019-11-08 05:22:02	2019-11-08 07:59:47
R2-1916186	Remaining issues on de-prioritized MAC PDU on CG resource	LG Electronics Polska	available	2019-11-08 05:22:08	2019-11-08 05:48:55
R2-1916187	General aspects on cDRX	NEC	available	2019-11-08 05:23:07	2019-11-08 07:47:54
R2-1916188	CR on LTE and EN-DC Measurement Gap configuration	Nokia, Nokia Shanghai Bell	not treated	2019-11-08 05:24:40	2019-11-08 06:51:03
R2-1916189	Sidelink CSI report	MediaTek Inc.	available	2019-11-08 05:35:44	2019-11-08 06:07:34
R2-1916190	Inter-RAT BSR	MediaTek Inc.	available	2019-11-08 05:35:44	2019-11-08 06:07:34
R2-1916191	CR on NeedForGap capability for each supported NR band before EN-	Nokia, Nokia Shanghai Bell	not treated	2019-11-08 05:39:23	2019-11-08 06:51:03
R2-1916192	Work plan for Rel-16 UE Capability	Intel Corporation	endorsed	2019-11-08 05:41:03	2019-11-08 05:59:54
R2-1916193	Discussion on NeedForGap signalling in NR SA before NE-DC	Nokia, Nokia Shanghai Bell	noted	2019-11-08 05:43:48	2019-11-08 06:51:03
R2-1916194	Discussion on multiple triggering conditions for CHO	Samsung Electronics	available	2019-11-08 05:43:56	2019-11-08 05:57:50
R2-1916195	Confirmation of working assumption for T312 support on PSCell	Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated	noted	2019-11-08 05:48:09	2019-11-08 05:57:50
R2-1916196	Discussion on DRX operation impact for NTN	Nokia, Nokia Shanghai Bell	available	2019-11-08 05:48:52	2019-11-08 08:02:02
R2-1916197	CHO compliance check and	CMCC	available	2019-11-08 05:54:11	2019-11-08 06:37:53
R2-1916198	Introduction of T312 for PCell and PSCell in NR (Draft)	Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated	revised	2019-11-08 05:54:59	2019-11-08 05:57:50
R2-1916199	Further consideration on T312 for	LG Electronics Inc	available	2019-11-08 06:05:13	2019-11-08 06:29:39
R2-1916200	Cell (re)selection after consecutive	LG Electronics Inc	available	2019-11-08 06:05:22	2019-11-08 06:29:40
R2-1916201	RLM/RLF enhancements in NR-U	LG Electronics Inc	available	2019-11-08 06:05:22	2019-11-08 06:29:40

R2-1916202	SSI and channel occupancy measurements for serving	LG Electronics Inc	available	2019-11-08 06:05:22	2019-11-08 06:29:40
R2-1916203	Stopping condition for monitoring additional paging occasions in NR-	LG Electronics Inc	available	2019-11-08 06:05:22	2019-11-08 06:29:40
R2-1916204	Support of conditional handover for	LG Electronics Inc	available	2019-11-08 06:05:23	2019-11-08 06:29:40
R2-1916205	Measurement ID Swapping Issue	LG Electronics	available	2019-11-08 06:07:47	2019-11-08 06:16:36
R2-1916206	Consideration of CHO Release	LG Electronics	available	2019-11-08 06:07:47	2019-11-08 06:16:36
R2-1916207	SCG Failure Handling with	LG Electronics	available	2019-11-08 06:07:47	2019-11-08 06:16:36
R2-1916208	Consideration of After-action upon	LG Electronics	available	2019-11-08 06:07:47	2019-11-08 06:16:36
R2-1916209	Consideration of Compliance	LG Electronics	available	2019-11-08 06:07:47	2019-11-08 06:16:36
R2-1916210	Handling Excess of UE Capability	LG Electronics	available	2019-11-08 06:07:47	2019-11-08 06:16:36
R2-1916211	Introduction of Cross Link Interference (CLI) handling and	LG Electronics Inc	revised	2019-11-08 06:12:44	2019-11-13 05:13:01
R2-1916212	Padding Removal and Feedback for Context Establishment	China Telecommunicati	available	2019-11-08 06:13:19	2019-11-08 06:14:45
R2-1916213	AS-layer configuration failure case in SL unicast	Samsung Electronics Co.,	available	2019-11-08 06:15:36	2019-11-08 06:21:30
R2-1916214	MAC PDU handling for Sidelink UE capabilities and Sidelink RRC	Samsung Electronics Co.,	available	2019-11-08 06:15:36	2019-11-08 06:21:30
R2-1916215	Remaining issues on reselection priority handlings for V2X	Samsung Electronics Co.,	available	2019-11-08 06:15:36	2019-11-08 06:21:30
R2-1916216	Interaction between RRC Connection Resume Condition and	Samsung Electronics Co.,	available	2019-11-08 06:15:36	2019-11-08 06:21:30
R2-1916217	Discussion on SL-RSRP reporting	Samsung Electronics Co.,	available	2019-11-08 06:15:36	2019-11-08 06:21:31
R2-1916218	Remaining Issues on Handling of SLRB configuration handling	Samsung Electronics Co.,	available	2019-11-08 06:15:36	2019-11-08 06:21:31
R2-1916219	UE Assistance for Release	Samsung	available	2019-11-08 06:19:43	2019-11-08 07:36:04
R2-1916220	SLRB Reconfiguration Handling	Samsung	available	2019-11-08 06:19:43	2019-11-08 07:36:04
R2-1916221	Transmission of Deprioritized Data	Samsung	available	2019-11-08 06:19:43	2019-11-08 07:36:04
R2-1916222	Split Bearer Fallback at	Samsung	available	2019-11-08 06:19:43	2019-11-08 07:36:04
R2-1916223	Configuration and Initial State of	Samsung	noted	2019-11-08 06:19:43	2019-11-08 07:36:04
R2-1916224	Fast failure recovery in CHO	Samsung R&D Institute India	available	2019-11-08 06:30:02	2019-11-08 06:43:24
R2-1916225	Cell Reselection remaining issues	Samsung R&D Institute India	available	2019-11-08 06:31:56	2019-11-08 06:43:24
R2-1916226	CHO UE behaviour upon transitioning to	Samsung R&D Institute India	available	2019-11-08 06:35:31	2019-11-08 06:43:24
R2-1916227	Single stack eMOB solution for NR	Samsung R&D Institute India	available	2019-11-08 06:37:12	2019-11-08 06:43:24
R2-1916228	Email discussion report [107bis#90] Further details on “m” operation for	Qualcomm Incorporated	noted	2019-11-08 06:40:05	2019-11-09 06:39:43
R2-1916229	TP for TA validation based on serving cell RSRP change (related	Qualcomm Incorporated	available	2019-11-08 06:40:05	2019-11-08 07:25:17
R2-1916230	CG/SPS alignment on Resource Boundary Pattern	Sequans Communications	noted	2019-11-08 06:41:04	2019-11-08 07:38:45
R2-1916231	Impact of CG/SPS with periodicities non dividing HF length	Sequans Communications	available	2019-11-08 06:41:04	2019-11-08 06:59:25
R2-1916232	UE autonomous retransmission in a CG resource	Sequans Communications	available	2019-11-08 06:41:04	2019-11-15 05:41:52
R2-1916233	Enhanced rescheduling for dropped CG	Sequans Communications	available	2019-11-08 06:41:04	2019-11-15 05:41:52
R2-1916234	On Inter-RAT assistance information for NB-IoT and LTE(-	Sequans Communications	noted	2019-11-08 06:41:04	2019-11-08 06:50:20
R2-1916235	NB-IoT UE Specific DRX - Backward Compatibility	Sequans Communications	available	2019-11-08 06:41:04	2019-11-08 06:50:20
R2-1916236	NB-IoT UE Specific DRX - Efficiency Issues	Sequans Communications	available	2019-11-08 06:41:04	2019-11-08 06:50:20
R2-1916237	Support for LTE deployment at IAB node sites	Sequans Communications	available	2019-11-08 06:41:04	2019-11-08 07:40:09
R2-1916238	F1-U Flow Control and Reordering Issues	Sequans Communications	available	2019-11-08 06:41:04	2019-11-08 07:40:09
R2-1916239	Packet Marking for E2E Flow Control	Sequans Communications	available	2019-11-08 06:41:04	2019-11-15 05:41:52
R2-1916240	Discussion on Earth fixed vs. Earth moving cells in NTN LEO	Nokia, Nokia Shanghai Bell,	revised	2019-11-08 06:58:23	2019-11-08 07:59:43

R2-1916241	UE positioning requirements and solution analysis in NTN	Nokia, Nokia Shanghai Bell,	revised	2019-11-08 07:02:10	2019-11-08 07:49:21
R2-1916242	Pre-trigger based mechanism for NTN connected mode mobility	Nokia, Nokia Shanghai Bell	available	2019-11-08 07:04:38	2019-11-08 07:49:21
R2-1916243	RRC message for source and	SHARP	noted	2019-11-08 07:09:19	2019-11-08 07:19:11
R2-1916244	CR to 38.306 on DRX-based intra-frequency SFTD measurement	Huawei, HiSilicon	not pursued	2019-11-08 07:11:01	2019-11-08 07:39:04
R2-1916245	CR to 38.331 on DRX-based intra-frequency SFTD measurement	Huawei, HiSilicon	not treated	2019-11-08 07:12:11	2019-11-08 07:39:04
R2-1916246	Remaining issues on CLI	Ericsson	available	2019-11-08 07:36:04	2019-11-08 07:40:04
R2-1916247	DRX considerations and RAN paging for PUR	Sequans Communications	available	2019-11-08 07:36:59	2019-11-08 07:38:45
R2-1916248	Padding removal	Nokia, Nokia Shanghai Bell, vivo, OPPO, Mediatek, Samsung, Sony,	noted	2019-11-08 07:42:46	2019-11-08 07:46:27
R2-1916249	TP for TS36.302 on ETSW/CMAS in connected mode for non-BL UE	Huawei Tech.(UK) Co.,	available	2019-11-08 07:44:43	2019-11-08 07:58:54
R2-1916250	Way forward on BAP Configuration	Futurewei	noted	2019-11-08 07:47:12	2019-11-08 07:49:37
R2-1916251	Enhancements for PUR	Sequans Communications	available	2019-11-08 07:51:14	2019-11-08 08:00:37
R2-1916252	Power and signalling savings at TAT expiry and reaching sr-	Ericsson, Nokia, Nokia Shanghai	available	2019-11-08 07:52:05	2019-11-08 07:55:16
R2-1916253	Allowing PDCP version change	Ericsson	postponed	2019-11-08 10:12:51	2019-11-08 10:19:36
R2-1916254	Issue on ping pong state transition for sidelink UE	Beijing Xiaomi Software Tech	available	2019-11-08 11:16:20	2019-11-08 11:39:12
R2-1916255	Discussion on resource allocation	Beijing Xiaomi Software Tech	available	2019-11-08 11:16:20	2019-11-08 11:39:12
R2-1916256	Discussion on the use case of CHO failure recovery	Beijing Xiaomi Software Tech	available	2019-11-08 11:16:20	2019-11-08 11:39:12
R2-1916257	Discussion on BSR prioritization issue	Beijing Xiaomi Software Tech	available	2019-11-08 11:16:20	2019-11-08 11:39:12
R2-1916258	[DRAFT] LS on CLI measurements UE capabilities	Qualcomm Incorporated	revised	2019-11-08 21:31:17	2019-11-09 07:24:03
R2-1916259	Discussion on eMIMO MAC CE	vivo	available	2019-11-12 05:10:30	2019-11-12 07:15:10
R2-1916260	Access control differentiation for IMS registration related signaling	Intel Corporation	postponed	2019-11-12 05:43:22	2019-11-12 23:04:40
R2-1916261	Different Access Control Treatment	Intel Corporation	not treated	2019-11-12 05:46:49	2019-11-12 23:04:40
R2-1916262	Security Algorithms for Radio Bearers	Qualcomm Incorporated	agreed	2019-11-12 05:52:17	2019-11-12 19:32:52
R2-1916263	Remaining issues of SL	MediaTek Inc.	available	2019-11-12 05:55:04	2019-11-12 07:01:55
R2-1916264	UE Behavior Clarification during	CATT	available	2019-11-12 12:17:17	2019-11-13 02:47:55
R2-1916265	Comparison of different PSCell modelling options for SCG	Qualcomm Incorporated	available	2019-11-12 12:25:38	2019-11-12 13:54:51
R2-1916266	Running 38.331 CR for	Huawei, HiSilicon	available	2019-11-12 13:02:08	2019-11-13 10:21:21
R2-1916267	Proposal for 2-bit downlink channel quality reporting in MSG3 for	Qualcomm Incorporated	available	2019-11-12 14:33:01	2019-11-12 15:22:34
R2-1916268	Forwarding of Reply LS on GUTI allocation for 5G CIoT (C1-198560;	CT1	noted	2019-11-12 18:40:49	2019-11-12 18:45:42
R2-1916269	RA Prioritization for MPS for 2-step RACH	Perspecta Labs, CISA ECD, AT&T, T-Mobile, Sprint, Verizon,	noted	2019-11-12 19:00:25	2019-11-13 08:52:55
R2-1916270	Clarification on	OPPO	not pursued	2019-11-13 08:59:23	2019-11-13 09:40:23
R2-1916271	Clarification on	OPPO	agreed	2019-11-13 08:59:28	2019-11-13 09:40:23
R2-1916272	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, HiSilicon, China	revised	2019-11-13 09:52:41	2019-11-15 10:12:47
R2-1916273	Main issues remaining for Conditional SN initiated SN change	Samsung Telecommunicati	available	2019-11-13 10:17:28	2019-11-13 14:28:54
R2-1916274	On Maximum Number of CHO Candidate Cells and Nodes	Charter Communications, Inc	available	2019-11-14 13:23:54	2019-11-14 16:07:11
R2-1916275	Reply LS on NR V2X Security for user plane data and PDCP SN size	SA3	noted	2019-11-15 09:16:38	2019-11-15 09:20:11
R2-1916276	The Reporting of CHO failure	CMCC	available	2019-11-15 10:22:18	2019-11-23 15:57:59

R2-1916277	Alternative solution for “under-	NTT DOCOMO,	postponed	2019-11-15 10:27:00	2019-11-23 15:57:59
R2-1916278	Impacts of PDCCH-WUS on RRC	CATT	available	2019-11-15 15:59:39	2019-11-15 20:29:19
R2-1916279	Session notes from NTN offline	THALES	available	2019-11-15 20:24:04	2019-11-23 15:57:59
R2-1916280	LS on further aspects of Mission Critical Services over 5MBS (S6-	SA6	noted	2019-11-17 06:26:59	2019-11-17 07:11:05
R2-1916281	Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-	Vice Chairman (Nokia)	approved	2019-11-17 06:27:00	2019-11-23 15:57:59
R2-1916282	Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO,	Vice Chairman (ZTE)	approved	2019-11-17 06:27:00	2019-11-23 15:57:59
R2-1916283	Report eMTC breakout session	Session chair (Ericsson)	approved	2019-11-17 06:27:00	2019-11-23 15:58:00
R2-1916284	Session minutes for NR-U, Power Savings, NTN and 2-step RACH	Session chair (InterDigital)	approved	2019-11-17 06:27:00	2019-11-23 15:58:00
R2-1916285	Report from session on Rel-15 and 16 LTE and NR positioning	Session chair (MediaTek)	approved	2019-11-17 06:27:00	2019-11-23 15:58:00
R2-1916286	Report from SOM/MDT session	Session chair	approved	2019-11-17 06:27:00	2019-11-23 15:58:00
R2-1916287	Report NB-IoT breakout session	Session chair (Huawei)	approved	2019-11-17 06:27:00	2019-11-23 15:58:00
R2-1916288	Report from session on LTE V2X and NR V2X	Session chair (Samsung)	approved	2019-11-17 06:27:00	2019-11-23 15:58:00
R2-1916289	LS on GUTI allocation for MT-EDT in 5G CIoT (C1-199005; contact:	CT1	noted	2019-11-17 06:27:00	2019-11-17 07:11:05
R2-1916290	LS on enhanced access control for IMS signalling (C1-199007; contact:	CT1	noted	2019-11-17 06:27:00	2019-11-17 07:11:05
R2-1916291	Reply LS on assistance indication for WUS (C1-199008; contact)	CT1	available	2019-11-17 06:27:00	2019-11-17 07:11:05
R2-1916292	LS on Extended NAS timers for Coverage Enhancement in 5GS	CT1	noted	2019-11-17 06:27:00	2019-11-17 07:11:05
R2-1916293	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated	revised	2019-11-17 06:51:32	2019-11-23 15:58:00
R2-1916294	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated	revised	2019-11-17 06:54:00	2019-11-23 15:58:00
R2-1916295	Discussion on PDCCH-WUS missing problems during BWP	Xiaomi Communications	available	2019-11-17 06:57:32	2019-11-18 02:56:06
R2-1916296	Correction to Pcompensation for	Huawei, HiSilicon	revised	2019-11-18 11:02:53	2019-11-23 15:58:00
R2-1916297	IAB remaining issues	Qualcomm Incorporated (Rapporteur)	noted	2019-11-27 02:26:23	2019-11-27 02:27:56
R2-1916298	WF on UL BAP routing ID	Qualcomm Incorporated (Rapporteur)	noted	2019-11-27 02:26:24	2019-11-27 02:27:56
R2-1916299	Discussion on PRACH	CATT	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916300	Report on Email Discussion [107b#52][NR MobE] Open issues	CATT	noted	2019-11-27 02:27:28	2019-11-27 02:27:56
R2-1916301	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	agreed	2019-11-27 02:27:28	2019-11-27 02:27:56
R2-1916302	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	agreed	2019-11-27 02:27:30	2019-11-27 02:27:56
R2-1916303	Correction to SIB5 acquisition for idle mode measurements	Ericsson	revised	2019-11-27 01:53:07	2019-11-27 01:58:01
R2-1916304	Correction on inter-frequency neighbour cell measurements	Ericsson	agreed	2019-11-27 02:27:32	2019-11-27 02:27:56
R2-1916305	Correction to SIB5 acquisition for idle mode measurements	Ericsson	agreed	2019-11-27 01:53:16	2019-11-27 01:58:01

R2-1916306	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai	agreed	2019-11-27 02:27:34	2019-11-27 02:27:56
R2-1916307	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai	agreed	2019-11-27 02:27:38	2019-11-27 02:27:56
R2-1916308	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai	revised	2019-11-27 01:57:11	2019-11-27 01:58:01
R2-1916309	Correction on handling of stored AS context for UP optimization and	Huawei, HiSilicon	agreed	2019-11-27 02:27:42	2019-11-27 02:27:56
R2-1916310	Corrections to Application layer measurement reporting and UE capability signalling	Lenovo, Motorola Mobility	agreed	2019-11-27 01:54:32	2019-11-27 01:58:01
R2-1916311	Correction to full configuration	Google Inc.	revised	2019-11-27 01:55:45	2019-11-27 01:58:01
R2-1916312	Correction to early measurement	Ericsson	revised	2019-11-27 01:57:42	2019-11-27 01:58:01
R2-1916313	Clarification on UE Inactive AS context	Google Inc.	revised	2019-11-27 02:27:45	2019-11-27 02:27:56
R2-1916314	[DRAFT] Reply LS on support of high peak data rate for Cat-M1 Ues	Qualcomm Incorporated	revised	2019-11-27 02:27:46	2019-11-27 02:27:56
R2-1916315	[DRAFT] reply LS on QoE	Ericsson	revised	2019-11-27 02:27:46	2019-11-27 02:27:56
R2-1916316	Correction on non-3GPP paging	Huawei, HiSilicon	endorsed	2019-11-27 02:27:46	2019-11-27 02:27:56
R2-1916317	Introduction of DL MIMO efficiency	Huawei, HiSilicon	endorsed	2019-11-27 02:27:47	2019-11-27 02:27:56
R2-1916318	Introduction of DL MIMO efficiency	Huawei, HiSilicon	endorsed	2019-11-27 02:27:48	2019-11-27 02:27:56
R2-1916319	Draft CR for 36.323 on supporting DAPS handover	Huawei, HiSilicon,	endorsed	2019-11-27 02:27:49	2019-11-27 02:27:56
R2-1916320	Report of [offline 106] UE capability	Intel Corporation	reserved	2019-11-27 02:27:49	
R2-1916321	Report on Offline Discussion [108] agreeable proposals on Conditional	CATT	revised	2019-11-27 02:27:49	2019-11-27 02:27:56
R2-1916322	Report of [Offline 109] Release of	Ericsson	noted	2019-11-27 02:27:49	2019-11-27 02:27:56
R2-1916323	Clarification on sCellIndex and SCell lists	Ericsson, Nokia, Nokia Shanghai	agreed	2019-11-27 01:57:21	2019-11-27 01:58:01
R2-1916324	Correction to full configuration	Google Inc.	postponed	2019-11-27 01:55:52	
R2-1916325	Correction to early measurement	Ericsson	agreed	2019-11-27 02:27:51	2019-11-27 02:38:04
R2-1916326	[DRAFT] reply LS on QoE	Ericsson	revised	2019-11-27 02:27:52	2019-11-27 02:38:04
R2-1916327	Reply LS on support of high peak data rate for Cat-M1 UEs in HD-	RAN2	approved	2019-11-27 02:27:52	2019-11-27 20:46:23
R2-1916328	Reply LS on QoE Measurement	RAN2	approved	2019-11-27 02:27:52	2019-11-27 02:38:04
R2-1916329	Report on Offline Discussion [108] agreeable proposals on Conditional	CATT	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916330	LS on Conditional PSCell	RAN2	approved	2019-11-27 02:27:52	2019-11-27 02:38:04
R2-1916331	Introduction of cross link interfernce	Huawei, HiSilicon	revised	2019-11-27 02:27:52	2019-11-27 02:38:04
R2-1916332	[DRAFT] LS on CLI measurements UE capabilities	Qualcomm Incorporated	revised	2019-11-27 02:27:53	2019-11-27 02:38:04
R2-1916333	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, HiSilicon, China	endorsed	2019-11-27 02:27:53	2019-11-27 02:38:04
R2-1916334	Running CR for the introduction of SRVCC from 5G to 3G	China Unicom, Huawei, HiSilicon	endorsed	2019-11-27 02:27:53	2019-11-27 02:38:04
R2-1916335	Introduction of SRVCC from 5G to 3G	Ericsson	endorsed	2019-11-27 02:27:53	2019-11-27 02:38:04
R2-1916336	[DRAFT] Reply LS on NID	Ericsson	revised	2019-11-27 02:27:54	2019-11-27 02:38:04
R2-1916337	NPN Stage 2 Draft CR	Nokia	revised	2019-11-27 02:27:54	2019-11-27 02:38:04
R2-1916338	Introduction of Cross Link Interference (CLI) handling and	LG Electronics Inc	revised	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916339	Running RRC CR for Introduction	Ericsson	revised	2019-11-27 02:27:55	2019-11-27 02:38:04
R2-1916340	Introduction of cross link interfernce management	Huawei, HiSilicon, ZTE Corporation	endorsed	2019-11-27 02:27:55	2019-11-27 02:38:04
R2-1916341	[Draft] CMAS/ETWS and	Qualcomm	revised	2019-11-27 02:27:55	2019-11-27 02:38:04
R2-1916342	Report of Offline Discussion 211	CATT	noted	2019-11-27 02:27:55	2019-11-27 02:38:04
R2-1916343	Running RRC CR for Introduction	Ericsson	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916344	Reply LS on NID structure and length	RAN2	approved	2019-11-27 02:27:55	2019-11-27 02:38:04
R2-1916345	CMAS/ETWS and emergency	RAN2	approved	2019-11-27 02:27:55	2019-11-27 02:38:04

R2-1916346	Draft Reply LS on Sending CAG ID in NAS layer	Qualcomm Incorporated	revised	2019-11-27 02:27:55	2019-11-27 02:38:04
R2-1916347	Introduction of cross link interfernce	Huawei, HiSilicon	endorsed	2019-11-27 02:27:55	2019-11-27 02:38:04
R2-1916348	LS on CLI measurements UE capabilities	RAN2	approved	2019-11-27 02:27:57	2019-11-27 20:50:15
R2-1916349	Reply LS on Sending CAG ID in	RAN2	approved	2019-11-27 02:27:57	2019-11-27 02:38:04
R2-1916350	Miscellaneous non-controversial	Ericsson	revised	2019-11-27 02:27:57	2019-11-29 11:24:16
R2-1916351	[108#06][NTN] Earth fixed vs. Earth moving cells in NTN LEO (Thales)	THALES	endorsed	2019-11-27 02:27:58	2019-12-02 14:19:51
R2-1916352	MAC Running CR for NR IIOT	Samsung R&D Institute UK	endorsed	2019-11-27 02:27:58	
R2-1916353	Correction to channelBWs	Ericsson	agreed	2019-11-27 02:27:58	2019-11-29 11:28:43
R2-1916354	Running 38.321 CR for	Huawei, HiSilicon	endorsed	2019-11-27 02:27:58	2019-12-14 16:30:52
R2-1916355	Stage-2 running CR for support of	Nokia	endorsed	2019-11-27 02:27:58	2019-12-16 16:39:10
R2-1916356	Clarification on default configuration and SRB1 for UP-EDT	Huawei, HiSilicon	postponed	2019-11-27 01:50:56	2019-11-27 01:58:01
R2-1916357	[DRAFT] Reply LS on Mobile-terminated Early Data Transmission	Qualcomm Incorporated	revised	2019-11-27 02:28:00	2019-11-27 02:38:04
R2-1916358	[DRAFT] LS on UE identifier for UP CIoT 5GS Optimisation	LGE	revised	2019-11-27 02:28:00	2019-11-27 02:38:04
R2-1916359	Summary of [CB Offline #303] on	Huawei, HiSilicon	noted	2019-11-27 02:28:00	2019-11-27 02:38:04
R2-1916360	Reply LS on extended NAS timers for CE in 5GS	Ericsson	revised	2019-11-27 02:28:11	2019-12-02 08:17:47
R2-1916361	Introduction of Rel-16 eMTC	Intel Corporation	endorsed	2019-11-27 02:28:12	2019-12-17 09:06:27
R2-1916362	Running CR on 36.321 for eMTC	Ericsson	endorsed	2019-11-27 02:28:12	2019-12-17 09:39:32
R2-1916363	Introduction of additional enhancements for eMTC	Qualcomm Incorporated	endorsed	2019-11-27 02:28:12	2019-12-14 16:30:52
R2-1916364	Introduction of Rel-16 eMTC enhancements	Qualcomm Incorporated	endorsed	2019-11-27 02:28:12	2019-12-18 06:26:44
R2-1916365	Running CR for 36.304 -Rel-16	Nokia	endorsed	2019-11-27 02:28:12	2019-12-19 18:38:24
R2-1916366	Running 36.302 CR for R16 eMTC	ZTE Corporation	endorsed	2019-11-27 02:28:12	2019-12-14 16:30:52
R2-1916367	(reserved)	Emre's tdocs	reserved	2019-11-27 02:28:12	
R2-1916368	Reply LS on Mobile-terminated Early Data Transmission	RAN2	approved	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916369	LS on UE identifier for UP CIoT 5GS Optimisation	RAN2	approved	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916370	(reserved)	Emre's tdocs	reserved	2019-11-27 02:28:12	
R2-1916371	Draft LS on consistent Uplink LBT failure detection mechanism	Qualcomm Incorporated	revised	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916372	Summary of offline 404 discussion	Qualcomm Incorporated	revised	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916373	[Draft] Reply LS on UE higher layer signalling for cross-slot scheduling	MediaTek Inc.	noted	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916374	Running CR for Introduction of Rel-16 NR UE power saving in TS	Huawei	noted	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916375	LS on RRM Measurement Relaxation for UE Power Saving in	RAN2	approved	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916376	[107bis#66][NR/NTN] Running TP	THALES	agreed	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916377	[DRAFT] LS on dependencies on AS design for mobility management	Thales	revised	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916378	[DRAFT] LS on LS on system level design assumptions for satellite in	Thales	revised	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916379	Inputs to TR 38.821 recommendations	THALES, Nomor, Nokia, Vodafone, Mediatek	revised	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916380	LS on consistent Uplink LBT failure	RAN2	approved	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916381	Summary of offline 404 discussion	Qualcomm Incorporated	noted	2019-11-27 02:28:12	
R2-1916382	Report of offline-403 - Remaining issues of consistent UL LBT failure	OPPO	noted	2019-11-27 02:28:12	2019-11-27 02:38:04
R2-1916383	DRX adaptions for NTN	Ericsson, Nomor Research GmbH, THALES	revised	2019-11-27 02:00:00	2019-11-27 02:00:00

R2-1916384	UE positioning requirements and solution analysis in NTN	Nokia, Nokia Shanghai Bell,	noted	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916385	Discussion on Earth fixed vs. Earth moving cells in NTN LEO	Nokia, Nokia Shanghai Bell,	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916386	TP on Feeder Link Switch	CATT, Huawei, HiSilicon	revised	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916387	Service continuity between TN and	NEC	noted	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916388	Remaining details on Random	Ericsson	revised	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916389	Satellite type differentiation	ZTE Corporation, Sanechips	noted	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916390	CHO for NTN LEO	Ericsson	revised	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916391	Report of email discussion	Ericsson	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916392	TP on RACH capacity calculation based on typical cell size	ZTE Corporation, Sanechips	agreed	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916393	CHO for NTN LEO	Ericsson	agreed	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916394	LS on dependencies on AS design for mobility management aspects of	RAN2	revised	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916395	LS on LS on system level design assumptions for satellite in 5GS	RAN2	revised	2019-11-27 02:28:13	2019-11-27 02:38:04
R2-1916396	Inputs to TR 38.821 recommendations	THALES, Nomor, Nokia, Vodafone, Mediatek	revised	2019-11-27 02:28:14	2019-11-27 02:38:04
R2-1916397	Inputs to TR 38.821 recommendations	THALES, Nomor, Nokia, Vodafone, Mediatek	agreed	2019-11-27 02:28:14	2019-11-27 11:55:45
R2-1916398	Correction to PHR in dual connectivity	Qualcomm Inc, Nokia, Nokia Shanghai Bell,	agreed	2019-11-27 02:28:14	2019-11-27 22:08:48
R2-1916399	Correction for the establishment of LTE RLC bearers for (NG)EN-DC	Huawei, HiSilicon	agreed	2019-11-27 02:28:16	2019-11-27 22:08:48
R2-1916400	Clarification regarding QoS handling in MRDC with 5G CN	Samsung, ZTE Corporation	agreed	2019-11-27 02:28:21	2019-11-27 22:08:48
R2-1916401	UE capability on NR positioning	Intel Corporation	withdrawn	2019-11-27 02:28:22	
R2-1916402	[Report of Offline#502]	Ericsson	noted	2019-11-27 02:28:22	2019-11-27 02:38:04
R2-1916403	Summary of Offline discussion #503 on whether to have one	CATT	revised	2019-11-27 02:28:22	2019-11-27 02:38:04
R2-1916404	[Report of Offline#504]	Ericsson	withdrawn	2019-11-27 02:28:22	2019-11-27 02:38:04
R2-1916405	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc	reserved	2019-11-27 02:28:22	
R2-1916406	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated	endorsed	2019-11-27 02:28:23	2019-11-27 02:38:04
R2-1916407	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated	endorsed	2019-11-27 01:53:42	2019-11-27 01:58:01
R2-1916408	CR of TS 36.305 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs	endorsed	2019-11-27 02:28:25	2019-11-27 02:38:04
R2-1916409	SSR Phase Bias Positioning Modes	Swift Navigation	endorsed	2019-11-27 02:28:26	2019-11-27 02:38:04
R2-1916410	SSR Phase Bias Positioning Modes	Swift Navigation	withdrawn	2019-11-27 02:28:26	

R2-1916411	Introducing support for GNSS Integer Ambiguity Level Indications	Ericsson	revised	2019-11-27 02:28:26	2019-11-27 02:38:04
R2-1916412	Introducing support for GNSS Integer Ambiguity Level Indications	Ericsson	endorsed	2019-11-27 02:28:26	2019-11-27 02:38:04
R2-1916413	Missing RACH aspect for DC	Nokia, Nokia Shanghai Bell, ZTE Corporation	agreed	2019-11-27 02:28:26	2019-11-27 22:08:48
R2-1916414	Remaining details on Random	Ericsson	endorsed	2019-11-27 02:28:27	2019-11-29 08:51:06
R2-1916415	DRX adaptions for NTN	Ericsson	endorsed	2019-11-27 02:28:27	2019-11-29 08:51:06
R2-1916416	[DRAFT] LS on trace related	Huawei	revised	2019-11-27 02:28:28	2019-11-27 02:38:04
R2-1916417	[DRAFT] LS on EN-DC related	Ericsson	revised	2019-11-27 02:28:28	2019-11-27 02:38:04
R2-1916418	[DRAFT]LS on Logged	CMCC	revised	2019-11-27 02:28:28	2019-11-27 02:38:04
R2-1916419	RAN2-108#661 offline discussion	Ericsson	noted	2019-11-27 02:28:28	2019-11-27 02:38:04
R2-1916420	[DRAFT] LS on RACH report and	Ericsson	revised	2019-11-27 02:28:28	2019-11-27 02:38:04
R2-1916421	Clarification of PDCCH monitoring when not fully aligned with PDCCH	NTT DOCOMO INC.	revised	2019-11-27 02:28:28	2019-11-27 02:38:04
R2-1916422	Stop using redirectedCarrierOffsetDedicated	Huawei, HiSilicon	agreed	2019-11-27 01:54:47	2019-11-27 01:58:01
R2-1916423	Allow Delta Configuration of ParametersListFmt2 and ParametersListEDTFmt2 in SIB2-NB	MediaTek Inc., ZTE Corporation, Sanechips, Huawei, HiSilicon	agreed	2019-11-27 01:54:42	2019-11-27 01:58:01
R2-1916424	RAN2 agreements for Rel-16 additional enhancements for NB-	Blackberry	endorsed	2019-11-27 02:28:31	2019-12-03 13:16:47
R2-1916425	[DRAFT] LS on PUR Fallback	Qualcomm	revised	2019-11-27 02:28:31	2019-11-27 02:38:04
R2-1916426	Draft LS reply PUR transmission for NB-IoT/eMTC	Ericsson	revised	2019-11-27 02:28:31	2019-11-27 02:38:04
R2-1916427	Alternative TP for TA validation based on serving cell RSRP	Sierra Wireless	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916428	[Report from Offline discussion	Qualcomm	withdrawn	2019-11-27 02:28:31	
R2-1916429	[Report from Offline discussion	Qualcomm	noted	2019-11-27 02:28:31	2019-11-27 02:38:04
R2-1916430	Offline discussion #702 (Qualcomm) To discuss the	Qualcomm Incorporated	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916431	Report of [Offline#705] Further	Ericsson	noted	2019-11-27 02:28:32	2019-11-27 02:38:04
R2-1916432	Report of [Offline#706] whether to re-use SIB14-NB or have new SIB	Huawei (Rapporteur)	noted	2019-11-27 02:28:32	2019-11-27 02:38:04
R2-1916433	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm Incorporated	revised	2019-11-27 02:28:32	2019-11-27 02:38:04
R2-1916434	[DRAFT] Feedback on RAN1 agreements on PUR	Qualcomm	revised	2019-11-27 02:28:32	2019-11-27 02:38:04
R2-1916435	LS reply PUR transmission for NB-IoT/eMTC	RAN2	approved	2019-11-27 02:28:32	2019-11-27 02:38:04
R2-1916436	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm Incorporated	revised	2019-11-27 02:28:33	2019-11-27 02:38:04
R2-1916437	Feedback on RAN1 agreements on PUR	RAN2	approved	2019-11-27 02:28:33	2019-11-27 02:38:04
R2-1916438	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm Incorporated	revised	2019-11-27 02:28:33	2019-11-27 02:38:04
R2-1916439	Clarification of PDCCH monitoring when not fully aligned with PDCCH	NTT DOCOMO INC.	agreed	2019-11-27 02:28:33	2019-11-27 02:38:04
R2-1916440	Reply LS on assistance indication for WUS	RAN2	approved	2019-11-27 02:28:35	2019-11-27 02:38:05
R2-1916441	Reply LS on signalling of sidelink	RAN2	revised	2019-11-27 02:28:35	2019-11-27 02:38:05
R2-1916442	[DRAFT] Response LS on SL	InterDigital	revised	2019-11-27 02:28:35	2019-11-27 02:38:05
R2-1916443	[DRAFT] Response LS on additional high layer information for	LGE	revised	2019-11-27 02:28:36	2019-11-27 02:38:05
R2-1916444	[DRAFT] Reply LS on resource coordination between NG-RAN	Ericsson	revised	2019-11-27 02:28:36	2019-11-27 02:38:05
R2-1916445	[DRAFT] Reply LS on sidelink synchronization under multiple	Qualcomm	revised	2019-11-27 02:28:36	2019-11-27 02:38:05
R2-1916446	[DRAFT] Reply LS on PC5S and PC5 RRC unicast message	Qualcomm Incorporated	revised	2019-11-27 02:28:36	2019-11-27 02:38:05
R2-1916447	Offline discussion on open issues of	Huawei	noted	2019-11-27 02:28:36	2019-11-27 02:38:05
R2-1916448	[DRAFT] Response LS on TX resource (re-)selection and MAC	LGE	revised	2019-11-27 02:28:36	2019-11-27 02:38:05

R2-1916449	Running CR for 38.322 for NR V2X	Ericsson	endorsed	2019-11-27 02:28:37	2019-11-27 02:38:05
R2-1916450	[Results of Offline#810]	OPPO	noted	2019-11-27 02:28:37	2019-11-27 02:38:05
R2-1916451	[Discussion on remaining	OPPO	noted	2019-11-27 02:28:37	2019-11-27 02:38:05
R2-1916452	Summary of offline [Offline-812] on HFN part of RX_NEXT and	CATT	noted	2019-11-27 02:28:37	2019-11-27 02:38:05
R2-1916453	[DRAFT] LS on NR V2X Security	CATT	revised	2019-11-27 02:28:37	2019-11-27 02:38:05
R2-1916454	Summary of offline [814] on sidelink transmissions during handover or	Nokia, Nokia Shanghai Bell	noted	2019-11-27 02:28:37	2019-11-27 02:38:05
R2-1916455	Summary on Offline [815] SL Synchronization under Async	Apple	noted	2019-11-27 02:28:37	2019-11-27 02:38:05
R2-1916456	Open issues on V2X 38.322 running	Ericsson	noted	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916457	Reply LS on signalling of sidelink	RAN2	approved	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916458	Response LS on additional high layer information for sidelink	RAN2	approved	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916459	Reply LS on resource coordination between NG-RAN nodes for NR	RAN2	approved	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916460	Response LS on TX resource (re-)selection and MAC related	RAN2	approved	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916461	Reply LS on PC5S and PC5 RRC	RAN2	approved	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916462	[DRAFT] Reply LS on UL-SL	OPPO	revised	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916463	[DRAFT] LS on NR V2X Security	CATT	revised	2019-11-27 02:28:38	2019-11-27 02:38:05
R2-1916464	Response LS on SL RLM/RLF	RAN2	revised	2019-11-27 02:28:39	2019-11-27 02:38:05
R2-1916465	Reply LS on sidelink synchronization under multiple	RAN2	approved	2019-11-27 02:28:39	2019-11-27 02:38:05
R2-1916466	[DRAFT] Reply LS on UL-SL	OPPO	revised	2019-11-27 02:28:39	2019-11-27 02:38:05
R2-1916467	LS on NR V2X Security issue and	RAN2	approved	2019-11-27 02:28:39	2019-11-27 02:38:05
R2-1916468	Reply LS on UL-SL prioritization	RAN2	approved	2019-11-27 02:28:39	2019-11-27 02:38:05
R2-1916469	Ericsson (Email discussion	Ericsson LM	endorsed	2019-11-27 02:28:39	2019-11-29 14:36:19
R2-1916470	LS on dependencies on AS design for mobility management aspects of	RAN2	approved	2019-11-27 02:28:39	2019-11-29 14:36:19
R2-1916471	Correction on sending Failure Information via SRB3	Ericsson, ZTE Corporation (Rapporteur),	agreed	2019-11-27 02:28:39	2019-11-27 02:38:05
R2-1916472	Running stage 2 CR on positioning (	Intel Corporation, ESA	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916473	SMTC setting for NR PSCell change in MR-DC	Nokia, Nokia Shanghai Bell	agreed	2019-11-27 02:28:41	2019-11-27 02:38:05
R2-1916474	Correction to integrity protection in DRB addition and modification	Ericsson	agreed	2019-11-27 02:28:42	2019-11-27 02:38:05
R2-1916475	On performing L3 filtering for NR	Ericsson	agreed	2019-11-27 01:55:21	2019-11-27 01:58:01
R2-1916476	Corrections on scg-RB-Config in	Ericsson	agreed	2019-11-27 02:28:45	2019-11-27 02:38:05
R2-1916477	Draft LS to RAN1 for clarification of	RAN2	revised	2019-11-27 02:28:46	2019-11-27 02:38:05
R2-1916478	Broadcast Positioning Procedure in	CATT	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916479	Correction on the condition of	Ericsson	agreed	2019-11-27 02:28:46	2019-11-27 02:38:05
R2-1916480	Correction on the configuration of split SRB	Huawei, HiSilicon,	agreed	2019-11-27 02:28:47	2019-11-27 02:38:05
R2-1916481	LS to RAN1 for clarification of PUCCH configuration	RAN2	approved	2019-11-27 02:28:49	2019-11-27 02:38:05
R2-1916482	LS on Discussion over UE capabilities of FG2-36/2-40/2-41/2-	RAN1	noted	2019-11-27 02:28:49	2019-11-27 02:38:05
R2-1916483	Correction to key derivation for the UE configured with sk-counter	Huawei, HiSilicon	revised	2019-11-27 02:28:49	2019-11-27 02:38:05
R2-1916484	Correction on the pre-condition for reconfiguration with sync of SCG	Huawei, HiSilicon	agreed	2019-11-27 02:28:50	2019-11-27 11:02:32
R2-1916485	Restoring SDAP and RoHC	Intel	agreed	2019-11-27 02:28:51	2019-11-27 02:38:05
R2-1916486	Security requirements for split	Ericsson,	revised	2019-11-27 02:28:52	2019-11-27 02:38:05
R2-1916487	Additional path reporting for downlink NR positioning measurements	Ericsson, T-Mobile, Nokia, Nokia Shanghai Bell, Deutsche Telekom, Polaris	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916488	Definition of NR standalone	Ericsson	postponed	2019-11-27 02:28:53	
R2-1916489	Correction of UE assistance information	Samsung Telecommunicati	revised	2019-11-27 02:28:55	2019-11-27 02:38:05
R2-1916490	Correction of UE assistance information	Samsung Telecommunicati	endorsed	2019-11-27 02:28:56	2019-11-27 02:38:05

R2-1916491	Correction on SIB1 description	Huawei, HiSilicon	agreed	2019-11-27 02:28:58	2019-11-27 02:38:05
R2-1916492	IAB flow control feedback info	Qualcomm Incorporated	noted	2019-11-27 02:29:00	2019-11-27 02:38:05
R2-1916493	Clarification regarding inter-node transfer of UE capability containers	Samsung Telecommunicati	agreed	2019-11-27 02:29:00	2019-11-27 02:38:05
R2-1916494	Miscellaneous corrections for late	Ericsson	agreed	2019-11-27 01:51:27	2019-11-27 01:58:01
R2-1916495	[107bis#34]Correction on ambiguity of UE FDD&TDD FR1&FR2 capabilities	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd	revised	2019-11-27 02:29:02	2019-11-27 02:38:05
R2-1916496	[DRAFT] LS on default codebook parameters	Nokia, Nokia Shanghai Bell	revised	2019-11-27 02:29:03	2019-11-27 02:38:05
R2-1916497	Issue related to CG overridden by	ASUSTeK	noted	2019-11-27 02:29:03	2019-11-27 02:38:05
R2-1916498	Report for [107bis#36] [NR R15] FR2 CA Fallbacks (Nokia)	Nokia, Nokia Shanghai Bell	postponed	2019-11-27 02:29:03	2019-11-27 02:38:05
R2-1916499	Report of Offline#26, absence of scs-XXkHz in channelBWs-DL/UL	Ericsson	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916500	CR to 38.331 on support of 70MHz channel bandwidth -option1 with	Huawei, HiSilicon,	not treated	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916501	CR to 38.306 on support of 70MHz channel bandwidth -option1 with	Huawei, HiSilicon,	not treated	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916502	Use of splitSRB-WithOneUL-Path	Ericsson	agreed	2019-11-27 02:29:05	2019-11-27 02:38:05
R2-1916503	[DRAFT] LS on Uplink skipping	vivo	revised	2019-11-27 02:29:06	2019-11-27 02:38:05
R2-1916504	Upper layer parameters to support IAB physical layer operation	Qualcomm (Rapporteur)	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916505	TP on Random Access procedure	CATT, Thales, OPPO, Spreadtrum Communications, Nomor Research	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916506	F1AP signalling over LTE leg way forward	Nokia, Nokia Shanghai Bell,	noted	2019-11-27 02:29:06	2019-11-27 02:38:05
R2-1916507	Miscellaneous corrections on UE capability fields	Intel Corporation, NTT DoCoMo	agreed	2019-11-27 02:29:06	2019-11-27 02:38:05
R2-1916508	Measurement Initiation Issue for	CATT, Thales	revised	2019-11-27 02:29:08	2019-11-27 02:38:05
R2-1916509	[DRAFT] LS on secondary DRX	Ericsson	revised	2019-11-27 02:29:08	2019-11-27 02:38:05
R2-1916510	Miscellaneous Corrections	Qualcomm Incorporated,	agreed	2019-11-27 02:29:08	2019-11-27 02:38:05
R2-1916511	Offline 34, IAB bootstrap configuration	Qualcomm Incorporated (Rapporteur)	noted	2019-11-27 02:29:09	2019-11-27 02:38:05
R2-1916512	Motivation for a dedicated mechanism for misaligned	Nokia, Nokia Shanghai Bell,	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916513	Handling of AS-Config in	Ericsson	agreed	2019-11-27 02:29:09	2019-11-27 02:38:05
R2-1916514	Correction of SRB3 handling at full	Ericsson	agreed	2019-11-27 02:29:10	2019-11-27 02:38:05
R2-1916515	Reply LS on Fast MCG Link Recovery using SRB3 (R3-197606;	RAN3	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916516	Reply LS on Recommended Bit Rate/Query for FLUS and MTSI	RAN2	approved	2019-11-27 02:29:11	2019-11-27 02:38:05
R2-1916517	Reply LS on direct indication of ETWS/CMAS (R1-1913367;	RAN1	noted	2019-11-27 02:29:11	2019-11-27 02:38:05
R2-1916518	Running CR for 36.300 on CA/DC Enhancements	Ericsson	endorsed	2019-11-27 02:29:11	2019-12-13 20:15:45
R2-1916519	Running CR for 38.300 for CA/DC Enhancements	Ericsson	endorsed	2019-11-27 02:29:11	2019-12-13 20:15:45
R2-1916520	Reply LS on Sending CAG ID in NAS layer (R3-197591; contact:	RAN3	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916521	Measurement Initiation Issue for	CATT, Thales	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916522	Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED	Ericsson	revised	2019-11-27 02:29:11	2019-11-27 02:38:05
R2-1916523	Correction to Feature Set Combination and Band combination	Ericsson	agreed	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916524	[DRAFT] LS on measurement	Nokia	revised	2019-11-27 02:00:00	2019-11-27 02:00:00

R2-1916525	Correction on MCG measurements	Ericsson	agreed	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916526	Summary of Offline 52: TP for LCH-priority based Data-Data and SR-	Samsung	noted	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916527	[Summary of] Offline 53, CG/SPS configuration and MAC CE for	Nokia, Nokia Shanghai Bell	noted	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916528	Reply LS on CSI-RS configuration	RAN2	approved	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916529	Restoring SDAP and RoHC contexts during Resumption	Intel	agreed	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916530	LS on RRC establishment cause value in EPS voice fallback from	RAN2	approved	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916531	Summary of offline #40 on UE	CATT	noted	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916532	Offline discussion about Power control for NR-DC	vivo	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916533	Summary of Offline discussion #503 on whether to have one	CATT	reserved	2019-11-27 10:11:53	
R2-1916534	Correction to AS security key	Ericsson	agreed	2019-11-27 01:54:54	2019-11-27 01:58:01
R2-1916535	Correction to AS security key	Ericsson	agreed	2019-11-27 02:44:34	2019-11-27 02:48:01
R2-1916536	Reply LS on SL RLM/RLF (R1-	RAN1	noted	2019-11-27 02:44:35	2019-11-27 02:48:01
R2-1916537	Way forward and TP for the pre-	Huawei, HiSilicon	endorsed	2019-11-27 02:44:35	2019-11-27 02:48:01
R2-1916538	TP for Timing Delta MAC CE	ZTE	endorsed	2019-11-27 02:44:35	2019-11-27 02:48:01
R2-1916539	Running CR to 38.321 on Integrated Access and Backhaul for NR	Samsung Electronics	endorsed	2019-11-27 02:44:35	2019-11-27 02:48:01
R2-1916540	[DRAFT] LS on F1AP over LTE leg signalling for IAB	Nokia, Nokia Shanghai Bell	revised	2019-11-27 02:44:36	2019-11-27 02:48:01
R2-1916541	LS on UE capabilities and RRC signalling on Tx switching period	RAN4	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916542	LS on UE capability of intraBandENDC-Support (R4-	RAN4	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916543	[DRAFT] LS on inter-RAT HO from	China Telecom	revised	2019-11-27 02:44:36	2019-11-27 02:48:01
R2-1916544	[Draft] LS on Network Coordination for UL PDCP Duplication	Nokia, Nokia Shanghai Bell	revised	2019-11-27 02:44:36	2019-11-27 02:48:01
R2-1916545	NE-DC dynamic power sharing capability	Qualcomm Incorporated	agreed	2019-11-27 02:44:36	2019-11-27 02:48:01
R2-1916546	Correction on initial BWP	Huawei, HiSilicon	agreed	2019-11-27 02:44:37	2019-11-27 02:48:01
R2-1916547	Need for Ethernet padding	RAN2	approved	2019-11-27 02:44:38	2019-11-27 02:48:01
R2-1916548	Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16	China Telecommunications, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO,	revised	2019-11-27 02:44:38	2019-11-27 02:48:01
R2-1916549	Corrections on the PDCP	Huawei, HiSilicon	revised	2019-11-27 02:44:38	2019-11-27 02:48:01
R2-1916550	Clarification for PDCP duplication	Huawei	postponed	2019-11-27 02:44:39	2019-11-27 02:48:01
R2-1916551	Correction on PRACH procedure	Huawei, HiSilicon	agreed	2019-11-27 02:44:39	2019-11-27 02:48:01
R2-1916552	Correction on CORESET location	Huawei, HiSilicon	agreed	2019-11-27 02:44:40	2019-11-27 02:48:01
R2-1916553	Work plan for Industrial IoT WI	Nokia	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916554	Text Proposal for TS 36.331 for support of F1AP signalling over	Nokia, Nokia Shanghai Bell	endorsed	2019-11-27 02:44:41	2019-11-27 02:48:01
R2-1916555	TP on Feeder Link Switch	CATT, Huawei, HiSilicon	agreed	2019-11-27 02:44:41	2019-11-27 02:48:01
R2-1916556	PSCell MIB configuration in MR-	MediaTek Inc.	noted	2019-11-27 02:44:41	2019-11-27 02:48:01
R2-1916557	Corrections on the PDCP	Huawei, HiSilicon	postponed	2019-11-27 02:44:41	2019-11-27 02:48:01
R2-1916558	Report of offline discussion #202	LG Electronics Inc	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916559	[DRAFT] LS on Additional frequency information for SRS	LGE	noted	2019-11-27 02:44:42	2019-11-27 02:48:01
R2-1916560	PDCP configuration generation	Huawei, HiSilicon	revised	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916561	Check RAN1 impacts of UE autonomous transmission of de-	Qualcomm Incorporated	noted	2019-11-27 02:44:44	2019-11-27 02:48:01
R2-1916562	Introduction of additional	Huawei	endorsed	2019-11-27 02:44:44	2019-12-16 09:44:08
R2-1916563	LS on updates for TS 36.300 and TS 38.300	RAN2	approved	2019-11-27 02:44:44	2019-12-19 18:12:57
R2-1916564	Report of [108#19] When to resume DRBs in UP optimization for 5GC	Ericsson (Rapporteur)	noted	2019-11-27 02:44:44	2019-12-19 18:30:15
R2-1916565	Introduction of Rel-16 NB-IoT	Nokia	endorsed	2019-11-27 02:44:44	2019-12-18 06:04:26
R2-1916566	Introduction of additional enhancements for NB-IoT in TS	Huawei	endorsed	2019-11-27 02:44:44	2019-12-18 10:29:53

R2-1916567	Introduction of additional enhancements for NB-IoT in TS	Huawei	endorsed	2019-11-27 02:44:44	2019-12-17 09:06:27
R2-1916568	Running CR on 36.321 for NB-IoT	Ericsson	endorsed	2019-11-27 02:44:44	2019-12-17 09:39:32
R2-1916569	Introduction to additional enhancements NB-IoT Rel-16	BlackBerry	endorsed	2019-11-27 02:44:44	2019-12-17 14:38:24
R2-1916570	Introduction of additional enhancements for NB-IoT	Qualcomm Incorporated	endorsed	2019-11-27 02:44:44	2019-12-13 20:14:58
R2-1916571	Correction on ambiguity of UE FDD/TDD FR1/FR2 capabilities	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd	agreed	2019-11-27 02:44:44	2019-11-27 22:08:48
R2-1916572	LS on Uplink skipping	RAN2	approved	2019-11-27 02:44:46	2019-11-27 02:48:01
R2-1916573	Draft CR to 36.331 on Integrated Access and Backhaul for (NG)EN-	Ericsson	reserved	2019-11-27 02:44:46	
R2-1916574	Running CR to TS 38.331 on IAB	Ericsson	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916575	[DRAFT] LS on introduction of	Nokia	withdrawn	2019-11-27 02:44:46	
R2-1916576	LS on Network Coordination for UL	RAN2	approved	2019-11-27 02:44:46	2019-11-27 02:48:01
R2-1916577	LS on F1AP over LTE leg signalling	RAN2	approved	2019-11-27 02:44:46	2019-11-27 02:48:01
R2-1916578	LS on channel raster for NR V2X UE (R4-1916146; contact: CATT)	RAN4	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916579	LS on EN-DC related MDT	RAN2	approved	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916580	LS on RACH report and RLF report	RAN2	approved	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916581	Offline discussion summary of UL dormancy behaviour	Qualcomm Incorporated	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916582	Offline discussion [#45] cross-carrier scheduling CR	Qualcomm Incorporated	noted	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916583	CR to 38.331 on support of cross-carrier scheduling with different	Qualcomm Incorporated	endorsed	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916584	[Draft] LS on FR2 gap timing impacts of async CA	Qualcomm Incorporated	noted	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916585	LS reply on CSI/SRS reporting (R1-	RAN1	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916586	Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16	China Telecommunications, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO,	agreed	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916587	[Draft] LS on RAN2 progress on SCell uplink behaviour of the UE in	Intel	revised	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916588	LS on MDT Measurements	RAN2	approved	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916589	Security requirements for split	Ericsson,	agreed	2019-11-27 02:44:47	2019-11-27 02:48:01
R2-1916590	[DRAFT] Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC	Ericsson	available	2019-11-27 02:00:00	2019-11-27 02:00:00
R2-1916591	Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED	Ericsson	endorsed	2019-11-27 02:44:48	2019-11-27 02:48:01
R2-1916592	LS on default codebook parameters	RAN2	approved	2019-11-27 02:44:48	2019-11-27 02:48:01
R2-1916593	Clarification on ne-DC capability	Huawei, HiSilicon	agreed	2019-11-27 02:44:48	2019-11-27 02:48:01
R2-1916594	Clarification on the en-DC and ng-	Huawei, HiSilicon	agreed	2019-11-27 02:44:49	2019-11-27 02:48:01
R2-1916595	LS on measurement reporting	RAN2	approved	2019-11-27 10:14:38	2019-11-27 10:18:01
R2-1916596	Overheating issue in (NG)EN-DC	Huawei, HiSilicon	postponed	2019-11-27 02:45:20	2019-11-27 02:48:01
R2-1916597	LS on secondary DRX group	RAN2	approved	2019-11-27 02:45:20	2019-11-27 02:48:01
R2-1916598	LS on trace related configurations	RAN2	approved	2019-11-27 02:45:20	2019-11-27 02:48:01
R2-1916599	LS on handover without SN	Huawei	revised	2019-11-27 02:45:20	2019-11-27 02:48:01
R2-1916600	LS on inter-RAT HO from SA to EN-	RAN2	approved	2019-11-27 02:45:21	2019-11-27 02:48:01
R2-1916601	LS on RAN2 progress on Scell uplink behaviour of the UE in	RAN2	approved	2019-11-27 02:45:21	2019-11-27 02:48:01
R2-1916602	PDCP configuration generation	Huawei, HiSilicon	agreed	2019-11-27 13:26:37	2019-11-29 00:41:22
R2-1916603	IP version on X2-U	R3 (Huawei)	agreed	2019-11-28 16:55:07	2019-11-29 00:41:02
R2-1916604	Correction to MR-DC with 5GC	R3 (Google)	agreed	2019-11-28 19:50:29	2019-11-29 00:41:02
R2-1916605	Independent migration to IPv6 on	R3 (Samsung)	agreed	2019-11-28 21:15:23	2019-11-29 00:41:02

R2-1916606	Correction of SN Status Transfer during HO with DC	R3 (Nokia, Nokia Shanghai Bell)	agreed	2019-11-28 22:58:13	2019-11-29 00:41:02
R2-1916607	Correction of QoS flow re-mapping	R3 (Ericsson)	agreed	2019-11-28 23:03:00	2019-11-29 00:41:02
R2-1916608	CR TS 38.300 Remote Interference	R3 (Ericsson,	agreed	2019-11-28 23:09:08	2019-11-29 00:41:02
R2-1916609	Introduction of Additional RRM Policy Index (ARPI)	R3 (Ericsson, Vodafone, Deutsche Telekom, Verizon Wireless, TIM,	agreed	2019-11-28 23:14:11	2019-11-29 00:41:02
R2-1916610	Stage2 Introduction of ARPI&SPID	R3 (ZTE)	revised	2019-11-28 23:22:26	2019-11-29 00:41:02
R2-1916611	DRB ID co-ordination between MN	R3 (Ericsson)	revised	2019-11-28 23:28:47	2019-11-29 00:41:02
R2-1916612	Introduction of direct data forwarding for inter-system HO between EPS and 5GS	R3 (Ericsson, NTT DoCoMo, Samsung, Nokia, Huawei, ZTE,	agreed	2019-11-28 23:35:11	2019-11-29 00:41:02
R2-1916613	Correcting misbehaviors and clean-ups on 37.340 related to PDU session spilt	R3 (Intel Corporation, Nokia, Nokia	agreed	2019-11-28 23:47:54	2019-11-29 00:41:02
R2-1916614	Resuming SCG in RRC Resume	R3 (Ericsson)	revised	2019-11-28 23:52:32	2019-11-29 00:41:02
R2-1916615	Stage2 Clarifications for RRC_Inactive with MR-DC@5GC	R3 (ZTE, Qualcomm Incorporated, China Telecom,	agreed	2019-11-28 23:59:28	2019-11-29 00:41:02
R2-1916616	Correction of NG connection in MR DC	R3 (Nokia, Nokia Shanghai Bell,	agreed	2019-11-29 00:05:04	2019-11-29 00:41:02
R2-1916617	Correcting misbehaviors and clean-ups on 37.340 related to data	R3 (Intel Corporation,	agreed	2019-11-29 00:11:06	2019-11-29 00:41:02
R2-1916618	TS36.300 Removal of Requirement for Exchanging Complete Cell List	R3 (ZTE, Ericsson, China	agreed	2019-11-29 00:17:18	2019-11-29 00:41:02
R2-1916619	Clarification on the offered non-GBR resources	R3 (Huawei, Ericsson, China Unicom, CMCC)	revised	2019-11-29 00:25:48	2019-11-29 00:41:02
R2-1916620	LS on LS on system level design assumptions for satellite in 5GS	RAN2	approved	2019-11-29 12:36:55	2019-11-30 01:04:03
R2-1916621	Response LS on SL RLM/RLF	RAN2	approved	2019-11-29 14:17:13	2019-11-30 01:04:03
R2-1916622	LS on handover without SN	RAN2	approved	2019-11-30 00:52:24	2019-11-30 01:04:03
R2-1916623	Reply LS on extended NAS timers for CE in 5GS	Ericsson	approved	2019-12-03 13:27:29	2019-12-03 16:13:49
R2-1916624	DRB ID co-ordination between MN and SN	Ericsson, ZTE Corporation (Rapporteur)	agreed	2019-12-04 11:32:54	2019-12-04 21:15:17
R2-1916625	Resuming SCG in RRC Resume	Ericsson, ZTE Corporation (Rapporteur)	agreed	2019-12-04 11:35:31	2019-12-04 21:14:59
R2-1916626	Clarification on UE Inactive AS context	Google Inc.	agreed	2019-12-05 02:07:13	2019-12-05 03:21:56
R2-1916627	Miscellaneous non-controversial	Ericsson	agreed	2019-12-05 02:08:04	2019-12-05 03:21:56
R2-1916628	Correction on the EUTRAN	Huawei, HiSilicon	agreed	2019-12-05 02:09:02	2019-12-05 03:21:56
R2-1916629	Correction to key derivation for the UE configured with sk-counter	Huawei, HiSilicon	agreed	2019-12-05 02:09:59	2019-12-05 03:21:56
R2-1916630	Correction to Pcompensation for	Huawei, HiSilicon	agreed	2019-12-05 02:11:39	2019-12-05 03:21:56
R2-1916631	Stage2 Introduction of ARPI&SPID	R3 (ZTE)	agreed	2019-12-05 02:12:35	2019-12-05 03:21:56
R2-1916632	Correction of UE assistance information	Samsung Telecommunicati	agreed	2019-12-05 02:13:35	2019-12-05 03:21:56
R2-1916633	Clarification on security key change and bearer termination point change	ZTE Corporation, Ericsson, Intel	agreed	2019-12-05 02:15:33	2019-12-05 03:21:56
R2-1916634	Clarification of NR-DC	ZTE Corporation	agreed	2019-12-05 02:16:27	2019-12-05 03:21:56
R2-1916635	Clarification on the offered non-GBR resources	R3 (Huawei, Ericsson, China Unicom, CMCC)	agreed	2019-12-05 03:19:02	2019-12-05 03:21:56
R2-1916636	Draft TS 38.340 (BAP)	Huawei	withdrawn	2019-12-16 08:01:30	
R2-1916637	Support for Non-Public Networks	Nokia	endorsed	2019-12-17 05:39:48	2019-12-17 09:05:04
R2-1916638	Running CR Introduction of 5G V2X	LG Electronics	endorsed	2019-12-17 08:59:30	2019-12-17 12:29:22

R2-1916639	Introduction of Cross Link Interference (CLI) handling and	LG Electronics Inc.	**endorsed**	2019-12-17 11:14:11	2019-12-17 12:29:22
R2-1916640	Introduction of T312 for PCell and PSCell in NR (Draft)	Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated	**endorsed**	2019-12-17 11:17:00	2019-12-18 13:20:54
R2-1916641	CR to 38.300 on Integrated Access	Qualcomm	**endorsed**	2019-12-18 06:01:27	2019-12-19 09:14:41
R2-1916642	Running CR to 37.340 for CA_DC enhancements	vivo, Ericsson	**endorsed**	2019-12-19 16:20:04	2019-12-20 07:52:41
R2-1916643	Text proposal of power control for NR-DC	vivo	**endorsed**	2019-12-19 16:39:28	2019-12-20 07:52:41
R2-1916644	Report of [108#45][LTE NR Mob] UE feature list for LTE and NR	Intel Corporation	reserved	2019-12-19 18:24:53	
R2-1916645	LS on clarification of CLI resource configuration	RAN2	**approved**	2019-12-20 19:41:58	2019-12-20 19:42:35

APPENDIX E

3GPP TSG-RAN WG2 meeting #109bis-e **R2-2002501**
Agenda Item: 2.2
Source: ETSI MCC
Title: Report of 3GPP TSG RAN2#109-e meeting, Online

Document for: Approval

Report of 3GPP TSG RAN WG2 meeting #109-e
Online
24 February - 06 March, 2020

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Table of Contents

ORGANISATION OF THE MEETING 9

STATISTICS/EXECUTIVE SUMMARY 9

1 OPENING OF THE MEETING 9

1.1 Call for IPR 10

1.2 Network usage conditions 10

1.3 Other 10

1.4 Statement Regarding Engagement with Companies Added to the U.S. Export Administration Regulations (EAR) Entity List in 3GPP Activities 11

2 GENERAL 12

2.1 Approval of the agenda 12

2.2 Approval of the report of the previous meeting 12

2.3 Reporting from other meetings 12

2.4 Others 12

General discussions by email, not captured under a specific Agenda Item 13

3 INCOMING LIAISONS 14

4 EUTRA CORRECTIONS REL-15 AND EARLIER 14

4.1 NB-IoT corrections Rel-15 and earlier 14

4.2 eMTC corrections Rel-15 and earlier 16

4.3 V2X and Sidelink corrections Rel-15 and earlier 17

4.4 Positioning corrections Rel-15 and earlier 17

4.5 Other LTE corrections Rel-15 and earlier 17

5 WI: NEW RADIO (NR) ACCESS TECHNOLOGY 22

5.1 Organisational 22

5.2 Stage 2 23

5.2.1 Stage 2 corrections for TS 38.300 23

5.2.2 Stage 2 corrections for TS 37.340 23

5.2.3 Positioning 24

5.3 Stage 3 user plane 25
5.3.1 MAC 25
5.3.2 RLC 25
5.3.3 PDCP 25
5.3.4 SDAP 26

5.4 Stage 3 control plane 26
5.4.1 NR RRC 26
5.4.1.1 Connection control 26
5.4.1.2 RRM and Measurements and Measurement Coordination 29
5.4.1.3 System information 30
5.4.1.4 Inter-Node RRC messages 31
5.4.1.5 Other 32
5.4.2 LTE changes related to NR 33
5.4.3 UE capabilities and Capability Coordination 33
5.4.4 Idle/inactive mode procedures 41

5.5 Void 42

6 REL-16 NR WORK ITEMS 42

6.0 Rel-16 Organizational 42
6.0.1 RRC 42
6.0.2 Feature List and UE capabilities 44
6.0.3 Other 45

6.1 Integrated Access and Backhaul for NR 46
6.1.1 Organisational 47
6.1.2 Stage-2 and general 51
6.1.3 BAP functionality 51
6.1.4 User plane aspects 54
6.1.5 Control plane aspects 57
6.1.5.2 Configuration 57
6.1.5.3 Other 59

6.2 NR-based Access to Unlicensed Spectrum 60
6.2.1 General 60
6.2.2 User plane 64
6.2.2.1 RACH 68
6.2.2.2 Handling UL LBT failures 68
6.2.2.3 Configured grant operation 69
6.2.2.4 Other 69
6.2.3 Control plane 70
6.2.3.1 Mobility and RRM 71
6.2.3.2 Other 72

6.4 NR V2X 72
6.4.1 General 72
6.4.2 Control plane 73
6.4.2.1 RRC 74
6.4.2.2 Others 77
6.4.3 User plane 78
6.4.3.1 MAC 78
6.4.3.2 Others 83
6.4.4 Others 85

6.5 Optimisations on UE radio capability signalling 85

6.5.1 Organisational 85
6.5.2 UE radio capability signalling using UE capability identity 86
6.5.3 Segmentation of UE radio capabilities 87

6.6 Void 87

6.7 NR Industrial Internet of Things (IoT) 87
6.7.1 General 87
6.7.2 TSC 91
6.7.2.1 Accurate reference timing 91
6.7.2.2 Scheduling Enhancements 93
6.7.2.3 Ethernet Header Compression 95
6.7.3 Intra-UE prioritization and multiplexing 98
6.7.3.1 Handling of deprioritized transmissions 98
6.7.3.2 Data Data prioritization and SR Data Prioritization 100
6.7.3.4 Other 102
6.7.4 PDCP duplication enhancements 102

6.8 NR Positioning Support 103
6.8.1 Organisational 103
6.8.2 Architecture and protocol aspects 104
6.8.2.1 Stage 2 104
6.8.2.2 RRC 108
6.8.2.3 LPP 110
6.8.2.4 Broadcast assistance data 118
6.8.2.5 UE-based positioning 120
6.8.3 Other 121

6.9 NR mobility enhancements 121
6.9.1 Organisational 121
6.9.2 Reduction in user data interruption during DAPS handover 129
6.9.3 Conditional handover and fast handover failure recovery 129
6.9.3.1 Conditional handover – configuration and execution details 129
6.9.3.2 Conditional handover – failure handling 132
6.9.3.3 Conditional handover – other aspects 133
6.9.3.4 Fast handover failure recovery 134
6.9.3.5 Conditional handover - beam specific aspects 135
6.9.3.6 Summary documents for conditional handover and fast handover failure recovery 135
6.9.4 Conditional PSCell addition/change 137
6.9.4.1 Conditional PSCell change for intra-SN 138
6.9.4.2 Summary documents for conditional handover and fast handover failure recovery 144

6.10 DC and CA enhancements 146
6.10.1 Organisational 146
6.10.2 NR-NR Dual Connectivity 149
6.10.3 Early measurement reporting 150
6.10.4 Efficient and low latency configuration signalling 153
6.10.4.1 Direct SCell activation 153
6.10.4.2 Fast SCell activation 153
6.10.4.3 MCG SCell and SCG Configuration with RRC Resume 158
6.10.4.4 Other 159
6.10.5 Fast MCG link Recovery 159
6.10.6 Cross-Carrier scheduling with different numerologies 161
6.10.7 Other 161

6.11 UE Power Saving in NR 163
6.11.1 Organisational 163
6.11.2 PDCCH-based power saving signals/channel Additional stage-3 RAN2 aspects 169

6.11.3 UE assistance 171
6.11.6 RRM measurement relaxation 172

6.12 SON/MDT support for NR 173
6.12.1 General 173
6.12.2 MDT 177
6.12.3 L2 measurements 179
6.12.4 SON 182
6.12.5 Others 184

6.13 2-step RACH for NR 184
6.13.1 General 184
6.13.2 Other user plane stage-3 aspects 188
6.13.3 RRC stage-3 related aspects 190
6.13.4 Other 191

6.14 Single Radio Voice Call Continuity from 5G to 3G 191
6.14.1 Organisational 192
6.14.2 Other 193

6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR 193
6.15.1 Organisational 193
6.15.2 Other 194

6.16 Enhancements on MIMO for NR 194
6.16.1 Organisational 194
6.16.2 RRC aspects 195
6.16.3 DL MAC CE design 197
6.16.4 General beam management enhancements 201

6.18 Private Network Support for NG-RAN 206
6.18.1 Organisational 206
6.18.2 Cell selection and reselection 208
6.18.3 Connected mode aspects 215
6.18.4 Other 218

6.19 Other NR Rel-16 WIs/SIs 220

6.20 NR TEI16 enhancements 225
6.20.1 RAN2 led TEI16 enhancements - Control plane related 225
6.20.1.0 In-principle-agreed CRs 226
6.20.1.1 Open / ongoing proposals 228
6.20.1.3 New proposals 237
6.20.2 RAN2 led TEI16 enhancements - User plane related 238
6.20.2.0 In-principle-agreed CRs 238
6.20.2.1 Open / ongoing proposals 238
6.20.2.3 New proposals 239
6.20.3 TEI16 enhancements led by other WGs 240
6.20.3.0 In-principle-agreed CRs 240
6.20.3.1 Open / ongoing proposals 240

6.21 On demand SI in connected 243

6.22 Physical layer enhancements for NR ultra-reliable and low latency case (URLLC) 246
6.22.1 Organizational 246
6.22.2 Control Plane 247
6.22.3 User Plane 248

7 REL-16 LTE WORK ITEMS 249

7.1 Additional MTC enhancements for LTE 249
7.1.1 Organisational 249
7.1.2 Mobile-terminated (MT) early data transmission (EDT) 252
7.1.3 UE-group wake-up signal (WUS) 254
7.1.4 Transmission in preconfigured resources 254
7.1.5 Scheduling multiple DL/UL transport blocks 254
7.1.6 Quality report in Msg3 255
7.1.7 MPDCCH performance improvement using CRS 256
7.1.8 Improvements for non-BL UEs 257
7.1.8.1 Idle Mode Mobility 257
7.1.8.2 ETWS/CMAS in connected mode 258
7.1.9 Stand-alone deployment 258
7.1.10 Mobility Enhancements 259
7.1.11 Coexistence with NR 260
7.1.12 Connection to 5GC (eDRX, EDT, UP optimisation, RRC_INACTIVE and other MTC specific topics) 264
7.1.12.1 Paging in RRC_INACTIVE 265
7.1.12.2 DRB resume in UP optimization 265
7.1.12.3 Other 266
7.1.13 Other 266

7.2 Additional enhancements for NB-IoT 267
7.2.1 Organisational 267
7.2.2 Mobile-terminated (MT) early data transmission (EDT) 270
7.2.3 UE-group wake-up signal (WUS) 270
7.2.4 Transmission in preconfigured resources 273
7.2.5 Scheduling multiple DL/UL transport blocks 279
7.2.6 Network management tool enhancement 279
7.2.7 Improved multi-carrier operation 280
7.2.8 Inter-RAT cell selection 281
7.2.9 Coexistence with NR 281
7.2.10 Connection to 5GC (Other common aspects, NB-IoT specific aspects) 281
7.2.11 UE specific DRX 284
7.2.12 Other 287

7.3 Even further mobility enhancement in E-UTRAN 287
7.3.1 Organizational 287
7.3.2 Reduction in user data interruption for dual active protocol stack (DAPS) handover 288
7.3.2.1 User plane aspects of DAPS HO 288
7.3.2.1.1 PDCP/RLC aspects of DAPS HO 288
7.3.2.1.2 MAC and UL transmission aspects of DAPS HO 290
7.3.2.1.3 Summary documents for UP aspects of DAPS HO 290
7.3.2.2 Control plane aspects of DAPS HO 292
7.3.2.2.1 RRC procedures during DAPS HO 292
7.3.2.2.2 UE capabilities for DAPS HO 294
7.3.2.2.3 Summary documents for CP aspects of DAPS HO 296
7.3.2.3 Other aspects of DAPS HO 298
7.3.3 Conditional handover 298

7.4 Further performance enhancement for LTE in high speed scenario 298

7.5 Other LTE Rel-16 WIs 299

7.6 LTE TEI16 enhancements 299

7.7 Support of Indian Navigation Satellite System (NavIC) 302

7.8 DL MIMO efficiency enhancements for LTE 303

7.9 LTE-based 5G Terrestrial Broadcast 304

8 BREAKOUT SESSION REPORTS 305
8.1 Session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility 306
8.2 Session on SRVCC, CLI, PRN, eMIMO, RACS 308
8.3 Session on eMTC 309
8.4 Session on NR-U, Power Savings, NTN and 2-step RACH 309
8.5 Session on Rel-15 and 16 LTE and NR positioning 310
8.6 Session on SON/MDT 310
8.7 Session on NB-IoT 310
8.8 Session on LTE V2X and NR V2X 311

CLOSING OF THE MEETING (17:00) 312

ANNEX A: LIST OF PARTICIPANTS 312

ANNEX B: LIST OF TDOCS 312

ANNEX C: INCOMING LIAISON STATEMENTS 313

ANNEX D: OUTGOING LIAISON STATEMENTS 320

ANNEX E: LIST OF AGREED CRS 321

ANNEX F: LIST OF OFFLINE EMAIL DISCUSSIONS DURING THE MEETING 329

ANNEX G: EMAIL APPROVALS 361

SHORT EMAIL DISCUSSION FOR RAN PLENARY, EXTENDED FROM R2 109E (R16 CRS) 361

SHORT EMAIL DISCUSSIONS NOT FOR RP (1 WEEKS): DEADLINE THURSDAY, 2020-03-12, 23:59 PACIFIC TIME (UNLESS STATED) 365

NEXT MEETING (LONG) DISCUSSIONS: DEADLINE 2020-04-08 23:59 PACIFIC TIME (UNLESS STATED) 366

ANNEX H: HISTORY 370

Organisation of the meeting

Meeting:	3GPP TSG RAN2#109-e
Meeting location:	Onlline
Duration:	24.02 - 06.03.2020
Host:	ETSI
TSG RAN WG2 Chairman:	Johan Johansson (MediaTek) (johan.johansson@mediatek.com)
TSG RAN WG2 Vice chairman:	Tero Henttonen (Nokia) (tero.henttonen@nokia.com)
TSG RAN WG2 Vice chairman:	Sergio Parolari (ZTE) (sergio.parolari@zte.com.cn)
TSG RAN WG2 MCC Support:	Juha Korhonen (ETSI MCC) (juha.korhonen@etsi.org)
Email reflector:	3GPP_TSG_RAN_WG2@LIST.ETSI.ORG
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_109-e/Docs
Next meetings:	TSG RAN2#109bis-e, 04/2020, online
	TSG RAN2#110-e, 05/2020, online

Statistics/Executive Summary

TSG RAN2#109-e was an electronic meeting, consisting of email discussions and Internet webinars, hosted by ETSI. There were approximately 250 numbered email discussions and 60 hours of webinars in this meeting. The webinars were typically arranged so that there were three parallel sessions held simultaeously.
The topics discussed were:

- NR, IAB, NR-IIOT, DC / CA enhancements, On demand SI in connected, NR URLLC - Johan Johansson (Chairman)
- LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility - Tero Henttonen (VC)
- SRVCC, CLI, PRN, eMIMO, RACS - Sergio Parolari (VC)
- eMTC - Emre Yavuz
- NR-U, Power Savings, NTN and 2-step RACH - Diana Pani
- Rel-15 and 16 LTE and NR positioning - Nathan Tenny
- SON/MDT - Hu Nan
- NB-IoT - Brian Martin
- LTE V2X and NR V2X - Kyeongin Jeong

The statistics from this meeting are:

- 382 participants
- 2414 Tdoc numbers allocated with 2244 available contributions. (See the attached tdoc list)
- 110 incoming liaison statements, out of which 89 were treated. The remaining liaisons will be treated in RAN2#109bis-e meeting.
- 32 outgoing liaison statements.
- 88 email approvals/discussions scheduled after RAN2#109-e meeting, see Annex G for details.
- Number of CRs submitted: 648. Out of these, 218 were agreed. See Annex E for details.

1 Opening of the meeting

This Agenda Item is treated by email only.

This agenda item includes a number of statements that shall be known by everyone.

This e-Meeting

- This e-Meeting will follow 3GPP principles for e-Meetings, e.g. an e-Meeting is an ad-hoc meeting that do not count towards a company's voting rights.
- RAN2 109 electronic has full decision power, i.e. full decision power to make agreements and approvals according to RAN WG2 terms of reference, without any need to ratify decisions at a later RAN2 meeting.
- There will be some more leeway than usual to re-discuss or post-change agreements made at R2 109 electronic.
- Recording of voice or video at meetings is not used in 3GPP. This applies also to this e-Meeting. No specific actions are taken to prevent the recording of web conferences.
- Descriptions on how this meeting is conducted can be found in RAN2 109-e Methods and Guidance under agenda item 2.4 below

General

Recording of voice or video at meetings is not used in 3GPP. This applies also to this e-Meeting. At this e-Meeting, no specific actions are taken to prevent the recording of web conferences. Companies that have concerns related to recordings, if any, may express those by email in the main meeting organizational thread [AT109e][000]

COMMENTS
- [109e][000] Ericsson (Mattias): It is also our understanding that we should not use recordings of the e-meeting, similar to normal meetings, and hence prefer that companies do not record the meeting. The MoM and emails should sufficiently capture the discussion during the meeting.
- [109e][000] Chair: Yes, and my understanding is that we don't record due to a gentlemen's agreement from the past, and the clarification is present for this meeting due to the easy technical possibilities to record web conferences etc.

1.1 Call for IPR

The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners **to inform their respective Organizational Partners of Essential IPRs** they become aware of.
The delegates were asked to take note that they were hereby invited:

- to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.
- to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Statement and the Licensing declaration forms (https://www.etsi.org/images/files/IPR/etsi-ipr-form.doc)

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

1.2 Network usage conditions

Not applicable

1.3 Other

In accordance with the Working Procedures it is reaffirmed that:
(i) compliance with all applicable antitrust and competition laws is required;
(ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and
(iii) the chairman will conduct the meeting with strict impartiality and in the interests of 3GPP

Note on (i): In case of question please contact your legal counsel.

Note on (ii): WIDs don't need to be submitted to the RAN2 meeting and will typically not be discussed here either.

1.4 Statement Regarding Engagement with Companies Added to the U.S. Export Administration Regulations (EAR) Entity List in 3GPP Activities

Updated 2019-10-10

1. Public Information is Not Subject to EAR

3GPP is an open platform where all contributions (including technology protected or not by patent) made by the different Individual Members under the membership of each respective Organizational Partner are publicly available. Indeed, contributions by all and any Individual Members are uploaded to a public file server when received and then the documents are effectively in the public domain.

In addition, since membership of email distribution lists is open to all, documents and emails distributed by that means are considered to be publicly available.

As a result, information contained in 3GPP contributions, documents, and emails distributed at 3GPP meetings or by 3GPP email distribution lists, because it is made available to the public without restrictions upon its further dissemination, is not subject to the export restrictions of the EAR.

Meeting minutes are maintained for 3GPP meetings. Such meeting minutes for 3GPP meetings are made available to the public without restrictions upon its further dissemination. As a result, information, including information conveyed orally, contained in 3GPP meetings is not subject to the export restriction of the EAR; this would include information conveyed during side meetings that may occur during the main meetings, if these meetings are open to any participants and the results of all said meetings are publicly available without restrictions upon their further dissemination.

2. Non-Public Information

Non-public information refers to the information not contained or not intended to be contained in 3GPP contributions, documents or emails. Such non-public information may be disclosed during informal meetings, exchanges, discussions or any form of other communication outside the 3GPP meetings and email distribution lists, and may be subject to the EAR.

3. Other Information

Certain encryption software controlled under the International Traffic in Arms Regulations (ITAR), even if publicly available, may still be subject to US export controls other than the EAR.

4. Conduct of Meetings

The situation should be considered as "business as usual" during all the meetings called by 3GPP.

5. Responsibility of Individual Members

It should be remembered that contributions, meetings, exchanges, discussions or any form of other communication in or outside the 3GPP meetings are of the accountability, integrity and the responsibility of each Individual Member. In addition, Individual Members remain responsible for ensuring their compliance with all applicable export control regulations, including but not limited to EAR.

Individual Members with questions regarding the impact of laws and regulations on their participation in 3GPP should contact their companies' legal counsels.

✉ **[AT109e][000] RAN2 109-e Organizational**
Intended outcome: Agenda Item 1 Chairman Reminders Possibility to comment.

- [AT109e][000] Chair Mon 24: Please draw your attention to the text in chapters 1, 1.1, 1.3, 1.4 (in the agenda and chair notes), which provide the standard but important reminders and in addition some statements specific to this e-Meeting. In case you wish to comment please do so immediately if you need some action taken, otherwise comments can be provided until the meeting is closed.

2 General

This agenda Item is treated by email only

2.1 Approval of the agenda

By Email

R2-2000008 Agenda for RAN2#109-e Chairman agenda Late
- [AT109e][000] Chair Mon 24: Proposal to approve the Agenda in R2-2000008, deadline for comments Feb 25 12.00 CET

⇒ **[AT109e][000] Mar 25: Approved**

2.2 Approval of the report of the previous meeting

By Email

R2-2000009 RAN2#108 Meeting Report MCC report Late
- [AT109e][000] Chair Mon 24: Proposal to approve the RAN2#108 Meeting Report in R2-2000008, deadline for comments Mar 05 1200 CET
- [AT109e][000] Chair MAR 5: No comments and deadline has passed

⇒ **[AT109e][000] Approved**

2.3 Reporting from other meetings

2.4 Others

By Email

R2-2002046 RAN2 109-e Methods and Guidance RAN2 chairman, RAN2 vice chairmen, session chairs discussion
- [AT109e][000] Chair Mon 24: Proposal to endorse the RAN2 109-e Methods and Guidance in R2-2002046, deadline for comments Feb 25 1200 CET

⇒ **[AT109e][000] Mar 25: Endorsed**

R2-2002047 Real Settings Test of GoToWebinar RAN2 Chairman (Mediatek), RAN2 Secretary (MCC) report
- [AT109e][000] Chair Comment: This document is for information
- [AT109e][000] Chair Mon 24: Proposal to note the report on Real Settings Test of GoToWebinar in R2-2002047, deadline for comments Feb 25 1200 CET

⇒ **[AT109e][000] Mar 25: Noted**

Agenda Additional Instructions - Scope

Incoming LS'es are handled. As usual it is up to session chair which ones to treat (and related tdocs).

R15 and earlier: For R15 and earlier releases, only documents on important and urgent issues shall be submitted and treated. No text enhancements without behavioural or functional change.

Email Discussions [108#xx] will be treated.

R16 CRs: It is planned that R16 CRs for all WIs are agreed at R2 109e and submitted to eRP (March) for approval.

R16 Stage-2: No or minimal corrections for Stage-2 TS, i.e. only input email discussions and minimal corrections needed for approval of current CRs as baseline.

Easy Agreements: For R16, R2 109e shall focus on "easy" agreements. Topics/proposals that need extensive discussions (e.g. highly controversial ones) shall be avoided, i.e. not submitted, not treated, de-prioritized, postponed etc.

TEI16: For TEI16, no treatment of new proposals, Email discussions [108#xx] will be treated. In-principle agreed CRs will be treated. May treat open proposals for which only CRs remain, e.g. with status last meeting, "Agreed, see CRs next meeting". Could consider to start email discussions to next meeting, e.g. based on new incoming LSes.

R16 UE capabilities: TBD to what extent R16 UE capabilities is treated at R2 109e This will have lower priority. CRs are not required, but could be provided if ready for some specific WI.

Agenda Additional Instructions - Summary of tdocs

In particular for R16, the Intention is to treat summaries that summarize contents of submitted tdocs rather than submitted tdocs for R16. Tdocs that are covered by a summary are to be noted if the summary is treated.

Where indicated in the agenda or later in chair notes, the tdocs submitted to a sub-agenda item or on a specific sub-topic, are summarized in a summary tdoc by an appointed rapporteur. It is the task of the rapporteur to reflect submitted proposals in a neutral way, group, merge and structure to facilitate easy treatment. At this meeting it is also the task of the rapporteur to suggest potential easy agreements for treatment and suggest likely controversial proposals for postponement. There may be an email discussion for each summary that may start as soon as there is a first summary draft, e.g. before submission. When such email discussion takes place during the tdoc review week it is considered a) the purpose is mainly to check correctness and get immediate comments/suggestions b) ambition level is best effort.

Note: Time Budget Comments remain in this document only for reference. They are not applicable for R2 109e.

General discussions by email, not captured under a specific Agenda Item

MULTI-COMPANY EMAIL DISC RAPPORTEUR

- [109e][000] Ericsson (Mats): Thanks for starting the meeting. I have question for clarification. Several of your e-mail discussions seem to be assigned to multiple companies, like 008:
  - ✉ ***[****AT109e][008][NR15] Cap Discussion (Ericsson, Mediatek, Huawei, NTT docomo, Qualcomm, Nokia)*
    Scope: Treat the documents R2-2001322, R2-2001224, R2-2000425, R2-2000684, R2-2001221, R2-2000165, R2-2002081, R2-2000034, R2-2001220, R2-2000011.
    Intended outcome: First Round comments, goal to determine which of the CRs that we should attempt to agree, find candidates to leave out (postpone).
    Deadline: Feb 26 1200 CET

Which company is responsible for summarizing and kicking off, or how would you like to handle this? What do the company names imply? Note: There are more discussions than 008 with multiple companies, this was an example.

- [109e][000] Chari: I had hoped that the first company in the list can do the honors of sending the first email, but I also expect all authors to participate, so you don't need to do much more than that. This particular email discussion is for a section of tdocs for which I suspect we don't need to fully treat all, so this is the reason why multiple tdocs are bundled for a first round of comments. Ericsson is the most frequent author for this group of papers.

3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

Rel-17 - Not to be treated

R2-2000041 LS on Requirements on positioning for UAS (S6-200269; contact: InterDigital) SA6 LS in Rel-17 FS_UASAPP To:SA1 Cc:SA2, RAN2

R2-2002095 Reply LS on UAV positioning (S1-201089; contact: InterDigital); SA1 LS in

R2-2000082 Reply LS to extend the scope of eV2X (SP-191379; contact: Telecom Italia) SA LS in Rel-17 FS_eV2XARC_Ph2 To:5GAA WG4 Cc:SA2, SA1, RAN, RAN2

R2-2000087 LS on 5GC assisted cell selection for accessing network slice (S2-2001728; contact: ZTE) SA2 LS in Rel-17 FS_eNS_Ph2 To:SA1, RAN2, RAN3

R2-2000089 Response LS on the "LS OUT on Location of UEs and associated key issues" (S3i200056; contact: Rogers) SA3-LI LS in Rel-17 FS_5GSAT_ARCH To:SA2, RAN2, RAN3

Withdrawn:

R2-2000081 LS on Requirements on positioning for UAS (S6-200269; contact: Interdigital) SA6 LS in Rel-17 FS_UASAPP To:SA1 Cc:SA2, RAN2

4 EUTRA corrections Rel-15 and earlier

See Appendix A for reference to Work items, work item codes and WIDs.

No documents should be submitted to 4. Please submit to 4.x

NOTE For R2 109e for R15 and earlier releases, only documents on important and urgent issues shall be submitted and treated. No text enhancements without behavioural or functional change.

4.1 NB-IoT corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.2.

R2-2000617 Clarification on polling bit for RRCConnectionRelease Huawei, HiSilicon CR Rel-14 36.322 14.1.0 0143 - F NB_IOTenh-Core

R2-2000618 Clarification on polling bit for RRCConnectionRelease Huawei, HiSilicon CR Rel-15 36.322 15.3.0 0144 - A NB_IOTenh-Core

✉ **[AT109e][301][NBIOT R14] Clarification on polling bit for RRCConnectionRelease (Huawei)**
Status: Not Started
Scope: Discuss and review the CRs
Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.
Deadline: 06-03-2020, 12:00 CET

R2-2001805 Report of [AT109e][301][NBIOT R14] Clarification on polling bit for RRCConnectionRelease (Huawei)

⇒ **Noted**

⇒ **'There seems to be general understanding that network may choose if to poll for DL RRC transmissions.'**

R2-2000632 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-13 36.300 13.13.0 1260 - F NB_IOT-Core, LTE_MTCe2_L1-Core

⇒ **Revised in R2-2001809**

R2-2001809 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-13 36.300 13.13.0 1260 1 F NB_IOT-Core, LTE_MTCe2_L1-Core
[CB]
=> Agreed

R2-2000633 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-14 36.300 14.11.0 1261 - F NB_IOT-Core, LTE_MTCe2_L1-Core

⇒ **Revised in R2-2001810**

R2-2001810 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-14 36.300 14.11.0 1261 1 A NB_IOT-Core, LTE_MTCe2_L1-Core
[CB]
=> Agreed

R2-2000634 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-15 36.300 15.8.0 1262 - A NB_IOT-Core, LTE_MTCe2_L1-Core

⇒ **Revised in R2-2001811**

R2-2001811 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-15 36.300 15.8.0 1262 1 A NB_IOT-Core, LTE_MTCe2_L1-Core
[CB]
=> Agreed

R2-2000635 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-16 36.300 16.0.0 1263 - A NB_IOT-Core, LTE_MTCe2_L1-Core

⇒ **Revised in R2-2001812**

R2-2001812 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-16 36.300 16.0.0 1263 - A NB_IOT-Core, LTE_MTCe2_L1-Core
[CB]
=> Agreed

✉ **[AT109e][302][NBIOT R13] Handling of UE Radio Capability for Paging in NB-IoT and eMTC (Huawei)**
Status: Not Started
Scope: Discuss and review the CRs
Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.
Deadline: 06-03-2020, 12:00 CET

R2-2001806 Report of [AT109e][302][NBIOT R13] Handling of UE Radio Capability for Paging in NB-IoT and eMTC (Huawei)

⇒ **Noted**

⇒ **Agree on the Rel-13 CR with a revised coversheet as suggested in the comments.**

⇒ **No Cat F Rel-14 CR.**

R2-2000638 System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.304 15.5.0 0779 - F NB_IOTenh2-Core, LTE_eMTC4-Core

R2-2000809 System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.300 15.8.0 1264 - F NB_IOTenh2-Core, LTE_eMTC4-Core

R2-2000810 System support for Wake Up Signal Huawei, HiSilicon CR Rel-16 36.300 16.0.0 1265 - A NB_IOTenh2-Core, LTE_eMTC4-Core

✉ **[AT109e][303][NBIOT R15] System support for Wake Up Signal (Huawei)**
Status: Not Started
Scope: Discuss and review the CRs
Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.
Deadline: 06-03-2020, 12:00 CET

R2-2001807 Report of [AT109e][303][NBIOT R15] System support for Wake Up Signal (Huawei)

⇒ **Noted**

⇒ **Postponed**

Withdrawn

R2-2000637 System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.331 15.8.0 4193 - F NB_IOTenh2-Core, LTE_eMTC4-Core Withdrawn

4.2 eMTC corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.1. This agenda item may not be treated during the e-meeting. No web conference is planned for this agenda item

R2-2000339 Correction for relaxed monitoring for BL and CE UE Ericsson CR Rel-14 36.304 14.7.0 0778 - F LTE_feMTC-Core

✉ **[AT109e][401][eMTC] Correction for relaxed monitoring for BL and CE UE (Ericsson)**
Intended outcome: To check whether there is support, and, if so, agreeable CR. The outcome can be provided in R2-2001866
Deadline: Wednesday, Feb. 26th 18:00 CET
Schedule: Thursday, Feb. 27th 13:30 - 15:30 CET

R2-2001866 Correction for relaxed monitoring for BL and CE UE Ericsson

⇒ **Rappoteur reports that there was not much support for the change and proposes not to pursue the CR this meeting.**

⇒ **Not pursued**

R2-2001062 Correction to support of UP-EDT, CP-EDT, in eMTC TDD Huawei, HiSilicon CR Rel-15 36.306 15.7.0 1734 - F LTE_eMTC4-Core

✉ **[AT109e][402][eMTC] Correction to support of UP-EDT, CP-EDT, in eMTC TDD (Huawei)**
Intended outcome: To check whether there is support, and, if so, agreeable CR. The outcome can be provided in R2-2001867
Deadline: Wednesday, Feb. 26th 18:00 CET
Schedule: Thursday, Feb. 27th 13:30 - 15:30 CET

R2-2001867 Correction to support of UP-EDT, CP-EDT, in eMTC TDD Huawei CR Rel-15 36.306 15.7.0 1734 1 F LTE_eMTC4-Core

⇒ **Revised in R2-2001889 with the following change on the cover page, i.e., 2019-03-04 to 2020-03-05, and agreed unseen.**

4.3 V2X and Sidelink corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

4.4 Positioning corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

4.5 Other LTE corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. No web conference is planned for this agenda item.
Summary document to be provided by the NN.

R2-2002087 Summary of LTE contributions in AI 4.5 Summary rapporteur (RAN2 vice-chair) discussion
=> To be discussed in separate email discussions

S1 AGREE: Contributions proposed for easy agreement in summary document:
Proposal in summary document:
Proposal S1_1: *Agree to CRs in R2-2000636, R2-2000663, R2-2000680, R2-2000685, R2-2000761, R2-2002056 and R2-2001158.*

RRC:

R2-2000636 Clarification on default configuration and SRB1 for UP-EDT and RRC_INACTIVE Huawei, HiSilicon CR Rel-15 36.331 15.8.0 4104 4 F LTE_eMTC4-Core, NB_IOTenh2-Core, LTE_5GCN_connect-Core R2-1916356
⇒ **See R2-2001743**
⇒ **Revised in R2-2001723**

R2-2001723 Clarification on default configuration and SRB1 for UP-EDT and RRC_INACTIVE Huawei, HiSilicon CR Rel-15 36.331 15.8.0 4104 5 F LTE_eMTC4-Core, NB_IOTenh2-Core, LTE_5GCN_connect-Core R2-2000636
⇒ **Agreed**

R2-2000680 Correction on cellReselectionSubPriority Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.8.0 4194 - F NR_newRAT-Core
⇒ **See R2-2001743**
⇒ **Merged into R2-2002114**

R2-2000685 Correction on LTE early measurement MediaTek Inc., Nokia, Nokia Shanghai Bell, Ericsson CR Rel-15 36.331 15.8.0 4195 - F LTE_euCA-Core
⇒ **See R2-2001743**
⇒ **Revised in R2-2001724**

R2-2001724 Correction on LTE early measurement MediaTek Inc., Nokia, Nokia Shanghai Bell, Ericsson CR Rel-15 36.331 15.8.0 4195 1 F LTE_euCA-Core R2-2000685
⇒ **Agreed**

R2-2000761 Corrections to T312 and Discovery Signals measurement Lenovo, Motorola Mobility CR Rel-15 36.331 15.8.0 4198 - F HetNet_eMOB_LTE-Core, LTE_SC_enh_L1-Core, TEI15
⇒ **See R2-2001743**
⇒ **Revised in R2-2001725**

R2-2001725 Corrections to T312 and Discovery Signals measurement Lenovo, Motorola Mobility CR Rel-15 36.331 15.8.0 4198 1 F HetNet_eMOB_LTE-Core, LTE_SC_enh_L1-Core, TEI15 R2-2000761
=> Agreed

R2-2002056 Correction to full configuration Google Inc. CR Rel-15 36.331 15.8.0 4151 3 F LTE_QMC_Streaming-Core

⇒ **Agreed**

R2-2001158 Minor corrections collected by Rapporteur Samsung Telecommunications CR Rel-15 36.331 15.8.0 4211 - F TEI15

⇒ **See R2-2001743**

⇒ **Revised in R2-2002114**

R2-2002114 Minor corrections collected by Rapporteur Samsung Telecommunications CR Rel-15 36.331 15.8.0 4211 1 F TEI15 R2-2001158

⇒ **Revised in R2-2001762**

R2-2001762 Minor corrections collected by Rapporteur Samsung Telecommunications CR Rel-15 36.331 15.8.0 4211 2 F TEI15 R2-2002114

⇒ **Agreed**

Stage-2:

R2-2000663 Missing QCI to CAPC mapping Nokia, Nokia Shanghai Bell CR Rel-16 36.300 16.0.0 1240 4 F LTE_unlic-Core R2-1913983

⇒ **See R2-2001743**

⇒ **Revised in R2-2001722**

R2-2001722 Missing QCI to CAPC mapping Nokia, Nokia Shanghai Bell CR Rel-16 36.300 16.0.0 1240 5 F LTE_unlic-Core R2-2000663

⇒ **Agreed**

⇒ **All of the above documents under S1_AGREE are handled in offline email discussion [201]**

✉ **[AT109e][201][LTE15] Agreeing to simple LTE Rel-15 CRs (RAN2 VC)**
Scope:
- Agree to CRs in R2-2000636, R2-2000663, R2-2000680, R2-2000685, R2-2000761, R2-2002056 and R2-2001158.

Intended outcome:
- Agreeable CRs (by each CR proponent)
- Summary of discussions (by email rappporteur), including list of CRs that require further discussion in this meeting (and are moved to discussion **202**)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording: Tuesday, March 3rd by 17:00 CET (i.e. one day to provide comments to the updated CR)

R2-2001743 Report of [AT109e][201][LTE15] Agreeing to simple LTE Rel-15 CRs (RAN2 VC) Nokia (RAN2 VC)

⇒ **Noted**

Agreements [AT109e][201][LTE15]

⇒ **Revise the CR R2-2000663 according to comments in R2-2001722.**

⇒ **Revise the CR R2-2000636 according to comments in R2-2001723.**

⇒ **The CR R2-2000680 will be merged to rapporteur CR R2-2002114 with proposed changes**

⇒ **Revise the CR R2-2000686 according to comments in R2-2001724.**

⇒ **Revise the CR R2-2000761 according to comments in R2-2001725.**

⇒ **Agree to the CR in R2-2002056.**

⇒ **Revise the CR R2-2001158 according to comments in R2-2002114**

⇒ **Related to discussions [201] and [003]: During the discussion [003] it was agreed that the documents R2-2002143 and R2-2001612 will be merged to the LTE RRC rapporteur CR (R2-2002114).**

S1 DISC: Contributions proposed for discussion in summary document:

Proposal in summary document:
DISC S1_1: *Discuss the CRs R2-2001139, R2-2001156, R2-2001157, R2-2001508, R2-2001347 and R2-2001351 over offline (email) discussion to solicit opinions from companies on the proposals and CR correctness.*

Handling of assistance information: Already discussed in RAN2#108, CRs postponed. At least CR checking is required.

R2-2001156 Correction of UE assistance information Samsung Telecommunications CR Rel-15 36.331 15.8.0 4210 - F NR_newRAT-Core

⇒ **Agreed**

R2-2001157 Correction of UE assistance information Samsung Telecommunications CR Rel-16 36.331 15.8.0 4164 2 A NR_newRAT-Core R2-1916490

⇒ **Postponed**

Addition of missing guidline for maximum number of PDCP SDUs per TTI for DL categories 22-26: Requires at least checking of the proposed numbers.

R2-2001139 Inclusion of Maximum Number of PDCP SDUs per TTI for DL Categories 22-26 Nokia, Nokia Shanghai Bell CR Rel-15 36.306 15.7.0 1736 - F LTE_1024QAM_DL-Core, TEI15

⇒ **See R2-2001744**

⇒ **Revised in R2-2001726**

R2-2001726 Inclusion of Maximum Number of PDCP SDUs per TTI for DL Categories 22-26 Nokia, Nokia Shanghai Bell, Lenovo, Motorola Mobility CR Rel-15 36.306 15.7.0 1736 1 F LTE_1024QAM_DL-Core, TEI15 R2-2001139

⇒ **Agreed**

Changing whether UE information availability indications in Msg5 are indicated in case UE is connected to 5GC:

R2-2001508 Correction on the content of RRCConnectionReconfigurationComplete message Google Inc. CR Rel-15 36.331 15.8.0 4224 - F LTE_5GCN_connect-Core

⇒ **See R2-2001744**

⇒ **Not pursued**

Clarification to RLC out-of-order delivery configuration introduced in Rel-15: Does the configuration apply to only PDCP duplication or also to other cases?

R2-2001347 The problem of LTE RLC out-of-order delivery configuration Samsung discussion LTE_HRLLC

⇒ **See R2-2001744**

⇒ **Noted**

R2-2001351 CR on RLC OutOfOrderDelivery configuration Samsung CR Rel-15 36.331 15.8.0 4217 - F LTE_HRLLC

⇒ **See R2-2001744**

⇒ **Not pursued**

⇒ **All of the above documents under S1_DISC are handled in offline email discussion [202]**

✉ **[AT109e][202][LTE15] Discuss remaining LTE Rel-15 CRs (RAN2 VC)**
Scope:
- Discuss the CRs R2-2001139, R2-2001156, R2-2001157, R2-2001508, R2-2001347 and R2-2001351 over offline (email) discussion to solicit opinions from companies on the proposals and CR correctness.
- Handle any CRs from discussion **201** that are deemed require further discussion

Intended outcome:
- Whether any of the CRs can be agreed?
- For CRs that can be agreed, final CRs (by CR proponents)
- Summary of discussions (by email rappporteur)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording: Tuesday, March 3rd by 17:00 CET (i.e. one day to provide comments to the updated CR)

R2-2001744 Report of [AT109e][202][LTE15] Discuss remaining LTE Rel-15 CRs (RAN2 VC) Nokia (RAN2 VC)

⇒ **Noted**

Agreements [AT109e][202][LTE15]

⇒ **Agree to the CRs R2-2001726 and R2-2001156**

⇒ **The CR R2-2001508 is not pursued (can be revisited if issues are identified)**

⇒ **The CRs R2-2001347 and R2-2001351 are not pursued (can be revisited if issues are identified).**

S2_DISC: Pre-rel-15 contributions proposed for discussion in summary document:

Proposals in summary document:
DISC S2_1: *Discuss which interpretation in R2-2001134 is correct, whether a clarification CR is needed and from which release onwards. After that is decided, determine which of the CRs R2-2001135, R2-2001136, R2-2001137, R2-2001138 are needed.*

DISC S2_2: *Discuss the CRs R2-2001140, R2-2001141, R2-2001142 to determine if the interpretation is correct and how a correction should be captured (if needed).*

Pre-Rel-15 CA: Are intra-band non-contiguous CA capabilities treated similarly as intra-band contiguous CA or as inter-band CA?

R2-2001134 Interpretation of UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell discussion Rel-12 LTE_CA-Core, TEI12

⇒ **See R2-2001736**

⇒ **Noted**

R2-2001135 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell
CR Rel-12 36.331 12.18.0 4206 - F LTE_CA-Core, TEI12

⇒ **Postponed**

R2-2001136 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell
CR Rel-13 36.331 13.15.0 4207 - A LTE_CA-Core, TEI12

⇒ **Postponed**

R2-2001137 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell
CR Rel-14 36.331 14.13.0 4208 - A LTE_CA-Core, TEI12

⇒ **Postponed**

R2-2001138 Clarification to UE capabilities for non-contiguous intra-band CA Nokia, Nokia Shanghai Bell
CR Rel-15 36.331 15.8.0 4209 - A LTE_CA-Core, TEI12

⇒ **Postponed**

Pre-Rel-15 CA: How to interpret the "mandatory" aspect of the HARQ ACK codebook capabilities – do all UEs support both capabilities?

R2-2001140 Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs Nokia, Nokia Shanghai Bell CR Rel-13 36.306 13.12.0 1737 - F LTE_CA_enh_b5C-Core Late

⇒ **Postponed**

R2-2001141 Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs Nokia, Nokia Shanghai Bell CR Rel-14 36.306 14.11.0 1738 - A LTE_CA_enh_b5C-Core Late

⇒ **Postponed**

R2-2001142 Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs Nokia, Nokia Shanghai Bell CR Rel-15 36.306 15.7.0 1739 - A LTE_CA_enh_b5C-Core Late

⇒ **Postponed**

⇒ **All of the above documents under S2_DISC are handled in email discussion 203**

✉ **[AT109e][203][LTE15] LTE pre-Rel-15 CRs on CA (Nokia)**

Scope:

- Discuss the topics identified in R2-2001134
- Discuss which (if any) of the CRs R2-2001135, R2-2001136, R2-2001137, R2-2001138 are needed.
- Discuss the CRs R2-2001140, R2-2001141, R2-2001142 to determine whether the proposed interpretation is correct and how should a correction (if needed) be captured

Intended outcome:

- Set of proposals with consensus (aim to agree to those over email), including the correct interpretation to both sets of CRs (by email rappporteur)

Deadline for providing comments and for rappporteur inputs:

- Companies input: Wednesday, Feb. 26th 17:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Friday Feb 28th 17:00 CET
- Comments on the CR wording: Monday, March 2nd by 17:00 CET (i.e. one day to provide comments to the updated CR)

R2-2001736 Report of [AT109e][203][LTE15] LTE pre-Rel-15 CRs on CA (Nokia) Nokia (RAN2 VC)

⇒ **Noted**

Agreements [AT109e][203][LTE15]

For R2-2001134:

⇒ **RAN2 notes the following observations on differences of UE capabilities for intra-band contiguous and non-contiguous CA:**
- **Intra-band contiguous CA capabilities are all contained within a single band entry of a band combination, while intra-band non-contiguous CA capabilities require at least two band entries.**
- **For intra-band contiguous carriers, UE band combination capabilities specify that UE supports any ordering of the capabilities.**
- **(Based on TS36.101): The ordering of intra-band non-contiguous entries is relevant for the support of BCS.**
- **(Based on TS36.101): The ordering of BCS is not directly related to the MIMO capabilities.**

FFS: if UE supports (2, 4) MIMO layers with CA_xA_xA, it will also support (4, 2) MIMO layers with CA_xA_xA.

⇒ **The CRs in R2-2001135, R2-2001136, R2-2001137, R2-2001138 are postponed.**

⇒ **The CRs in R2-2001140, R2-2001141, R2-2001142 are postponed to next meeting.**

S3_NR: Contributions proposed to be treated together with the equivalent topic in NR session:

Proposals in summary document:
Proposal S3_1: *Treat these contributions jointly with corresponding contributions from NR session.*

R2-2000965 Discussion on security requirement for UE capability enquiry Huawei, HiSilicon
discussion Rel-15 TEI15, LTE-L23

R2-2001096 Security requirement for UE capability enquiry for LTE Intel Corporation, NTT DoCoMo, Apple CR Rel-15 36.331 15.8.0 4041 3 C TEI15 R2-1914745
=> Revised in R2-2002094

R2-2002094 Security requirement for UE capability enquiry for LTE Intel Corporation, NTT DoCoMo, Apple, Ericsson CR Rel-15 36.331 15.8.0 4041 4 C TEI15, LTE-L23 R2-1914745

R2-2001604 Unsecured UE capability handling NTT DOCOMO INC. CR Rel-15 36.300 15.8.0 1269 - F LTE_euCA-Core

R2-2001614 Unsecured UE capability handling NTT DOCOMO INC. CR Rel-15 36.331 15.8.0 4226 - F LTE_euCA-Core, LTE_5GCN_connect-Core

⇒ **All of the above documents under S3_NR are handled in NR discussion (see AI 5.4.1.1)**

5 WI: New Radio (NR) Access Technology

(NR_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

NOTE For R2 109e for R15 and earlier releases, only documents on important and urgent issues shall be submitted and treated. No text enhancements without behavioural or functional change.

5.1 Organisational

Incoming LSs, etc.

Not Treated:

R2-2000036 Reply LS on Tx DC location (R4-1915361; contact: Huawei) RAN4 LS in Rel-15
NR_newRAT-Core To:RAN1, RAN2

5.2 Stage 2

5.2.1 Stage 2 corrections for TS 38.300

You should discuss your stage 2 CRs with the specification rapporteurs before submission.

By Email - Potential easy

R2-2000566 Security and RRC Resume Request Nokia (Rapporteur) CR Rel-15 38.300
15.8.0 0188 - F NR_newRAT-Core
=> Revised in R2-2002215

R2-2002215 Security and RRC Resume Request Nokia (Rapporteur) CR Rel-15 38.300
15.8.0 0188 1 F NR_newRAT-Core

⇒ **[AT109e][001][NR15] Agreed**

R2-2000567 Security and RRC Resume Request Nokia (Rapporteur) CR Rel-16 38.300
16.0.0 0189 - A NR_newRAT-Core
=> Revised in R2-2002216

R2-2002216 Security and RRC Resume Request Nokia (Rapporteur) CR Rel-16 38.300
16.0.0 0189 1 A NR_newRAT-Core

⇒ **[AT109e][001][NR15] Agreed**
=> Coversheet update by MCC: Release should be Rel-16
=> Revised in R2-2002307

R2-2002307 Security and RRC Resume Request Nokia (Rapporteur) CR Rel-16 38.300
16.0.0 0189 2 A NR_newRAT-Core
=> **Agreed**

✉ **[AT109e][001][NR15] Stage-2 38300 (Nokia)**
Scope: CRs above, potential other R15 38300 topic TBD
Intended outcome: Agreed CRs
CLOSED

5.2.2 Stage 2 corrections for TS 37.340

You should discuss your stage 2 CRs with the specification rapporteurs before submission.

By Web Conf

R2-2001175 Clarification on PDCP version change Huawei, HiSilicon CR Rel-15 37.340
15.8.0 0166 1 F NR_newRAT-Core R2-1915574

R2-2001176 Clarification on PDCP version change Huawei, HiSilicon CR Rel-15 36.331
15.8.0 4152 1 F NR_newRAT-Core R2-1915573

Move From 5.4.1.5

R2-2000937 Allowing PDCP version change without handover Ericsson CR Rel-15 36.306
15.7.0 1733 - F NR_newRAT-Core

R2-2000938 Allowing PDCP version change without handover Ericsson CR Rel-15 36.331
15.8.0 4201 - F NR_newRAT-Core
- Suggest to add capability for PDCP version change wo Handover

Move From 5.4.3

R2-2000159 TS 36.331 Clarifying the options for PDCP version change Nokia, Nokia Shanghai Bell CR
Rel-15 36.331 15.8.0 4186 - F NR_newRAT-Core

R2-2000160 TS 36.306 Clarifying the options for PDCP version change Nokia, Nokia Shanghai Bell CR
Rel-15 36.306 15.7.0 1726 - F NR_newRAT-Core

- Nokia think that UEs in the field normal capability today is that PDCP version change is done wo handover.

DISCUSSION
- Samsung has same understanding as Nokia, and think default behaviour is to change PDCP version without Handover.
- ZTE think we already concluded that default behaviour is with HO. Intel think this was the default assumption when making the TS, and think the Nokia proposed capability doesn't make sense. Intel think that a UE that can do this without HO for sure can do this with HO. Mediatek agrees as well.
- QC think from implementation point of view both are ok, and think that HO gives better security. Vivo agrees
- Samsung cannot agree to Ericsson and Huawei proposals, for compatibility reasons.
- TMO think security may be an issue, and think IODT may be an upcoming problem.
- KDDI are concerned about impact to existing network but doesn't understand the Security issue.
- Docomo think security is a valid issue. We usually need to change when changing bearer.
- Verizon is still looking at security issue.

Chair wonders if there are UE compatibility issues to do PDCP version change with HO.
- Samsung need to check, but don't understand the security issue. QC think that a network using same DRB ID is problematic.
- Huawei think that if we postpone, then if there will be more proposals on the table, such proposal need to be advertised in advance.
- Ericsson clarifies that they wrote their proposals to be compatible towards UEs in field.
- Intel think the original intention was with HO.
- QC think in R2 we always prioritize UE compatibility.

⇒ **Postpone (again), to next meeting**

5.2.3 Positioning

Corrections to both the stage 2 and stage 3 aspects related to positioning. Stage 2 CRs should be discussed with the specification rapporteur before submission. This item is treated in a breakout session.

This document will be treated in the first session the week of February 24

R2-2000762 Corrections to the Location measurement indication procedure Lenovo, Motorola Mobility
CR Rel-15 38.331 15.8.0 1454 - F NR_newRAT-Core

Intel have some detailed comments to be taken offline. Some tidying up can be done and they think the condition should be kept for clarity.
Ericsson also think the condition on RSTD measurement is OK to keep.
Huawei think the CR is not essential. Lenovo think we should ensure that the spec is correct.
⇨ We have the correction of the field but do not restructure the condition.

✉ **[AT109e][608][POS] Corrections to location measurement indication (Lenovo)**
Intended outcome: Agreed CR in R2-2001932
Deadline: Wednesday 2020-03-04 1200 CET

R2-2001932 Corrections to the Location measurement indication procedure Lenovo, Motorola Mobility
CR Rel-15 38.331 15.8.0 1454 1 F NR_newRAT-Core

⇨ Agreed in email discussion [AT109e][608]

5.3 Stage 3 user plane

Essential functional corrections.

5.3.1 MAC

By Email – Discussion

R2-2001626 Clarification on the Operation of DRX Inactivity Timer Apple CR Rel-15 38.321 15.8.0 0700 - F NR_newRAT-Core
=> Revised in R2-2002065

R2-2002065 Clarification on the Operation of DRX Inactivity Timer Apple CR Rel-15 38.321 15.8.0 0700 1 F NR_newRAT-Core

⇒ **[AT109e][002][NR15] Majority's view is Alt2, and one company prefers Alt1; There seems to be support to have a clarification, Companies can check the internal implementation. Can come back next meeting.**

R2-2001354 Clarification on p-CSI reporting multiplexed with SR in DRX Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

Agreements [AT109e][002][NR15]

⇒ **R2 understanding is that DRX active time starts after the SR transmission and p-CSI reporting does not start until 4ms after SR is sent.**

⇒ **No CR is needed.**

✉ **[AT109e][002][NR15] User Plane (Apple/Huawei)**
Scope: Treat User Plane R15 CRs, tdocs above
CLOSED

Not to be Treated

R2-2001468 Correction on the RACH parameters for BFR Huawei, HiSilicon CR Rel-15 38.321 15.8.0 0697 - F NR_newRAT-Core

R2-2001589 UL grant overridden between configured grant and RAR grant ASUSTeK discussion Rel-15 NR_newRAT-Core

Not available:

R2-2000975 Correction on the RACH parameters for BFR Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core Late

5.3.2 RLC

Not to be treated

R2-2001295 Ordering of PDCP SN and RLC SN Qualcomm Incorporated CR Rel-15 38.322 15.5.0 0031 - F NR_newRAT-Core

5.3.3 PDCP

Not to be treated

R2-2001294 PDCP Recovery conditions Qualcomm Incorporated CR Rel-15 38.331 15.8.0 1482 - F NR_newRAT-Core

R2-2001296 Ordering of PDCP SN and RLC SN Qualcomm Incorporated CR Rel-15 38.323 15.6.0 0041 - F NR_newRAT-Core

5.3.4 SDAP

5.4 Stage 3 control plane

Essential functional corrections.

5.4.1 NR RRC

Including all architecures

By Email

R2-2001081 Miscellaneous non-controversial corrections Set V Ericsson CR Rel-15 38.331 15.8.0 1472 - F NR_newRAT-Core
=> Revised in R2-2002291

R2-2002291 Miscellaneous non-controversial corrections Set V Ericsson CR Rel-15 38.331 15.8.0 1472 1 F NR_newRAT-Core

⇒ **[AT109e][003][NR15] Agreed**
=> Revised in R2-2002377

R2-2002377 Miscellaneous non-controversial corrections Set V Ericsson CR Rel-15 38.331 15.8.0 1472 2 F NR_newRAT-Core
=> Agreed

✉ **[AT109e][003][NR15] NR RRC (Ericsson)**
Scope: RRC Maintenance, Treat CR above, there may be additions to the CR during the meeting.
CLOSED

5.4.1.1 Connection control

Including L1 Parameters, L2 Parameters, Connection establishment and release, Connection reconfiguration (also reconfig with sync, Handover), Connection resume and release with RRC_INACTIVE state, Security procedures, re-establishment, RRC processing delay requirements etc.

By Web Conf

Unsecured Capability handling
Moved from 3:

R2-2000073 Reply LS on Handling of UE radio network capabilities in 4G and 5G (S3-194488; contact: Intel) SA3 LS in Rel-15 TEI15, 5GS_Ph1-SEC To:RAN2 Cc:SA2, RAN3

R2-2002049 Unsecured UE capability handling NTT DOCOMO INC. discussion NR_newRAT-Core Late

Moved from 4.5:

R2-2000965 Discussion on security requirement for UE capability enquiry Huawei, HiSilicon discussion Rel-15 TEI15, LTE-L23

R2-2001619 Unsecured UE capability handling NTT DOCOMO INC. CR Rel-15 38.331 15.8.0 1497 - F NR_newRAT-Core

Moved from 5.2.1:

R2-2001608 Unsecured UE capability handling NTT DOCOMO INC. CR Rel-15 38.300 15.8.0 0202 - F NR_newRAT-Core

Moved from 4.5:

R2-2001096 Security requirement for UE capability enquiry for LTE Intel Corporation, NTT DoCoMo, Apple CR Rel-15 36.331 15.8.0 4041 3 C TEI15 R2-1914745

R2-2002094 Security requirement for UE capability enquiry for LTE Intel Corporation, NTT DoCoMo, Apple CR Rel-15 36.331 15.8.0 4041 4 C TEI15 R2-1914745

⇒ **Agreed**

R2-2001604 Unsecured UE capability handling NTT DOCOMO INC. CR Rel-15 36.300 15.8.0 1269 - F LTE_euCA-Core

R2-2001614 Unsecured UE capability handling NTT DOCOMO INC. CR Rel-15 36.331 15.8.0 4226 - F LTE_euCA-Core, LTE_5GCN_connect-Core

DISCUSSION on the 9 tdocs above.
- Chair understands that Huawei / Intel proposals for LTE may be straightforward (copy NR solution), To be treated in LTE session.
- But due to technical problems docomo can't explain

⇒ **Have an email discussion to determine whether there is interest for the additional proposals in 2049**

✉ **[AT109e][070][NR15] Unsecured UE capability handling (NTT Docomo)**
Scope: Based on R2-2002049 determine the interest, and if possible arrive at an agreed CR
Intended outcome: Short report or agreed CR
CLOSED

R2-2002310 Report of [AT109e] [070][NR15] Unsecured UE capability handling (NTT Docomo) NTTDOCOMO, INC. (offline email discussion rapporteur)

⇒ **[AT109e][070][NR15] Noted**

Agreements [AT109e][070][NR15]

⇒ **No further optimization for indicating the UE capability secured or unsecured when transferring to other nodes.**

⇒ **No further optimization for indicating the NB-IoT UE capability valid or invalid when transferring to other nodes before SA3 provides any solution.**

RRC Release and L2

R2-2000341 Poll request in RRC signalling from NW to UE Ericsson discussion Rel-15 NR_newRAT-Core
- Ericsson explains that there has been NR UEs that requires the network to poll at release, which is wrong.
- Ericsson proposes to clarify that the network may choose whether to poll or not.
- QC think the note will not help and increases the ambiguity and prefers to leave this to impl.
- Samsung think this is not a new issue. Network may poll and UE may or may not be able to send Status report
- MTK agrees that network can choose it to include a poll or not and think this it clear in RLC and would prefer to not specify UE behaviour further.
- Docomo has understood there are different behaviours in field, and think a clarification can be useful.
- Huawei also don't think we need to clarify. Nokia agrees

⇒ **There seems to be general understanding that network may choose if to poll for DL RRC transmissions.**

⇒ **Not much support to clarify UE behaviour, Noted, not agreed**

R2-2000342 Clarification of successful acknowledgement of RRCRelease message Ericsson CR Rel-15 38.331 15.8.0 1437 - F NR_newRAT-Core

Gap Sharing

R2-2001183 Clarification on gap sharing configuration at handover and re-establishmentHuawei, HiSilicon CR Rel-14 36.331 14.13.0 4212 - F LTE_feMTC-Core
- Samsung point out there there are cover page problems, UE impact should be removed. Ericsson and Nokia think UE need to be indicated.

- Oppo wonder why gap sharing config is not released along with the gap configuration,
- Huawei understand that some UEs release, and some don't. Ericsson think gaps and gap sharing is always released by the network. QC think indeed there are different UE implementations and we need this.
- Nokia think that for handover the UE release is strange, but less strange for reestablishment.
- Intel think the WI codes are strange, and wonder if NR is impacted. Huawei clarify yes.

⇒ **Shall handle the different UE implementations by specifying network behaviour, consider handover and re-establishment.**

⇒ **Work on the details by email**

=> Revised in R2-2002332

R2-2002332 Clarification on gap sharing configuration at handover and re-establishmentHuawei, HiSilicon
CR Rel-14 36.331 14.13.0 4212 1 F LTE_feMTC-Core

⇒ **[AT109e][069][NR15] Agreed**

R2-2001184 Clarification on gap sharing configuration at handover and re-establishmentHuawei, HiSilicon
CR Rel-15 36.331 15.8.0 4213 - A LTE_feMTC-Core, NR_newRAT-Core
=> Revised in R2-2002333

R2-2002333 Clarification on gap sharing configuration at handover and re-establishmentHuawei, HiSilicon
CR Rel-15 36.331 15.8.0 4213 1 A LTE_feMTC-Core, NR_newRAT-Core

⇒ **[AT109e][069][NR15] Agreed**

✉ **[AT109e][069][NR15] Gap Sharing (Huawei)**
Scope: Discussion 1183, 1184,
Intended outcome: Agreed CRs
CLOSED

By Email – Potential Easy

R2-2001590 Correction on NZP-CSI-RS-ResourceSet ASUSTeK CR Rel-15 38.331 15.8.0 1496 - F NR_newRAT-Core
=> Revised in R2-2002129

R2-2002129 Correction on NZP-CSI-RS-ResourceSet ASUSTeK CR Rel-15 38.331 15.8.0 1496 1 F NR_newRAT-Core

⇒ **[AT109e][004][NR15] agreed**

R2-2001178 Correction to RRC reconfiguration complete for NR-DC Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1384 1 F NR_newRAT-Core R2-1915580

⇒ **[AT109e][004][NR15] postponed**

R2-2001179 Correction to DRB addition/modification for the LTE UE not in EN-DC Huawei, HiSilicon
CR Rel-15 38.331 15.8.0 1380 1 F NR_newRAT-Core R2-1915575

⇒ **[AT109e][004][NR15] Contents is agreed. Merged with the Rapporteur CR.**

R2-2000359 Cell re-selection during RRC connection resume vivo CR Rel-15 38.331 15.8.0 1355 1 F NR_newRAT-Core R2-1914686

⇒ **[AT109e][004][NR15] Contents is agreed. Merged with the Rapporteur CR.**

R2-2000681 Correction on reporting of uplink TX direct current MediaTek Inc. CR Rel-15 38.331 15.8.0 1450 - F NR_newRAT-Core
=> Revised in R2-2002141

R2-2002141 Correction on reporting of uplink TX direct current MediaTek Inc. CR Rel-15 38.331 15.8.0 1450 1 F NR_newRAT-Core

⇒ **[AT109e][004][NR15] agreed**

✉ **[AT109e][004][NR15] Potential Easies I (Mediatek, vivo, Huawei, ASUS)**
Scope: Treat R2-2000681, R2-2000359, R2-2001179, R2-2001178, R2-2001590. In case email discussion gets unexpectedly long, it can be split.
CLOSED

R2-2002139 Report of [AT109e][004][NR15] Potential Easies I MediaTek discussion Rel-16 NR_newRAT-Core

⇒ **Noted**

Not to be treated

R2-2000664 Clarification on the presence of ssb-perRACH-Occasion for the CSI-RS based CFRA ZTE Corporation, Sanechips, Ericsson (Rapporteur) CR Rel-15 38.331 15.8.0 1449 - NR_newRAT-Core

R2-2001466 Correction on PUSCH-less uplink carrier Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1492 - F NR_newRAT-Core

R2-2001180 Potential issue on the Counter Check in (NG)EN-DC and NR standalone Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

R2-2001181 Draft LS to SA3 on potential issue of Counter Check Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:SA3

R2-2000233 Add Description of RACH Resouse Distribution CATT CR Rel-15 38.331 15.8.0 1435 - F NR_newRAT-Core

R2-2000856 Discussion on recursion in RRC Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

R2-2000857 Clarification on recursion in RRC messages Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.8.0 1456 - F NR_newRAT-Core

R2-2000616 Clarification on RRCReconfiguration and RRCReconfigurationComplete in MR-DC Apple CR Rel-15 38.331 15.8.0 1448 - F NR_newRAT-Core

R2-2001177 Correction on the need for reconfiguration with sync in (NG)EN-DC, NR-DC and NE-DC Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.8.0 1382 1 F NR_newRAT-Core R2-1915578

R2-2001186 Clarification on SCell release Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1415 1 F NR_newRAT-Core R2-1916033

Not available

R2-2000973 Correction on PUSCH-less uplink carrier Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core Late

Withdrawn

R2-2000187 Clarification on RRCReconfiguration and RRCReconfigurationComplete in MR-DC Apple CR Rel-15 38.331 15.8.0 1432 - F NR_newRAT-Core Withdrawn

5.4.1.2 RRM and Measurements and Measurement Coordination

Including late drop.

By Email - Discussion

Coordination on number of measurment ID

R2-2000245 Corrections on maxMeasIdentitiesSCG-NR in MR-DC ZTE Corporation, Sanechips, Ericsson, NEC, CATT CR Rel-15 38.331 15.8.0 1272 2 F NR_newRAT-Core R2-1914906
=> Revised in R2-2002344

R2-2002344 Corrections on maxMeasIdentitiesSCG-NR in MR-DC ZTE Corporation, Sanechips, Ericsson, NEC, CATT CR Rel-15 38.331 15.8.0 1272 3 F NR_newRAT-Core

⇒ **[AT109e][005][NR15] Agreed**

below Move from 5.4.1.4

R2-2000163 TDOC Capability Coordination for Measurement Reporting Identities in MR-DC Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

⇒ **[AT109e][005][NR15] noted**

✉ **[AT109e][005][NR15] Coordination on number of measurement ID (Nokia, ZTE)**
Scope: Coordination on number of measurement ID, Treat the documents above
Intended outcome: Agreed CRs
Deadline: MAR 05 1200 CET (Stop time)

R2-2002218 Summary of [AT109e][005][NR15] Coordination on number of measurment ID ZTE Corporation discussion Rel-15 NR_newRAT-Core

⇒ **[AT109e][005][NR15] noted**

⇒ **[AT109e][005][NR15] For measurement identity coordination in MR-DC, dummify the legacy field (i.e. maxMeasIdentitiesSCG), and introduce new fields (i.e. maxIntraFreqMeasIdentitiesSCG, maxInterFreqMeasIdentitiesSCG) for intra-frequency and inter-frequency measurement identity coordination.**

below Move from 5.4.1.4, not treated

R2-2000162 TS 38.331 Capability Coordination for Measurement Reporting Identities in MR-DC Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.8.0 1428 - F NR_newRAT-Core

SSB to measure

R2-2000858 SSB-ToMeasure related clarification Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

⇒ **Noted**

R2-2000859 SSB-ToMeasure related clarification Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.8.0 1457 - F NR_newRAT-Core

⇒ **[AT109e][006][NR15] Not Agreed. No Reply in email discussion.**

5.4.1.3 System information

By Web Conf

R2-2000343 ETWS and CMAS acquisition during measurement gaps Ericsson discussion Rel-15 NR_newRAT-Core

- QC agree with the observations but think gaps are important as well, and think there could be bad consequences.
- QC think the network should schedule these transmissions when there are no gaps.
- Oppo think the proposal makes sense, but think this can be left for impl.
- Nokia wonder why this is an issue in NR, while we haven't addressed this for LTE. Samsung also wonders. Ericsson think this has been discussed for LTE and the problem exists there.
- Samsung think that according to TS the UE will acquire the SIBs immediately. Vivo agrees and think no clarification is needed. LG agrees as well
- Mediatek think that acc to R4 the UE don't receive anything from serving cell in m gap.
- Docomo think that also in LTE UE doesn't prioritize ETWS over gaps, so for LTE collisions need to be handled by network.

⇒ **Chair: UE vendor seems not completely aligned on what should be the behaviour**

⇒ **Chair: No support, people are not convinced there is a real problem**

R2-2000344 Clarification for SIB6, SIB7 and SIB6 acquisition during measurement gaps Ericsson CR Rel-15 38.331 15.8.0 1438 - F NR_newRAT-Core

By Email – Potential Easy

R2-2000353 Clarification on the PLMN-IdentityInfoList ZTE Corporation, Sanechips CR Rel-15 38.331 15.8.0 1440 - F NR_newRAT-Core
=> Revised in R2-2002183

R2-2002183 Clarification on the PLMN-IdentityInfoList ZTE Corporation, Sanechips CR Rel-15 38.331 15.8.0 1440 1 F NR_newRAT-Core

⇒ **[AT109e][006][NR15] Agreed**
=> Coversheet update by MCC: WI code = NR_newRAT-Core
=> Revised in R2-2002305

R2-2002305 Clarification on the PLMN-IdentityInfoList ZTE Corporation, Sanechips CR Rel-15 38.331 15.8.0 1440 2 F NR_newRAT-Core
=> **Agreed**

5.4.1.4 Inter-Node RRC messages

By Web Conf

R2-2001452 Discussion on SN trigger MN release measurement gap Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

- Ericsson think it may be too late to agree something like this.
- ZTE also think this is not needed. P1 would be ok but not P2. Intel agrees, Ericsson think we don't need a CR.
- Chair: There seems to be no support to make a clarification.

⇒ **P1 reflects intended behaviour**

R2-2001456 Clarification on SN trigger MN release measurement gap Nokia,Nokia Shanghai Bell CR Rel-15 38.331 15.8.0 1491 - F NR_newRAT-Core

R2-2000166 TDoc IODT issue in 1-symbol PUCCH configuration with frequency hopping Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

- Wrong AI
- Docomo wonder why FH would be configured for 1 symbol
- CATT think R1 is discussing the same issue this week, so maybe we should wait.
- Nokia think the main problem is the RRC reject which is clearly R2.
- Huawei are not sure ..
- ZTE QC: Have to check

⇒ **Continue by email, allow for checking.**

R2-2000167 TS 38.331 IODT issue in 1-symbol PUCCH configuration with frequency hopping Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.8.0 1430 - F NR_newRAT-Core

✉ **[AT109e][068][NR15] 1-symbol PUCCH with frequency hopping (Nokia)**
Scope: Allow check, Continue treat and discuss the documents R2-2000166, R2-2000167
Intended outcome: Agreed CRs
CLOSED

R2-2002324 Summary of email discussion [AT109e][068][NR15] IODT issue in 1-symbol PUCCH configuration with frequency hopping Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

⇒ **[AT109e][068][NR15] Not sufficient support to update TS**

RAN2 Understanding [AT109e][068][NR15], (no need to update TS):

- From RAN2 perspective, It is understood from RAN1 discussions that the presence or absence of the intra-slot frequency hopping configuration (a.k.a *intraSlotFrequencyHopping and secondHopPRB*) does not have any impact on how the 1-symbol PUCCH is transmitted.

a) For UEs supporting PUCCH format 0/2 without intra-slot frequency hopping, intra-slot frequency hopping configuration can be provided but will be ignored for 1-symbol PUCCH.

b) For UEs NOT supporting PUCCH format 0/2 without intra-slot frequency hopping, to avoid possible different interpretations by the UE, 1-symbol PUCCH can still be configured no matter intra-slot frequency hopping configuration is provided or not.

Email – Potential Easy

R2-2000879 Correction on p-maxNR-FR1 for NE-DC Ericsson CR Rel-15 38.331 15.8.0 1460 - F NR_newRAT-Core
=> Revised in R2-2002154

R2-2002154 Correction on p-maxNR-FR1 for NE-DC Ericsson CR Rel-15 38.331 15.8.0 1460 1 F NR_newRAT-Core

⇒ **[AT109e][006][NR15] agreed**

R2-2000880 Correction on SFTD frequency list in INM Ericsson CR Rel-15 38.331 15.8.0 1461 - F NR_newRAT-Core

⇒ **[AT109e][006][NR15] agreed**

R2-2001612 Correction on handover preparation message LG Electronics Inc. CR Rel-16 36.331 15.8.0 4225 - F NR_newRAT-Core

⇒ **[AT109e][006][NR15] contents is agreed, merged with rapporteur CR**

✉ **[AT109e][006][NR15] Potential easies II (Nokia, LG, Ericsson, ZTE)**
Scope: Treat the documents R2-2000858, R2-2000859, R2-2000353, R2-2000879, R2-2000880, R2-2001612
CLOSED

R2-2002155 Potential easies II Ericsson discussion Rel-15 NR_newRAT-Core

⇒ **Noted**

5.4.1.5 Other

Email – Potential Easy

R2-2000763 Introduction of provisions for late non-critical extensions Lenovo, Motorola Mobility CR Rel-15 38.331 15.8.0 1455 - F NR_newRAT-Core

⇒ **[AT109e][007][NR15] agreed**

R2-2000764 Introduction of provisions for late non-critical extensions Lenovo, Motorola Mobility CR Rel-15 36.331 15.8.0 4199 - F LTE_eMTC4-Core, NB_IOTenh2-Core, NR_newRAT-Core, LTE_QMC_Streaming-Core

⇒ **[AT109e][007][NR15] agreed**

R2-2001324 CR on overheating assistance reporting in handover case Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1484 - F NR_newRAT-Core
=> Revised in R2-2002149

R2-2002149 CR on overheating assistance reporting in handover case Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1484 1 F NR_newRAT-Core

⇒ **[AT109e][007][NR15] agreed**

Not to be treated

R2-2000693 Correction on RLC entity release in case of full config Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1452 - F NR_newRAT-Core
Withdrawn

R2-2001185 "Need M" field mandatory presence due to a child presence condition Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core Withdrawn

5.4.2 LTE changes related to NR

By Email – Potential easy

R2-2000682 Clarification on candidate NR frequencies for IDC in EN-DC NTT DOCOMO, INC., Ericsson, MediaTek Inc., ZTE Corporation, Qualcomm Incorporated CR Rel-15 36.331 15.8.0 4168 1 F NR_newRAT-Core R2-1915832
=> Revised in R2-2002189

R2-2002189 Clarification on candidate NR frequencies for IDC in EN-DC NTT DOCOMO, INC., Ericsson, MediaTek Inc., ZTE Corporation, Qualcomm Incorporated, Samsung CR Rel-15 36.331 15.8.0 4168 2 F NR_newRAT-Core

⇒ **[AT109e][007][NR15] agreed**

R2-2000692 Correction on FR1-GP flag Huawei, HiSilicon CR Rel-15 36.331 15.8.0 4196 - F NR_newRAT-Core
=> Revised in R2-2002143

R2-2002143 Correction on FR1-GP flag Huawei, HiSilicon CR Rel-15 36.331 15.8.0 4196 1 F NR_newRAT-Core

⇒ **[AT109e][007][NR15] contents is agreed. Merged with rapporteur CR**

✉ **[AT109e][007][NR15] Potential easies III (Huawei, Lenovo, NTT Docomo)**
Scope: Treat the documents R2-2000763, R2-2000764, R2-2001324, R2-2000682, R2-2000692.
CLOSED

R2-2002142 report of [AT109e][007][NR15] Potential easies III (Huawei, Lenovo, NTT Docomo) Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

⇒ **noted**

Not to be treated

R2-2001455 Correction on Release of EN-DC CATT CR Rel-16 36.331 15.8.0 4223 - F NR_newRAT-Core

5.4.3 UE capabilities and Capability Coordination

Including Late Drop
Including outcome of the email discussion [108#04][R15 NR] Support of 70MHz channel bandwidth (Huawei)

By Web Conf

FR2 fallback

R2-2000600 Handling of fallbacks for combined contiguous and non-contiguous CA in FR2 Apple, Nokia, Nokia Shanghai Bell, OPPO, Intel discussion Rel-15 NR_newRAT-Core

R2-2001222 Handling of FR2 fallback band combinations Ericsson discussion
DISCUSSION on the two tdocs above

- Intel think that the apple proposal can already be support by R4 TS, in R4 TS it is stated for some cases fallbacks are not included.
- Docomo think that the change to not support all fallbacks in R4 was recent. Docomo support the Ericsson view, and think there is no problem to support all fallbacks. IS there a real problem. Nokia think the support of all fallbacks generates a lot of work in RAN4.
- LG also support the Apple proposal.
- Mediatek think there may be a compatibility problem, and we need to know more before agreeing a solution.
- Apple think that in R4 we have lot of BC but in field only a few are used.
- Vivo think R2 need to decide together with R4 and don't want to agree.

- Verizon think it is difficult to decide.
- Nokia think that also there is a testing issue in the future so UEs will not be able to test all possible combination. Docomo think that testing is anyway done by testing tools and is not an issue.
- TMO think that testing has never covered all cases, but are not sure this is a valid reason, and agree with Docomo.
- Verizon think there is indeed a testing effort and this is important.
- Chair wonder what is the main problem of going in the direction of the Apple CRs.
- Ericsson think that there is impact to network. Verizon think this is a true observation. Chair wonder if the impact is mainly for new cases.
- Intel think we need to do something now, as R4 already has started working acc to this.
- Chair think we could go in this direction, if used carefully.
- Ericsson first want to verify the problem.
- TMO think the network impact should not be neglected.
- Apple think R4 know very well the R2 impacts when they made their agreement.
- MTK think that valid fallbacks must be specified in R4. Fallbacks cannot automatically be considered supported just based on signalling. MTK want to clarify what is the real UE capability, i.e. R4 TS + signalling.
- Ericsson cannot accept to change.
- [AT109e][000] Chair: WA is withdrawn and removed.

⇒ **Chair's decided way forward**
R2 assume to follow R4 decision to not support all fall-backs.
Send an LS to R4 with questions to understand more detailed requirements for a solution, and understand better what R4 actually means with not supporting all fallbacks.
Next Q expect to agree on the solution (solution could cover impact in R4 and R2).

✉ **[AT109e][071][NR15] FR2 Fallback Combinations (MTK)**
Scope: LS to R4 on the details according to above.
Intended outcome: Approved LS
Deadline: Mar 5 CET

R2-2002312 [DRAFT] Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 MediaTek Inc LS out Rel-15 NR_newRAT-Core

- Apple don't like Q1. Think it is obvious that the benefit is UE testing and development. Intel agrees.
- Ericsson think we discussed the motivation in R2 and it is clear that companies have a different view.
- Chair proposes Q1: RAN2 respectfully ask RAN4 to share the understanding on intentions for a solution for "not support all fallbacks"
- Apple cannot accept Q1 and think we can also have no LS.
- Docomo think the last version is a good compromise and we should send an LS.
- LG think current proposal is ok and think we can make Q1 part of the text instead.
- TMO support the LS. VDF also think the LS should be sent. Both TMO and VDF see no harm in asking question.
- Chair asks to agree
- APPLE OBJECTs to send the LS with Q1 (sustained objection)
- Chair last attempt: Have "Companies in RAN2 have different understanding on intentions and detail requirements for a solution." In P1. Ericsson cannot accept this.
- Chair: This seems stuck and RAN2 cannot progress this due to sustained objections. Chair will notify RAN4 chair that R2 can currently not agree.

⇒ **noted**

⇒ **close this discussion, no outcome**

R2-2000601 CR to TS38.331 on FR2 intra band contiguous and non-contiguous CA fallback Apple, Nokia, Nokia Shanghai Bell, OPPO, Intel CR Rel-16 38.331 15.8.0 1447 - F NR_newRAT-Core

R2-2000602 CR to TS38.306 on FR2 intra band contiguous and non-contiguous CA fallback Apple, Nokia, Nokia Shanghai Bell, OPPO, Intel CR Rel-16 38.306 15.8.0 0234 - F NR_newRAT-Core

R2-2001223 [DRAFT] Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 Ericsson LS out To:RAN4

LS request BCS

R2-2000035 Reply LS on BCS reporting for EN-DC BC (R4-1915358; contact: Huawei) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **[AT109e][072][NR15] Noted**

R2-2001318 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331) Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1409 1 F NR_newRAT-Core R2-1915892

R2-2001319 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306) Huawei, HiSilicon CR Rel-15 38.306 15.8.0 0208 1 F NR_newRAT-Core R2-1915893

DISCUSSION
- Docomo are ok to address this, but think we need to be careful. The Huawei CR impact meaning in an existing field. For the new scenario we can just introduce new support for inter-band case. Suggest discuss by email.
- QC think that Huawei are keeping compatibility and support this. Intel agrees. Samsung agrees. Nokia too. Docomo would be ok as well. Chair: CRs seems agreeable
- Nokia think some small rewording is needed

⇒ **Revised, the contents of the CRs above are agreed, except that small rewordings can be discussed.**

✉ **[AT109e][072][NR15] BWCS for inter-ENDC BC with intra-ENDC BC (Huawei)**
Intended outcome: Agreed CRs based on R2-2001318 and 1319
CLOSED

R2-2002127 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331) Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1409 2 F NR_newRAT-Core

⇒ **[AT109e][072][NR15] agreed**

R2-2002128 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306) Huawei, HiSilicon CR Rel-15 38.306 15.8.0 0208 2 F NR_newRAT-Core

⇒ **[AT109e][072][NR15] agreed**
=> Revised in R2-2002390

R2-2002390 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306) Huawei, HiSilicon CR Rel-15 38.306 15.8.0 0208 3 F NR_newRAT-Core
=> Agreed

NE-DC capability extensions

R2-2000487 Introduction of extended capabilities for NE-DC only BCs ZTE Corporation, Sanechips discussion Rel-15 NR_newRAT-Core

⇒ **Noted**

R2-2000488 CR on introduction of extended capabilities for NE-DC only BCs ZTE Corporation, Sanechips CR Rel-15 38.331 15.8.0 1445 - F NR_newRAT-Core
=> Revised in R2-2002220

R2-2002220 CR on introduction of extended capabilities for NE-DC only BCs ZTE Corporation, Sanechips CR Rel-15 38.331 15.8.0 1445 1 F NR_newRAT-Core

⇒ **[AT109e][073][NR15] Postponed**

DISCUSSION
- Nokia think their CRs are very similar to ZTEs CRs and would be ok with those.
- ZTE think -v1570 version need to be discussed. Huawei agrees, and are not sure this is applicable to NEDC, might need to ask R1.
- MTK think the CRs are ok, have some preference of ZTE version. The 1024QAM parameter that need discussion. QC agrees this is needed.
- Samsung would prefer to not have 4 parallel lists and prefer the Huawei proposal, and think we can support this also with no change.
- Ericsson think we need to look further at this.
- Docomo think we need to change.
- Chair: There is support to have CRs to fix the support of the extensions. There seem to be somewhat more support for the ZTE CR.
- Huawei think we should send LS to R1 to check for 1024 QAM. MTK would be ok.

✉ **[AT109e][073][NR15] NE-DC capability extensions (ZTE)**
Intended outcome: LS to R1 to ask about applicability of 1024QAM parameter, Agreed CRs based on R2-2000487, 0488
CLOSED

R2-2002221 LS on the applicability of UE capability for NE-DC NR_newRAT-Core To:RAN1 — ZTE Corporation — LS out — Rel-15

⇒ **[AT109e][073][NR15] Approved (this is the final version)**

R2-2001182 Clarification on NE-DC only band combination 38.331 15.8.0 1474 - F NR_newRAT-Core — Huawei, HiSilicon — CR — Rel-15

R2-2000161 TS 38.331 Fixing NE-DC Band Combinations 15 38.331 15.8.0 1427 - F NR_newRAT-Core — Nokia, Nokia Shanghai Bell — CR — Rel-15
=> Revised in R2-2002061

R2-2002061 TS 38.331 Fixing NE-DC Band Combinations 15 38.331 15.8.0 1427 1 F NR_newRAT-Core — Nokia, Nokia Shanghai Bell — CR — Rel-15

Other

R2-2001082 Clarification of handover and measurement capabilities in NR-DC and NE-DC CR Rel-15 38.306 15.8.0 0245 - F NR_newRAT-Core — Ericsson
- Huawei think PScell in NE-DC is LTE cell so it shouldn't apply there. Ericsson agrees that maybe this need to be corrected.
- Google think PScell change should be indicated with the BC. ZTE think these are indeed UE cap not BC.
- Nokia think the intent is ok, but NE-DC and NR-DC also implies support for NR SA so maybe the only problem to fix is the word only. Intel agrees. Huawei think then we might need to re-review the whole TS. Intel think we shouldn't change too much. Some capabilities are R1 capabilities.
- ZTE think we need to clarify further for PScell change. QC think anyway means mandatory with capability signalling.
- Oppo agrees with the intention but think ngEN-DC should be included.
- Samsung agrees something need to change.

⇒ **Will have a change**

EMAIL DISCUSSION to next meeting:

✉ **[Post109e][][NR15] Clarification of capabilities with NR-DC and NE-DC (Ericsson)**
Scope: Based on R2-2001082, find an acceptable CR, Check whether more places need update.
Intended outcome: Agreeable CR
Deadline: Next Meeting

R2-2001382 SRS Capability report for SRS only Scell Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1490 - F NR_newRAT-Core
=> Revised in R2-2002036

R2-2002036 SRS Capability report for SRS only Scell Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1490 1 F NR_newRAT-Core
DISCUSSION
- QC support to have a change
- Samsung wonders in which scenario this problem occurs. Can the outlined problem occur? Intel are also wondering, but think this is indeed agreed in R1, and think R1 reference to the coversheet. Huawei think yes this is possible.
- Nokia also wonder, is this TDD or FDD?
- Docomo wonder if we can use existing signalling for this? Ericsson also think this may be possible.
- OPPO also wonder about the scenario.
- Huawei think DL carrier cannot use the UL feature set ..

⇒ **Postponed**

✉ **[AT109e][081][NR15] SRS Capability report for SRS only Scell (Huawei)**
Scope: Check the scenario, refer to relevant R1 decisions. If agreeable to continue; CR agree how to signal (If scenario need deeper checking can be postponed)
CLOSED

EMAIL DISC to next meeting:
✉ **[Post109e][NR15] SRS Capability report for SRS only Scell (Huawei)**
Scope: Check the understanding on legacy behaviors and figure out an agreeable CR to fix the problem, ref R2-2002036 and [AT109e][081]
Intended outcome: Agreed CR (if possible)
Deadline: Next Meeting

By Email – Discussion

R2-2000011 LS on UE data rate (R1-1913552; contact: Ericsson) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **Noted**

R2-2000034 LS on UE capability of intraBandENDC-Support (R4-1913130; contact: Qualcomm) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **Noted**

R2-2000165 TS 38.306 Clarifying consequences if not supported Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.8.0 0176 3 F LTE_NR_DC_CA_enh-Core R2-1915508

⇒ **[AT109e][008] Round 1: Postpone, Wait for R1 LS**

R2-2001221 Clarification on maximum number of supported PDSCH Resource Element mapping patterns Ericsson CR Rel-15 38.306 15.8.0 0249 - F NR_newRAT-Core

⇒ **[AT109e][008] Round 1: Not Agreed**

✉ **[AT109e][008][NR15] Cap Discussion (Ericsson, Mediatek, Huawei, NTT docomo, Qualcomm, Nokia)**
1st Round Scope: Treat the documents R2-2001322, R2-2001224, R2-2000425, R2-2000684, R2-2001221, R2-2000165, R2-2002081, R2-2000034, R2-2001220, R2-2000011.
Intended outcome: First Round comments, goal to determine which of the CRs that we should attempt to agree, find candidates to leave out (postpone).

CLOSED

R2-2002134 [AT109e][008][NR15] Cap Discussion Ericsson discussion Rel-16 NR_newRAT-Core

DISCUSSION
- [AT109e][000] Monday 24 Docomo (Hideaki-san): For this "combo" email discussion, one approach would be to prepare a document listing all tdocs and ask interested companies to fill in their views for each tdoc, if the intention of proposed changes is agreeable or not. If the majority thinks that the CR is needed, then, we will work on polishing the CR for further. If you agree, the 1st company in the list can prepare such the tdoc?
- [AT109e][000] Chair: yes your proposal was more or less exactly what I had in mind. If the first company cannot do this, some other company could do it, and it can be resolved in the respective email discussion.
- [AT109e][000] Huawei (Yang): Looking at the tdoc number listed in the email thread, we think several companies have frequent authors. The UE capability discussion is always complicated and we actually think to split a bit further on these papers might be more helpful. In our view we suggest R2-2001322 and R2-2000034 can be two separate email discussions, as both discussion need careful evaluation on backward compatibility. The contribution author can be the email rapporteur. For others we are fine to group them together and have one company to lead the email discussion.
- [AT109e][000] Tuesday 25 Chair: Dear Yang Thanks for the suggestion, it is a good one. I suggest we make this split if we decide to go ahead (i.e. after this email discussion have discussed one round). If you think the discussions are complex for some documents we can also do email discussion to next meeting.
- [AT109e][008] Chair: Decision Part 1:
  R2-2000165 Postpone, Wait for R1 LS
  R2-2001221 Not Agreed.
  R2-2001220 Agree to have this CR, can polish the wording (Ericsson)
  R2-2001224 Intention OK, Significant support for the CR Continue,
  Continue to treat 2020 and 1224 in [AT109e][008], Deadline Mar 3
  R2-2000684 Agree to have this CR, can polish the wording (Mediatek)
  R2-2000425 Different interpretations on current behaviour. Continue,
  Continue to treat 0684 and 0425 in [AT109e][077], Deadline Mar 3
  R2-2002080, R2-2002081 Not clear, Something may be needed,
  Continue to treat R2-2002080, R2-2002081 in [AT109e][078], Deadline Mar 3
  R2-2001322 There is significant support to make a clarification,
  Continue to treat in New Email discussion [AT109e][079], Deadline Mar 3

✉ **[AT109e][008][NR15] Cap Discussion (Ericsson)**
Round 2 Scope: R2-2001224 Agree to have this CR, can polish the wording, R2-2001220 Intention OK, Significant support for the CR, continue discussion, make revisions.
Intended outcome: Agreed CRs
CLOSED

R2-2001224 Capability coordination for NE-DC Ericsson CR Rel-15 38.331 15.8.0 1475 - F NR_newRAT-Core
=> Revised in R2-2002275

R2-2002275 Capability coordination for NE-DC Ericsson CR Rel-15 38.331 15.8.0 1475 1 F NR_newRAT-Core

⇒ **[AT109e][008][NR15] Agreed**

R2-2001220 Data rate for the case of single carrier standalone operation Ericsson CR Rel-15 38.306 15.8.0 0248 - F NR_newRAT-Core
=> Revised in R2-2002276

R2-2002276 Data rate for the case of single carrier standalone operation Ericsson CR Rel-15 38.306 15.8.0 0248 1 F NR_newRAT-Core

⇒ **[AT109e][008][NR15] Agreed**

=> Coversheet update by MCC: CR number and date incorrect.
=> Revised in R2-2002402

R2-2002402 Data rate for the case of single carrier standalone operation Ericsson CR Rel-15 38.306 15.8.0 0248 2 F NR_newRAT-Core
=> **Agreed**

R2-2000684 Correction on SRB capability in NR-DC MediaTek Inc. CR Rel-15 38.306 15.8.0 0236 - F NR_newRAT-Core

⇒ **[AT109e][077][NR15] Agreed**

R2-2000425 Correction on removal of NR-DC and NE-DC band combinations when capabilityRequestFilterCommon is absent MediaTek Inc. CR Rel-15 38.331 15.8.0 1444 - F NR_newRAT-Core
R2-2002274 Correction on removal of NR-DC and NE-DC band combinations when capabilityRequestFilterCommon is absent MediaTek Inc. CR Rel-15 38.331 15.8.0 1444 1 F NR_newRAT-Core

⇒ **[AT109e][077][NR15] Agreed**

✉ **[AT109e][077][NR15] Cap Discussion II (Mediatek)**
Scope: R2-2000684: Agree to have this CR, can polish the wording, R2-2000425, Different interpretations on current behaviour. continue discussion, make revisions.
Intended outcome: Agreed CR (if CR not agreeable now for 0425, then a statement clarifying current behaviour to be captured in Chair notes).
CLOSED

R2-2002080 UE capability of intra-band requirements for inter-band EN-DC/NE-DC NTT DOCOMO, INC. CR Rel-15 38.331 15.8.0 1501 - F NR_newRAT-Core Late
R2-2002349 UE capability of intra-band requirements for inter-band EN-DC/NE-DC NTT DOCOMO, INC., Qualcomm Incorporated CR Rel-15 38.331 15.8.0 1501 1 F NR_newRAT-Core Late

⇒ **[AT109e][078][NR15] Agreed**

R2-2002081 UE capability of intra-band requirements for inter-band EN-DC/NE-DC NTT DOCOMO, INC. CR Rel-15 38.306 15.8.0 0259 - F NR_newRAT-Core Late
R2-2002350 UE capability of intra-band requirements for inter-band EN-DC/NE-DC NTT DOCOMO, INC., Qualcomm Incorporated CR Rel-15 38.306 15.8.0 0259 1 F NR_newRAT-Core Late

⇒ **[AT109e][078][NR15] Agreed**

✉ **[AT109e][078][NR15] Cap Discussion III (NTT DOCOMO)**
Scope: R2-2002080, R2-2002081, continue discussion, Different views, Something may be needed.
CLOSED

R2-2001322 CR on fallback BC reporting Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1483 - F NR_newRAT-Core
=> Revised in R2-2002150
R2-2002150 CR on fallback BC reporting Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1483 1 F NR_newRAT-Core
R2-2002347 CR on fallback BC reporting Huawei, HiSilicon CR Rel-15 38.331 15.8.0 1483 2 F NR_newRAT-Core

⇒ **[AT109e][079][NR15] Agreed**

✉ **[AT109e][079][NR15] Cap Discussion IV (Huawei)**

Scope: R2-2001322, There is significant support to make a clarification, Should attempt to convince opponents. If agreeable, cover sheet need update,
CLOSED

By Email

Rapporteur CR

R2-2001393 Miscellaneous Corrections to UE capability parameters Intel Corporation, Lenovo, Motorola Mobility, NTT DOCOMO, INC., Samsung, Qualcomm Incorporated, Ericsson CR Rel-15 38.306 15.8.0 0255 - F NR_newRAT-Core
=> Revised in R2-2002073

R2-2002073 Miscellaneous Corrections to UE capability parameters Intel Corporation, Lenovo, Motorola Mobility, NTT DOCOMO, INC., Samsung, Qualcomm Incorporated, Ericsson CR Rel-15 38.306 15.8.0 0255 1 F NR_newRAT-Core
=> Revised in R2-2002297

R2-2002297 Miscellaneous Corrections to UE capability parameters Intel Corporation, Lenovo, Motorola Mobility, NTT DOCOMO, INC., Samsung, Qualcomm Incorporated, Ericsson CR Rel-15 38.306 15.8.0 0255 2 F NR_newRAT-Core

⇒ **[AT109e][009][NR15] Agreed**

✉ **[AT109e][009][NR15] Miscellaneous Corr UE cap (Intel)**
Scope: Treat the CR above, items may be added to this CR during the meeting
CLOSED

70 MHz BW – email discussion

R2-2001312 Report for email discussion 108#04 on support of 70MHz CBW Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

⇒ **Noted**

R2-2001313 CR to 38.331 on support of 70MHz channel bandwidth Huawei, HiSilicon, Vodafone CR Rel-15 38.331 15.8.0 1410 2 F NR_newRAT-Core R2-1916500
=> Revised in R2-2002152

R2-2002152 CR to 38.331 on support of 70MHz channel bandwidth Huawei, HiSilicon, Vodafone CR Rel-15 38.331 15.8.0 1410 3 F NR_newRAT-Core
=> Revised in R2-2002209

R2-2002209 CR to 38.331 on support of 70MHz channel bandwidth Huawei, HiSilicon, Vodafone CR Rel-15 38.331 15.8.0 1410 4 F NR_newRAT-Core

⇒ **[AT109e][010][NR15] Agreed**

R2-2001314 CR to 38.306 on support of 70MHz channel bandwidth Huawei, HiSilicon, Vodafone CR Rel-15 38.306 15.8.0 0209 2 F NR_newRAT-Core R2-1916501
=> Revised in R2-2002153

R2-2002153 CR to 38.306 on support of 70MHz channel bandwidth Huawei, HiSilicon, Vodafone CR Rel-15 38.306 15.8.0 0209 3 F NR_newRAT-Core
=> Revised in R2-2002210

R2-2002210 CR to 38.306 on support of 70MHz channel bandwidth Huawei, HiSilicon, Vodafone CR Rel-15 38.306 15.8.0 0209 4 F NR_newRAT-Core

⇒ **[AT109e][010][NR15] Agreed**
=> Update by MCC: zip-file had two tdocs

R2-2002306 CR to 38.306 on support of 70MHz channel bandwidth Huawei, HiSilicon, Vodafone CR Rel-15 38.306 15.8.0 0209 5 F NR_newRAT-Core
=> Agreed

Other

R2-2001323 CR on the maximum stored number of deprioritisation frequencies Huawei, HiSilicon CR Rel-15 38.306 15.8.0 0254 - F NR_newRAT-Core

=> Revised in R2-2002151

R2-2002151 CR on the maximum stored number of deprioritisation frequencies Huawei, HiSilicon CR Rel-15 38.306 15.8.0 0254 1 F NR_newRAT-Core

⇒ **[AT109e][010][NR15] Agreed**

R2-2001187 Correction on parameter description of beamManagementSSB-CSI-RS Huawei, HiSilicon CR Rel-15 38.306 15.8.0 0194 2 F NR_newRAT-Core R2-1914663

⇒ **[AT109e][010][NR15] Agreed**

✉ **[AT109e][010][NR15] Potential easies IV (Huawei)**
Scope: Treat the documents R2-2001187, R2-2001323, R2-2001314, R2-2001314, R2-2001313, R2-2001312
CLOSED

R2-2002148 [AT109e][010][NR15] Potential easies IV (Huawei) Huawei discussion Rel-15 NR_newRAT-Core

⇒ **noted**

Not to be treated

XDD FRX Diff

R2-2000013 LS on XDD-FRX Differentiation (R1-1913579; contact: Qualcomm) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2 Cc:RAN4

R2-2000583 xDD FRx split capabilities. Qualcomm Incorporated discussion Rel-16 TEI16

R2-2000246 Discussion on XDD-FRX differentiation in UE capability ZTE Corporation, Sanechips discussion Rel-15 NR_newRAT-Core

R2-2000247 CR to 38.306 on XDD-FRX differentiation in UE capability ZTE Corporation, Sanechips CR Rel-15 38.306 15.8.0 0227 - F NR_newRAT-Core

R2-2000248 CR to 38.331 on XDD-FRX differentiation in UE capability ZTE Corporation, Sanechips CR Rel-15 38.331 15.8.0 1436 - F NR_newRAT-Core

R2-2001320 Discussion on capabilities with XDD-FRX differentiations Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

R2-2001321 Draft reply LS on capabilities with XDD-FRX differentiations Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:RAN1 Cc:RAN4

Other

R2-2001083 Clarification of fallback per band feature set Ericsson CR Rel-15 38.306 15.8.0 0246 - F NR_newRAT-Core

R2-2001084 Un-defined band combinations in UECapabilityInformation Ericsson discussion Rel-15 NR_newRAT-Core, TEI15

R2-2000531 Corrections on bwp-WithoutRestriction OPPO CR Rel-15 38.306 15.8.0 0232 - F NR_newRAT-Core

R2-2002059 Dummifying bandwidth class F for FR1 Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.8.0 0257 - F NR_newRAT-Core Late

Withdrawn

R2-2000164 TS 38.331 Dummifying bandwidth class F Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.8.0 1429 - F NR_newRAT-Core

5.4.4 Idle/inactive mode procedures

This agenda item addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions, out of coverage, etc) are covered under RRC agenda items (5.4.1.x)

Withdrawn

R2-2000340 Correction for Pcompensation for PC1 in FR2 Ericsson, NTT DOCOMO INC. CR Rel-15 38.304 15.6.0 0144 - F NR_newRAT-Core Withdrawn

5.5 Void

6 Rel-16 NR Work Items

6.0 Rel-16 Organizational

6.0.1 RRC

Cross WI issues. CR merge issues. Organizational. Only rapporteurs input (TS rapporteur or running CR editor) is expected. Including outcome of the email discussion [108#28][R16 RRC] RRC Merge (Ericsson Samsung)

By Web Conf

R2-2001085 [108#28][R16 RRC] RRC Merge – 38331 - Email discussion report Ericsson discussion Rel-16 TEI16

- Ericsson reports that there are several problematic places in RRC, each of them should have an email discussion
- Ericsson has focused on functional clashes

⇒ **Have one email discussion to cover at least the "yes" in the table.**

⇒ **Noted**

R2-2001086 Rel-16 RRC 38331 CR Merge Ericsson discussion Rel-16 TEI16

- The RRC merge file can be used to identify in detail the clashes.

⇒ **Noted**

=> Revised in R2-2002293

R2-2002293 Rel-16 RRC 38331 CR Merge Ericsson discussion Rel-16 TEI16

R2-2001160 Notes from 36331 Rel-16 CR merge [108#28][R16 RRC] Samsung Telecommunications report Rel-16 36.331 LTE_NR_DC_CA_enh-Core, LTE_feMob-Core, LTE_eMTC5-Core, NB_IOTenh3-Core, TEI16 Late

- Samsung point out that corrections need to be done acc to merge findings. There are also a lot of basic ASN.1 protocol problems.

⇒ **Assume that we will have an email discussion for merge issues also for LTE.**

⇒ **Noted**

R2-2001159 Draft 36331 Rel-16 resulting from CR merge [108#28][R16 RRC] Samsung Telecommunications other Rel-15 36.331 LTE_NR_DC_CA_enh-Core, LTE_feMob-Core, LTE_eMTC5-Core, NB_IOTenh3-Core, TEI16

⇒ **Noted**

GENERAL DISCUSSION

- Nokia wonders is there would be a difference. Ericsson think there are no surprises.
- Samsung think we should develop a R2 view on whether it is possible to keep time plan.
- TMO think we need a good product.
- Nokia wonder if we need to have 306 CRs now. Chair think no. ZTE think there are some small WIs for which 306 CR is ready. Chair think that for non-L1 items we can have 306 CRs. Huawei think this is only for items that has zero L1 impacts / no L1 features. Huawei pont out that 306 UE cap and RRC goes together. Chair agrees,
- Ericsson think we need to decide which CRs should go for approval. Chair agrees and think this is needed latest Mar 4.

✉ **[AT109e][065][R16] R16 NR RRC coordination (Ericsson)**
Scope: Cross WI RRC coordination, Address issues found at RRC Merge. Identify which CRs/WIs that are problematic.
CLOSED

R2-2002290 [AT109e][065][R16] R16 NR RRC coordination Email discussion report Ericsson discussion Rel-16
- Chair: it is observed that the participation was low.

⇒ **[AT109e][065][R16] This document describes a couple of issues, and action points, which the rapporteur (Ericsson) has all taken on himself. Those actions are endorsed.**

✉ **[AT109e][066][R16] R16 LTE RRC coordination (Samsung)**
Scope: Cross WI RRC coordination, Address issues found at RRC Merge. Identify which CRs/WIs that are problematic.
CLOSED

CHAIR OBSERVATION
- No participation in [066]. Draft report can serve as a start for further review.

R2-2001087 Rel-16 ASN.1 review plan Ericsson discussion Rel-16 TEI16 Late
- Huawei agrees that we keep FFS and editors notes.
- Chair think all CRs will be provided
- TMO are worried TS will not be stable in June. When will Freeze happen. Chair think from now we just focus on fixing problems and open issues.
- Nokia are also concerned. Time line is challenging. Nokia think IMT2020 doesn't require ASN.1 freeze. Oppo also have concerns. Oppo think ph1 start in april.
- Docomo also think this is challenging but similar situations in the past.
- AT&T wonder if we will have ASN.1 complete in June. Chair think yes.
- Ericsson think we can have NBC until Q3.
- Intel think bullet 1 is ok, keep FFSes, and think time plan is ok.
- Samsung think the time to provide comments is too short. Samsung think we can start with a non-official version for comments and thus start even earlier.
- LG wonder what all CRs provided to RP means? Is there a process to establish the quality.
- ZTE think we have the current situation is as it is, and we should have a plan similar to the current one. QC agrees with ZTE
- Samsung are ok with current process, acknowledge that we can try, for the moment we don't know if success or not.
- Nokia think we need to be clear to RP. UE capabilities is a major issue. Nokia think the timeline of the current plan is an issue.
- Huawei think the plan is possible
- Intel wonders about UE capabilities, what should be the plan.
- TMO think if NBC is acceptable until September is an issue. Chair think that we shouldn't have NBC after ASN.1 freeze. If we expect/plan NBC then we shall move the ASN.1 freeze.

⇒ **Will have a plan similar to this proposal**

✉ **[AT109e][099][ASN.1] ASN.1 Plan (Ericsson/Chairman)**
Scope: gather detail plan comments and make revision.
Intended outcome: endorsed plan
CANCELED

⇒ **[AT109e][000] Chair: email discussion [099] is cancelled and replaced by a 1 week email approval.**

✉ **[Post109e][R16 ASN1] ASN.1 review Plan (Ericsson/Samsung)**

Intended outcome: endorsed plan, definition of additional email discussions, e.g. per WI open issues discussion.
Deadline: MAR 12 1200 CET

Moved from 3

R16 L1 parameters

R2-2000023 LS on updated Rel-16 LTE and NR parameter lists (R1-1913675; contact: Qualcomm) RAN1 LS in Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core, LTE_DL_MIMO_EE-Core, LTE_terr_bcast-Core, NR_2step_RACH-Core, NR_unlic-Core, NR_IAB-Core, 5G_V2X_NRSL-Core, NR_L1enh_URLLC-Core, NR_IIOT-Core, NR_eMIMO-Core, NR_UE_pow_sav-Core, NR_pos-Core, NR_Mob_enh-Core, LTE_NR_DC_CA_enh-Core To:RAN2, RAN3

DISCUSSION
[Chair] Treated in email discussion 000. R16 CR rapporteurs shall take into account.
- [AT109e][000] Chair: Proposal to NOTE the Incoming LS on updated Rel-16 LTE and NR parameter lists in R2-2000023 (R1-1913675; contact: Qualcomm).
- [AT109e][000] Chair: We need to take this LS into account. Maybe that has already happened. Any questions or discussions, can be done here.

Online:
- Huawei wonder what to do with the updated L1 parameters.
- Huawei think we should reply to R1 where terminology clashes.
- Nokia agrees.

⇒ **Will have an email discussion for L1 parameters (QC)**

✉ **[AT109e][067][R16] L1 parameters (QC)**
Scope: Discussion on L1 parameters, issues, consistency
CLOSED, NOT NEEDED

RAPPORTEUR STATEMENT on L1 params
- [AT109e][067][R16] QC: All R16 WIs with R2 work has Rapporteur CRs already that will take this into account, On TEI16 Multiple LTE-CRS rate matching patterns is covered both in eMimo and main sessions, RACH configuration considering TDD configuration for FR1 is covered in main session by [AT109e][057][TEI16] Additional RACH config (NTT Docomo). With these, I would conclude that we covered the RAN1 LS of its current form.

6.0.2 Feature List and UE capabilities

Cross WI issues. Organizational. Only rapporteurs input (TS rapporteur or running CR editor) is expected.

- Intel point out that L1 feature list is very late and encourage companies to participate.

By Web Conf

R2-2002064 [DRAFT] LS on Guidelines for UE capability definitions Ericsson LS out Rel-16 TEI16 To:RAN1, RAN4
- Ericsson think we don't need to discuss. Email only. Intel agrees

✉ **[AT109e][011][R16] LS on Guidelines for UE capability definitions (Intel/Ericsson)**
Intended outcome: Approved LS out
CLOSED

R2-2002292 LS on Guidelines for UE capability definitions R2 LS out Rel-16 TEI16 To:RAN1, RAN4

⇒ **[AT109e][011][R16] Approved**
=> Revised in R2-2002378

=> Approved

6.0.3 Other

Other Cross WI issues, e.g. MAC issues. Only rapporteurs input (TS rapporteur or running CR editor) is expected.

By Email – Discussion

R2-2000533 LCID extension for Rel-16 Samsung discussion Rel-16 TEI16
Moved from 6.20.2

⇒ **Noted**

R2-2001500 Extension of the LCID LG Electronics Inc. discussion TEI16

⇒ **Noted**

✉ **[AT109e][012][R16] LCID extension (Samsung)**
Scope: LCID extension, applicable to all R16 WIs that have need,
Part 1: Intended outcome: Report, issues and resolutions. CLOSED
Part 2: Intended outcome: Agreed CR
CLOSED

R2-2002208 Report of LCID extension for Rel-16 Samsung discussion Rel-16 TEI16
=> Revised in R2-2002277

R2-2002277 Report of LCID extension for Rel-16 Samsung discussion Rel-16 TEI16

⇒ **[AT109e][012][R16] Noted**

Agreements [AT109e][012][R16]

⇒ **LCID spaces for both DL and UL MAC CEs are extended from Rel-16.**

⇒ **To extend LCID spaces for MAC CEs, a new MAC subheader with one-byte eLCID field is introduced. Tentatively LCID value 34 is used for both DL and UL for the new MAC subheader.**

⇒ **When the new MAC subheader with one-byte eLCID field is used, eLCID values 0 to 255 indicates LCID values 64 to 319, accordingly.**

⇒ **The LCID range in IAB running CR (i.e. 64 to (2^{16} – 65)) is updated to '320 to (2^{16} + 319). It is FFS whether to keep reserved LCID values in IAB running CR.**

⇒ **For the selection of set1 (below 64) or set2 (above 64), the general principle is that less frequent and low priority MAC CEs should be assigned to set2, and more frequent and high priority MAC CEs (which also requires low overhead) can be assigned to set1 based on consensus. With this principle, the final decision is made by each WI discussion.**

⇒ **No restriction (e.g. always to have L field) is needed to assign MAC CE to set2.**

R2-2002320 Introduction of a new MAC subheader for MAC Ces Samsung CR Rel-16
38.321 15.8.0 0703 - B TEI16

⇒ **[AT109e][012][R16] Agreed**

Review of Stage-2 TP/CRs from other groups

38.300:

R2-2002266 Introduction of 5G-SRVCC R3 (Nokia, Nokia Shanghai Bell) CR Rel-16 38.300
16.0.0 0205 - B SRVCC_NR_to_UMTS
- Due to a clash instead a R2 CR was updated in R2-2002370.

⇒ **[AT109e][084][R16] Not Agreed**

R2-2002269 Propagation of Roaming and Access Restriction information in NG-RAN in non-homogenous NG-RAN node deployments R3 (Ericsson, Qualcomm) CR Rel-15 38.300 15.8.0 0206 - F NR_newRAT-Core

⇒ **[AT109e][084][R16] Agreed**

R2-2002270 Propagation of Roaming and Access Restriction information in NG-RAN in non-homogenous NG-RAN node deployments R3 (Ericsson, Qualcomm) CR Rel-16 38.300 16.0.0 0207 - A NR_newRAT-Core

⇒ **[AT109e][084][R16] Agreed**

✉ **[AT109e][084][R16] 38300 Review of R16 TPs/CRs from other groups (Nokia)**
Scope: Review of TPs/CRs from other groups
Intended outcome: Agreed CRs
Deadline: MAR 6 1200 CET (see also schedule)

36.300:

R2-2002267 Propagation of Roaming and Access Restriction information in E-UTRAN in non-homogenous eNB deployments R3 (Ericsson, Qualcomm) CR Rel-15 36.300 15.8.0 1272 - F NR_newRAT-Core

⇒ **[AT109e][085][R16] Agreed**

R2-2002268 Propagation of Roaming and Access Restriction information in E-UTRAN in non-homogenous eNB deployments R3 (Ericsson, Qualcomm) CR Rel-16 36.300 16.0.0 1273 - A NR_newRAT-Core

⇒ **[AT109e][085][R16] Agreed**

R2-2002271 RAN3 inputs for RAN2 NB-IoT running CR R3 (Huawei, Ericsson) CR Rel-16 36.300 16.0.0 1274 - B NB_IOTenh3-Core

R2-2002272 RAN3 inputs for RAN2 eMTC running CR R3 (Huawei, Ericsson) CR Rel-16 36.300 16.0.0 1275 - B LTE_eMTC5-Core

⇒ **[AT109e][085][R16] Attempt to further treat R2-2002271 and R2-2002272 in [Ext109e][313] and [Ext109e] [403], taking into account comments provided in [AT109e][085]**

✉ **[AT109e][085][R16] 36300 Review of R16 TPs/CRs from other groups (Nokia)**
Scope: Review of TPs/CRs from other groups
CLOSED

✉ **[AT109e][086][R16] 37340 Review of R16 TPs/CRs from other groups (ZTE)**
Scope: Review of TPs/CRs from other groups
NOT USED

6.1 Integrated Access and Backhaul for NR

(NR_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: RP-192188)
Time budget: 3 TU
Tdoc Limitation: 12 tdocs

6.1.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc
Including outcome of the email discussion [108#46][IAB] Feature List (Ericsson)
Including outcome of the email discussion [108#31][IAB] Running CR 38.331 36.331 (Ericsson)
Including outcome of the email discussion [108#51][IAB] Running CR 38.340 (Huawei)

By Email

LS in

R2-2000027 LS Reply on CP Bearer Mapping for IAB (R3-197659; contact: Ericsson) RAN3 LS in Rel-16 NR_IAB-Core To:RAN2

⇒ **Noted**

R2-2000045 LS on definition of IAB-MT channel bandwidth (R4-1916165; contact: Qualcomm) RAN4 LS in Rel-16 NR_IAB-Core To:RAN2

⇒ **Noted**

R2-2002253 LS on the inter donor DU re-routing and source IP configuration (R3-201418; contact: Huawei)) RAN3 LS in Rel-16 NR_IAB-Core To:RAN2

General

R2-2000480 IAB workplan update Qualcomm Incorporated Work Plan Rel-16 R2-1914806

✉ **[AT109e][013][IAB] IAB General (Qualcomm)**
Scope: WI Rapporteur email thread, Treat general items, planning etc
CLOSED (no decisions, just information sharing)

BAP TS– email 108#51

R2-2000481 Email discussion [108#51][IAB]: BAP functional view Qualcomm Incorporated report Rel-16

⇒ **Noted**

R2-2000990 draft TS for TS 38.340 (BAP) Huawei draft TS Rel-16 38.340 0.2.1 NR_IAB-Core Late

⇒ **Revised to remove the change-marks, in R2-2002113**

R2-2002113 draft TS for TS 38.340 (BAP) Huawei draft TS Rel-16 38.340 0.3.0 NR_IAB-Core

DISCUSSION
- Huawei think this version seems to have a modelling issue.
- Ericsson think there is no modelling issue.
- Nokia raised the modelling issue. Nokia propose to not mention which entity performs what. There are still two places to correct. Except for that endorsement is ok and the rest is just small details to fix. Vivo agrees
- Huawei and Samsung think we need some discrimination. Ericsson agrees.
- Chair think that the entity language could remain, but maybe we should clarify that the intention of modelling into entities is to clarify the functionality. It is not intended to be an implementation restriction.
- QC think what we have is quite ok.

⇒ **The intention of modelling into entities is to clarify the functionality. It is not intended to be an implementation restriction.**

⇒ **The said revision in R2-2002113 is endorsed as a baseline. Can still discuss whether anything need to be captured regarding the concerns that we shouldn't limit internal node implementations.**

✉ **[AT109e][014][IAB] BAP 38340 TS/CR (Huawei)**
Scope: Progress BAP TS, Stage-3 and implementation focus, Treat 108#51.
Intended outcome: Address Stage-3 Open issues, take this meeting's agreements into account, as they become available. Produce final agreed TS.
CLOSED

R2-2002345 draft TS for TS 38.340 (BAP) Huawei draft TSRel-16 38.340 0.4.0 NR_IAB-Core

⇒ **[AT109e][014][IAB] Contents agreed, Endorsed for submission for approval at RP**

RRC CRs – email 108#31

R2-2000741 Running CR to TS 38.331 on IAB for NR - B NR_IAB-Core Ericsson CR Rel-16 38.331 15.8.0 1471

R2-2000742 Running CR to TS 36.331 on IAB for NR NR_IAB-Core Ericsson CR Rel-16 36.331 15.8.0 B

- Huawei think there is some details that need fixing. Chair think we can fix details also after endorse as baseline.

⇒ **Both Endorsed as baseline (clean revisions in R2-2002122, and 2123)**

✉ **[AT109e][015][IAB] RRC CRs 38331 36331 (Ericsson)**
Scope: Progress RRC CRs.
Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.

⇒ **Email discussion is extended until MAR 10 as [Ext109e][015][IAB] RRC CRs 38331 36331 (Ericsson)**

R2-2002283 RRC CRs 38331 36331 Ericsson discussion Rel-16 NR_IAB-Core

DISCUSSION
P1
- LG are ok

P2
- QC think we already agreed on this

P3
- Huawei think this can be indicated in the UP.
- Nokia think this is a small issue, choice or single IE.

⇒ **The BAP entity at the IAB-MT be released on transition to IDLE mode.**

⇒ **For the EN-DC case, the SRB2 on LTE leg carries information that consists of an F1-AP message encapsulated in SCTP/IP or F1-C related SCTP/IP packet.**

⇒ **For now assume that IAB node will select between legacy and extended ID range using the CHOICE in ASN.1 for RRC signaling (if there are issues this can be rediscussed during ASN1 review)**

R2-2002122 Running CR to TS 38.331 on IAB for NR 1 B NR_IAB-Core Ericsson CR Rel-16 38.331 15.8.0 1471
=> Revised in R2-2002328

R2-2002328 Running CR to TS 38.331 on IAB for NR 2 B NR_IAB-Core Ericsson CR Rel-16 38.331 15.8.0 1471
=> Revised in R2-2002357

R2-2002357 Running CR to TS 38.331 on IAB for NR 3 B NR_IAB-Core Ericsson CR Rel-16 38.331 15.8.0 1471
=> Coversheet update by MCC: Revision = 4
=> Revised in R2-2002406

R2-2002406 Running CR to TS 38.331 on IAB for NR 4 B NR_IAB-Core Ericsson CR Rel-16 38.331 15.8.0 1471
=> Agreed

R2-2002123 Running CR to TS 36.331 on IAB for NR B NR_IAB-Core Ericsson draftCR Rel-16 36.331 15.8.0 -

=> Revised in R2-2002329

R2-2002329 Running CR to TS 36.331 on IAB for NR NR_IAB-Core — Ericsson — draftCR — Rel-16 — 36.331 — 15.8.0 — B
=> Revised in R2-2002358

R2-2002358 Running CR to TS 36.331 on IAB for NR - B NR_IAB-Core — Ericsson — CR — Rel-16 — 36.331 — 15.8.0 — 4233
=> Agreed

Idle mode 38304 36304 CRs

R2-2000524 Correction of TS 38.304 to introduce IAB NR_IAB-Core — Huawei, HiSilicon — discussion — Rel-16
=> Revised in R2-2002117

R2-2002117 Correction of TS 38.304 to introduce IAB 15.6.0 0150 - B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 38.304
=> Revised in R2-2002166

R2-2002166 Correction of TS 38.304 to introduce IAB 15.6.0 0150 1 B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 38.304

⇒ **[AT109e][016][IAB] Endorsed as baseline**
=> Revised in R2-2002321

R2-2002321 Correction of TS 38.304 to introduce IAB 15.6.0 0150 2 B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 38.304

⇒ **[AT109e][016][IAB] Agreed**
=> Coversheet update by MCC: WI code = NR_IAB-Core
=> Revised in R2-2002403

R2-2002403 Correction of TS 38.304 to introduce IAB 15.6.0 0150 3 B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 38.304
=> Agreed

R2-2000525 Correction of TS 36.304 to introduce IAB NR_IAB-Core — Huawei, HiSilicon — discussion — Rel-16
=> Revised in R2-2002118

R2-2002118 Correction of TS 36.304 to introduce IAB 15.5.0 0784 - B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 36.304
=> Revised in R2-2002167

R2-2002167 Correction of TS 36.304 to introduce IAB 15.5.0 0784 1 B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 36.304

⇒ **[AT109e][016][IAB] Endorsed as baseline**

=> Revised in R2-2002322

R2-2002322 Correction of TS 36.304 to introduce IAB 15.5.0 0784 2 B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 36.304

⇒ **[AT109e][016][IAB] Agreed**
=> Coversheet update by MCC: Wrong tdoc number.
=> Revised in R2-2002404

R2-2002404 Correction of TS 36.304 to introduce IAB 15.5.0 0784 3 B NR_IAB-Core — Huawei, HiSilicon — CR — Rel-16 — 36.304
=> Agreed

✉ **[AT109e][016][IAB] Idle CRs 38304 36304 (Huawei)**
Scope: Progress xx304 CRs
Part 1 (if needed) Intended outcome: Endorsed CRs, revision with tdoc number
CLOSED
Part 2:
CLOSED

R2-2002258 Open issue discussion for TS 38.304 and 36.304 Huawei discussion Rel-16 NR_IAB-Core

⇒ **[AT109e][016][IAB] Noted**

Stage-2 37340 CR

R2-2000526 Correction of TS 37.340 on the support of MR-DC for IAB Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
=> Revised in R2-2002119

R2-2002119 Correction of TS 37.340 on the support of MR-DC for IAB Huawei, HiSilicon CR Rel-16 37.340 16.0.0 0186 - B NR_IAB-Core
=> Revised in R2-2002168

R2-2002168 Correction of TS 37.340 on the support of MR-DC for IAB Huawei, HiSilicon CR Rel-16 37.340 16.0.0 0186 1 B NR_IAB-Core
- Part 1 of email discussion [017]: endorse CR is finished.

⇒ **[AT109e][017][IAB] The running CR in R2-2002168 is endorsed as baseline (small fix in cover page remains)**

R2-2002323 Correction of TS 37.340 on the support of MR-DC for IAB Huawei, HiSilicon CR Rel-16 37.340 16.0.0 0186 2 B NR_IAB-Core

⇒ **[AT109e][017][IAB] Agreed**

✉ **[AT109e][017][IAB] Stage-2 37340 CR (Huawei)**
Scope: Progress Stage-2 37340 CRs
Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.
CLOSED

Stage-2 38300 CR – endorsed at R2#108

[Chair] note that low ambition level can be applied for Stage-2, e.g. 36300 CR might not be necessary now

✉ **[AT109e][018][IAB] Stage-2 38300 36300 CR (Qualcomm)**
Scope: Progress Stage-2 38300 36300 CRs
Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.
Deadlines: Mar 4, 5, 6 (see the schedule).

R2-2002365 CR to 38.300 on Integrated Access and Backhaul for NR Qualcomm CR Rel-16 38.300 16.0.0 0153 7 B NR_IAB-Core
=> Coversheet update by MCC: Wrong spec version and tdoc number
=> Revised in R2-2002407

R2-2002407 CR to 38.300 on Integrated Access and Backhaul for NR Qualcomm CR Rel-16 38.300 16.0.0 0153 8 B NR_IAB-Core
=> Agreed

MAC CR

R2-2000760 Running CR to 38.321 on Integrated Access and Backhaul for NR Samsung Electronics GmbH CR Rel-16 38.321 15.8.0 0677 2 B NR_IAB R2-1915256

R2-2002116 Running CR to 38.321 on Integrated Access and Backhaul for NR Samsung Electronics GmbH CR Rel-16 38.321 15.8.0 0677 3 B NR_IAB
- Samsung explains that the revision just fixes a typo and that the CR only implements MAC TPs that were agreed in Reno.

⇒ **Endorsed as baseline**

=> Revised in R2-2002225

R2-2002225 Running CR to 38.321 on Integrated Access and Backhaul for NR Samsung Electronics GmbH CR Rel-16 38.321 15.8.0 0677 4 B NR_IAB

R2-2002354 Running CR to 38.321 on Integrated Access and Backhaul for NR Samsung Electronics GmbH CR Rel-16 38.321 15.8.0 0677 5 B NR_IAB

⇒ **[AT109e][019][IAB] Agreed**
=> Coversheet update by MCC: Improved title
=> Revised in R2-2002405

R2-2002405 Introduction of Integrated Access and Backhaul for NR Samsung Electronics GmbH CR Rel-16 38.321 15.8.0 0677 6 B NR_IAB
=> Agreed

[AT109e][019][IAB] Rapporteur Comment on potential open issue.
- Cell information discussion would need to be continued (if there is a need for this). There is no time now to settle this issue (if indeed there is an issue!), and there is consensus about the design of the Guard Symbol MAC CE i.e. no need to explicitly indicate the cell ID. However there are two 'camps':
- The cell on which the MAC CE is received is the one and only one to which the MAC CE applies;
- The MAC CE applies to the entire cell group (e.g. the MAC CE indicates the worst case scenario) – from below it would appear only Nokia believes this should be the interpretation.

✉ **[AT109e][019][IAB] MAC CR (Samsung)**
Scope: Progress MAC CR
Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.
CLOSED

Feature List and UE cap

R2-2000740 Summary of email discussion [108#46][IAB] Feature List Ericsson discussion Rel-16 NR_IAB-Core
- Ericsson suggest to discuss in the discussion 024, the 020 is not needed.

⇒ **Change: This discussion is merged and treated in email discussion 024, 020 is cancelled.**

6.1.2 Stage-2 and general

Including principles and higher level aspects e.g. that involve both user plane and control plane, multi-connectivity etc.
R2 109e: R16 Stage-2: No or minimal corrections for Stage-2 TS, i.e. only input email discussions and minimal corrections needed for approval of current CRs as baseline.

R2-2000469 Parent selection at IAB nodes during Initial Setup Intel discussion Rel-16 NR_IAB-Core

R2-2000743 On Multi-connectivity for IAB Ericsson discussion Rel-16 NR_IAB-Core

R2-2000744 Security for inter-IAB node Signalling Ericsson discussion Rel-16 NR_IAB-Core

R2-2001624 NR-DC support in IAB (signaling perspective) Samsung R&D Institute UK discussion R2-1916056

R2-2001634 EN-DC support in IAB Samsung R&D Institute UK discussion R2-1916055

6.1.3 BAP functionality

Routing, Bearer Mapping, BAP based Flow Control, Other
Summary on BAP functionality (Huawei)

By Web Conf

R2-2000989 Summary of email discussion 108#51 on BAP open issue Huawei discussion Rel-16 NR_IAB-Core Late

P3:

- Chair think that P3 doesn't need to agreed. It is agreed in the past, and think we also have agreed that we don't support local load balancing.
- Chair suggest to capture: For the BAP operation: In case of Path ID mismatch, there may be several outgoing links that matches the destination. We do not specify which link shall be selected in such case (up to implementation).
- Ericsson suggest to clarify that such path mismatch should be an abnormal and temporary situation.
- Other proposals by email.

⇒ **For the BAP operation: In case of Path ID mismatch, there may be several outgoing links that matches the destination. We do not specify which link shall be selected in such case (up to implementation).**

⇒ **Assumption: RAN2 expect that Path ID mismatch may occur due to RLF in the network, i.e. not in normal operation.**

R2-2002055 Summary on BAP functionality in AI 6.1.3 Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

P2

- QC think R3 work on this. Ericsson agrees
- Chair: ok we leave P2 to R3.
- Nokia wonders what happens if donor gets a packet for another node. Chair think fo next meeting.

4a/4b

- Chair wonders if the CU can provide the wrong config.
- ZTE think that for 1-to-1 bearer mapping things can go wrong, and a default mapping can be used for that.
- LG think that using a default Backhaul RLF channel will bring more problems, and think that best effort traffic do not need to be re-routed.
- QC don't like 4a. Vivo agrees. KDDI agrees
- Chair think that for the sake of discussion we may need to discuss 1-to-1 mapping and 1-to-n mapping separately.
- Nokia think that 4a can work.
- QC think that following the decision that we can re-route at RLF it means that we can also map to a different
- Huawei think that 4a can be applied always, and think a default link can be used.
- Chair: 4a/4b do not treat further in this meeting.

P5

- Futurewei think that the polled IAB node should decide for polling. Chair wonder then what information is required in the Poll. FW think the type of feedback need to be indicated. Ericsson also want to discuss furher.
- LG think 6b is FW concern.

Chair: Rest of Proposals for email discussion

⇒ **BAP operation in Donor (DU) requires that its own BAP address is configured**

✉ **[AT109e][021][IAB] BAP functionality (Huawei)**
Scope: Treat remaining parts to be treated from email discussion and from summary
Intended outcome: resolution to issues, solutions.
CLOSED

R2-2002157 Proposals for approval on BAP functionality (Set I) Huawei discussion Rel-16 NR_IAB-Core

⇒ **noted**

R2-2002259 Proposals for approval on BAP functionality (Set II) Huawei discussion Rel-16 NR_IAB-Core

⇒ **noted**

Agreements [AT109e][021][IAB]

⇒ **After bootstrapping, the specific routing ID and BH RLC channel as configured by F1AP are used for non-F1 traffic.**

⇒ **The CU may assign a BH RLC channel for BAP control PDU transmission via F1AP. If not assigned by the CU, the IAB-node selects the BH RLC channel for BAP control PDU by implementation.**

⇒ **R16 will not specify BAP buffer related operations.**

⇒ **The BH RLC channels to be reported by the polled IAB node is up to the polled IAB node implementation.**

⇒ **The routing IDs to be reported by the polled IAB node is up to the polled IAB node implementation.**

R2-2000270 Design of DL HbH Flow Control Message vivo discussion
R2-2000271 Discussion on BAP control PDU vivo discussion
R2-2000470 Multi-route support in IAB Intel discussion Rel-16 NR_IAB-Core
R2-2000502 Further consideration on routing configuration ZTE, Sanechips discussion
R2-2000503 Further consideration on bearer mapping ZTE, Sanechips discussion
R2-2000504 Consideration on flow control control PDU ZTE, Sanechips discussion
R2-2000518 Remaining issues for routing Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-2000519 Remaining issues for bearer mapping Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-2000561 Flow control open issues in IAB NEC Corporation discussion Rel-16
R2-2000661 Considerations on BAP entity release KDDI Corporation discussion
R2-2000745 Further Discussion on BAP Layer Signaling Ericsson discussion Rel-16 NR_IAB-Core
R2-2000746 Remaining Issues Related to HbH Flow Control Ericsson discussion Rel-16 NR_IAB-Core
R2-2000770 Desired data rate for hop-by-hop flow control Samsung discussion Rel-16 NR_IAB
R2-2000819 On BAP features and their mandatory vs optional support Samsung Electronics GmbH discussion
R2-2000847 Flow-control details Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-2000893 Remaining open Issues of IAB Flow Control CATT discussion Rel-16 NR_IAB-Core
R2-2000902 Inter-node BH RLF indication CMCC discussion Rel-16
R2-2000903 BAP mapping support for routing CMCC discussion Rel-16 R2-1915196
R2-2001060 Remaining issues of BAP Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-2001562 Need of BAP buffer LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1916139
R2-2001563 Consideration on local routing in IAB LG Electronics Inc. discussion Rel-16 NR_IAB-Core
R2-2001564 Details of polling for hop-by-hop flow control LG Electronics Inc. discussion Rel-16 NR_IAB-Core
R2-2001565 Configuration of BH RLC channel for control PDU transmission LG Electronics Inc. discussion Rel-16 NR_IAB-Core
R2-2001622 Remaining issues for IAB HbH Flow control Futurewei Technologies discussion
R2-2001635 BAP layer indication of RLF at child node Samsung R&D Institute UK discussion

6.1.4 User plane aspects

User plane aspects not covered by BAP, e.g. Scheduling and QoS, LCID extension..
Summary on IAB MAC impacts (Samsung)

By Web Conf

R2-2002044 Summary of IAB MAC impacts Samsung (rapporteur) discussion Rel-16 NR_IAB-Core
=> Revised in R2-2002092

R2-2002092 Summary of IAB MAC impacts Samsung (rapporteur) discussion Rel-16 NR_IAB-Core

⇒ **Noted**

✉ **[AT109e][022][IAB] User Plane Aspects (Samsung)**
Part 1, Scope: Treat summary in R2-2002092 Intended outcome: issues resolution, solutions CLOSED
Part 2, Outgoing LS
CLOSED

R2-2002254 LS to RAN1 on T_delta in IAB LS out RAN2 to: RAN1 cc: RAN4

⇒ **[AT109e][022][IAB] Approved**

R2-2002120 Summary of IAB MAC impacts Samsung (rapporteur) discussion Rel-16 NR_IAB-Core

⇒ **Noted**

R2-2002162 IAB MAC impacts: Proposals for discussion and approval (Set I) Samsung discussion Rel-16 NR_IAB-Core

⇒ **Noted**

DISCUSSION
- [AT109e][022][IAB] Chair Comment: There seems to be support that RAN2 will not specify any normative solutions to handle perceived “double-counting” of the buffer data.
- Intel think the above comment is not correct. Samsung clarifies that there was no support to capture in TS. Chair think that the main requirement is that a scheduling node understands what is reported. Can be discussed at a future meeting.

Agreements [AT109e][022][IAB]

⇒ **Pre-emptive BSR will only support formats already available for “normal” BSR, i.e. we will not support pre-emptive BSR formats with special content (e.g. timing information) not used for “normal” BSR, nor will we support pre-emptive BSR formats not based on LCG reporting.**

⇒ **Periodic pre-emptive BSR is not supported.**

⇒ **Logical channels shall be prioritized in accordance with the following order (highest priority listed first):**
- **C-RNTI MAC CE or data from UL-CCCH;**
- **Configured Grant Confirmation MAC CE;**
- **MAC CE for BSR, with exception of BSR included for padding;**
- **Single Entry PHR MAC CE or Multiple Entry PHR MAC CE;**
- ***MAC CE for pre-emptive BSR;***
- **data from any Logical Channel, except data from UL-CCCH;**
- **MAC CE for Recommended bit rate query;**
- **MAC CE for BSR included for padding.**

(can still allow discussions on this)

⇒ **Pre-emptive BSR reports exclusively the volume of data expected but not yet received.**

⇒ **The mapping of LCGs between the ingress and egress links is left to implementation.**

⇒ **FFS if to insert a NOTE in TS 38.321 to acknowledge the ambiguity that can occur when BH RLC channels of a single ingress link LCG are mapped to different egress BH link LCGs. (can discuss in the CR discussion, or just leave the note out for now)**

⇒ **RAN2 to make the clarification in the MAC spec that it is allowed to have a pre-emptive BSR MAC CE and a non-pre-emptive BSR MAC CE in the same MAC PDU.**

⇒ **SR triggered by pre-emptive BSR can always be sent (assuming the relevant SR configuration has available resources, and assuming of course the BSR itself cannot be sent) i.e. it is not delayed by the use of a timer or mask.**

⇒ **RAN2 will design one single fixed-length Guard Symbols MAC CE, containing values (or indices mapped thereto) of all 8 parameters introduced by RAN1.**

R2-2002163 IAB MAC impacts: Proposals for discussion and approval (Set II) Samsung discussion
Rel-16 NR_IAB-Core

Agreements [AT109e][022][IAB]

⇒ **RAN2 to rule out sending pre-emptive BSR as padding.**

⇒ **The only reporting format supported for the pre-emptive BSR is the Long BSR.**

⇒ **Pre-emptive BSR shall be cancelled when a MAC PDU that contains the pre-emptive BSR MAC CE is sent. FFS other cancellation conditions, e.g. implementation specific.**

⇒ **Pre-emptive BSR may be used for the case of dual-connected IAB node. It is up to network implementation to work out the associated MAC entity and the associated expected amount of data. RAN2 does not plan to standardize additional constraints to assist such associations.**

⇒ **a NOTE in TS 38.321 to acknowledge the issue of CG-aware mapping between ingress and egress LCGs for the DC-connected node.**

R2-2002217 IAB MAC impacts: Proposals for discussion and approval (Set III) Samsung discussion
Rel-16 NR_IAB-Core

DISCUSSION

P1

- Chair thought that triggering would be left to implementation
- LG think this could be covered, e.g. a note,
- Intel think this is not needed we can leave for implementation.
- Samsung think that the triggers are specified and whether to use it or not is up to implementation.
- Nokia think “shall” is too strong and can leave this for implementation,
- Lenovo think a NOTE is good.
- Chair: several companies don’t want to capture but leave for implementation

P2

- Samsung think R1 has already agreed but are waiting for R2

P3

- Huawei support

P4

- QC think we need to send LS
- LG think the IE, range mapping etc should be decided by R1. Nokia agrees.
- Huawei think we can capture in R2 TS. Intel agrees. Huawei think we already now have value range and granularity from R1 and R4.
- QC think we can ask R1 to specify this in their TS.
- Huawei think we can discuss 11 vs 12 bits.

⇒ **The T_delta MAC CE shall not contain SCS.**

⇒ **Send LS to ask R1 (cc R4) to capture the range mapping of the IE signalled for T_delta, inform about our current design.**

⇒ **Add to [AT109e][022][IAB]: Approved LS deadline EOM**

R2-2000272 Preemptive BSR Procedures and Format vivo discussion

R2-2000471 Uplink latency reduction Intel discussion Rel-16 NR_IAB-Core

R2-2000483 (TP for NR_IAB BL CR to TS 38.321) MAC CE for guard symbols Qualcomm Incorporated, Samsung other Rel-16

R2-2000505 Discussion on the pre-emptive BSR format ZTE, Sanechips discussion

R2-2000506 Discussion on remaining issues on Timing Delta MAC CE ZTE, Sanechips discussion

R2-2000507 TP for Timing Delta MAC CE ZTE, Sanechips discussion

R2-2000508 Draft LS on Timing Delta signaling ZTE, Sanechips discussion

R2-2000514 Remaining issue of pre-emptive BSR in IAB Kyocera discussion

R2-2000520 Remaining issues of the pre-emptive BSR Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-2000521 Leftover issues to support the IAB RACH procedure Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-2000527 Remaining issue for the Timing Delta MAC CE Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-2000528 TP for Guard Symbols MAC CEs Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-2000747 Remaining Aspects of Pre-emptive BSR Format Ericsson discussion Rel-16 NR_IAB-Core

R2-2000748 L1 Resource Multiplexing MAC CE Ericsson discussion Rel-16 NR_IAB-Core

R2-2000781 Finalising Rel-16 pre-emptive BSR design Samsung Electronics GmbH discussion

R2-2000782 TP on outstanding issues with pre-emptive BSR Samsung Electronics GmbH discussion

R2-2000808 Open issues with IAB LCID space extension and its wider impact on Rel-16 Samsung Electronics GmbH discussion

R2-2000848 Remaining issues of buffer status reporting for IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-2000849 Format for pre-emptive BSR Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-2000850 MAC CE for guard symbols indication Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-2000894 Remaining Issues on Pre-emptive BSR CATT discussion Rel-16 NR_IAB-Core

R2-2001018 Consideration on uplink low-latency scheduling Lenovo, Motorola Mobility discussion Rel-16

R2-2001019 Pre-emptive BSR in DC scenario Lenovo, Motorola Mobility discussion Rel-16

R2-2001020 BSR and pre-BSR in packet re-routing scenario Lenovo, Motorola Mobility discussion Rel-16

R2-2001342 Data volume reporting and dual connectivity with Pre-emptive BSR Futurewei Technologies discussion R2-1914768

R2-2001556 Consideration on truncated pre-BSR MAC CE LG Electronics Inc. discussion Rel-16 NR_IAB-Core

R2-2001558 Remaining issues on Timing Delta MAC CE LG Electronics Inc. discussion Rel-16 NR_IAB-Core

R2-2001559 [DRAFT] LS on Timing Delta MAC CE LG Electronics Inc. LS out Rel-16 NR_IAB-Core To:RAN1

R2-2001560 LCG based UL grant LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1916137

R2-2001561 Ambiguity of pre-BSR with multiple parents LG Electronics Inc. discussion Rel-16 NR_IAB-Core

R2-2001591 Discussion on including pre-emptive BSR in MAC PDU ASUSTeK discussion Rel-16 38.321 NR_IAB-Core
R2-2001592 Discussion on cancelling pre-emptive BSR ASUSTeK discussion Rel-16 38.321 NR_IAB-Core
R2-2001631 F1-U Flow Control and Reordering Issues Sequans Communications discussion Rel-16 NR_IAB-Core R2-1913630
R2-2001632 Packet Marking for E2E Flow Control Sequans Communications discussion Rel-16 NR_IAB-Core R2-1913631
R2-2001645 TP for Guard Symbol MAC CE ZTE Corporation, Sanechips discussion

6.1.5 Control plane aspects

Not to be Treated

R2-2000273 Discussion on IAB BH RLF report mechanism in case of DC vivo discussion R2-1914920
R2-2000274 Verification of BH RLF notification vivo discussion R2-1914918
R2-2000275 [Draft] LS on BH RLF notification verification vivo LS out R2-1914919 To:SA3
R2-2000276 RLF Notification Messages vivo discussion
R2-2000472 Further discussion on Backhaul RLF handling Intel discussion Rel-16 NR_IAB-Core
R2-2000509 Discussion on IAB BH RLF handling ZTE, Sanechips discussion
R2-2000510 Discussion on BAP control PDU of RLF indication ZTE, Sanechips discussion
R2-2000516 Possible issues on Backhaul RLF handling Kyocera discussion
R2-2000662 Considerations on Intra-CU indication KDDI Corporation discussion
R2-2000749 Further details on Backhaul link RLF Notification Types to Downstream Node(s) Ericsson discussion Rel-16 NR_IAB-Core
R2-2001348 Cell Selection for Backhaul RLF Recovery Futurewei Technologies discussion R2-1916061
R2-2001633 Remaining issues on IAB RLF Samsung R&D Institute UK discussion

6.1.5.2 Configuration

Summary on IAB Configuration except IP address (Ericsson)
Summary on IAB IP address configuration (Samsung).

By Email

R2-2002045 Summary on IAB IP address configuration Samsung (rapporteur) discussion Rel-16 NR_IAB-Core

⇒ **noted**

✉ **[AT109e][023][IAB] IP address Allocation (Samsung)**
Scope: Treat summary on IP address allocation
Intended outcome: agreed solutions, agreed issues resolutions
CLOSED

R2-2002164 IAB IP address allocation - Proposals for discussion and approval Samsung discussion Rel-16 NR_IAB-Core

DISCUSSION

P1

- Chair think we don't need to explicitly agree. This is indeed the case.

P2

- Nokia think RRC reconfiguration complete is better and allows a unified solution.
- Samsung think only Nokia want this.
- QC suggest to agree as a working assumption.

P4
- QC think R3 shall resolve this.
- Nokia think R3 will resolve this.

⇒ **R2 assumes that whether there are any additional scenarios (apart from node integration and recovery from RLF) where an IAB node may need to request one or more IP addresses is left to RAN3.**

⇒ **As a working assumption, RRCSetupComplete message is used by the IAB node to request IP address for the case of node integration in the SA scenario. This assumption can be revisited after all cases has been addressed.**

⇒ **Issue on IP address request in the NSA case is moved to email discussion to next meeting**

⇒ **Issue on whether – following recovery from RLF – there is a need for the IAB node to request an IP address is moved to email discussion.**

⇒ **Confirm that R2 will implement R3 agreements**
- **RAN2 to implement IP address addition and removal in RRC [this serves merely as a reminder of the work to be done].**
- **RAN2 to implement in RRC the mapping between the IPv4 address(es)/IPv6 prefix assigned to the IAB node, and the related donor-DU's BAP address RRC, when assigning the IP address to the IAB node [this serves merely as a reminder of the work to be done].**

✉ **[Post109e][IAB] IP address allocation (Samsung)**
Scope: NSA case, following recovery from RLF, R3 should decide what is required, R2 should look at signalling solution (which message etc). Take R3 decisions and outcomes into consideration.
Intended outcome: Report, possibly agreeable TP
Deadline: next meeting

R2-2002057 Summary of 6.1.5.2: IAB-MT Features List Ericsson discussion Rel-16 NR_IAB-Core

✉ **[AT109e][024][IAB] IAB MT Features (Ericsson)**
Scope: Treat summary on IAB MT Features, Progress Feature List, Treat email discussion [108#46].
Intended outcome: agreements, solutions, issues resolutions
CLOSED

R2-2002284 Summary of 6.1.5.2: IAB Configuration except IP address Ericsson (rapporteur) discussion Rel-16 NR_IAB-Core

⇒ **Noted**

Agreements [AT109e][024][IAB]

⇒ **IP assignment over RRC" is of mandatory support for IAB-MTs and does not need to be listed in the feature list.**

⇒ **"F1AP over LTE leg signaling for EN-DC IAB-MT" is an optional feature/capability.**

⇒ **"Feature "0.1 HbH flow control" has two components: BH RLC channel based and Routing ID based. These two components are separately signalled.**

⇒ **For an IAB-MT node:**
- The "Basic Procedures" of the BAP layer feature group is mandatory.
- IP assignment over RRC is mandatory.
- All other Rel-16 features are optional.

⇒ **RAN2 to prepare 2 sets of CRs one with and another without capability signalling and let the RAN plenary to decide on it.**

⇒ **RAN2 will not discuss the mandatoriness of Rel-15 features.**

R2-2000277 Cell baring indication for IAB support vivo discussion
R2-2000479 Parent selection at IAB nodes during Initial Setup (Text proposal) Intel Corporation draftCR Rel-16 38.331 15.8.0 NR_IAB-Core
R2-2000482 (TP for NR_IAB BL CR to TS 38.331) IP address configuration Qualcomm Incorporated other Rel-16
R2-2000511 Discussion on the RRC signalling for IP address allocation ZTE, Sanechips discussion
R2-2000529 The impacts of IP address management of IAB node to RAN2 Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-2000750 IP Address Assignment for IAB Node(s) Ericsson discussion Rel-16 NR_IAB-Core
R2-2000769 IP address configuration for IAB Samsung discussion Rel-16 NR_IAB
R2-2000895 Views on RRC States of IAB nodes CATT discussion Rel-16 NR_IAB-Core
R2-2001016 Remaining details for IAB-MT access Samsung Electronics GmbH discussion
R2-2001059 IP address assignment for IAB nodes Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-2001061 IAB-MT features list and capabilities Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

6.1.5.3 Other

Barring, Access etc
Summary on Barring, access etc (Ericsson)

By Email (and maybe Webconf)

R2-2002058 Summary of 6.1.5.3: SI Broadcast, cell Restrictions/Reservation and Barring, Initial Access, and Connection Setup Ericsson discussion Rel-16 NR_IAB-Core

⇒ **Noted**

✉ **[AT109e][025][IAB] SI Broadcast, cell Restrictions/Reservation and Barring, Initial Access, and Connection Setup (Ericsson)**
Scope: Treat summary on 6.1.5.3
Intended outcome: agreed solutions, agreed issues resolutions
CLOSED

R2-2002285 Email discussion to progress on: SI Broadcast, cell Restrictions/Reservation and Barring, Initial Access, and Connection Setup Ericsson (rapporteur) discussion Rel-16 NR_IAB-Core

⇒ **Noted**

Agreement [AT109e][025][IAB]

⇒ **IAB-MTs ignore the IEs cellBarred, cellReservedForOtherUse, and cellReservedForOperatorUse.**
If any issue is identified, it should be discussed at the next meeting.

⇒ **IAB-MTs are not under UAC control.**

R2-2000484 IAB access barring Qualcomm Incorporated other Rel-16
R2-2000512 Consideration on IAB node access control ZTE, Sanechips discussion
R2-2000522 Backhaul RLF Recovery Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-2000523 Leftover issue for cell barring Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-2000751 On cell Reservations in MIB and SIB1 Ericsson discussion Rel-16 NR_IAB-Core
R2-2000752 Draft CR to 36.304 on cell Reservations for IAB-MTs Ericsson CR Rel-16 36.304 15.5.0 0780 - B NR_IAB-Core
R2-2000753 Draft CR to 38.304 on cell Reservations for IAB-MTs Ericsson CR Rel-16 38.304 15.6.0 0147 - B NR_IAB-Core
R2-2000754 IAB-MT Feature Capabilities Ericsson discussion Rel-16 NR_IAB-Core
R2-2000824 PWS information handling in IAB Sony discussion Rel-16 NR_IAB-Core R2-1915227
R2-2000835 IAB Cell Barring Sony discussion Rel-16 NR_IAB-Core
R2-2000892 Views on Cell Barring Mechanism for IAB CATT discussion Rel-16 NR_IAB-Core
R2-2001021 Cell selection for IAB RLF recovery Lenovo, Motorola Mobility discussion Rel-16
R2-2001056 BH link failure handling Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-2001057 Remaining aspects of F1AP transport in EN-DC Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-2001058 Remaining aspects of IAB initial access Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core
R2-2001523 Access control in IAB networks LG Electronics France discussion NR_IAB-Core
R2-2001524 Necessity of even earlier BH RLF notification LG Electronics France discussion NR_IAB-Core
R2-2001525 BH RLF Notification Termination Layer LG Electronics France discussion NR_IAB-Core
R2-2001605 Differential barring for IAB nodes and UEs Futurewei Technologies discussion
R2-2001625 F1AP related terminology in NSA IAB Samsung R&D Institute UK discussion

6.2 NR-based Access to Unlicensed Spectrum

(NR_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: RP-191575; Further prioritization guidance in RP-191581). Documents in this agenda item will be handled in a break out session.

Time budget: 3 TU

Tdoc Limitation: 9 tdocs

6.2.1 General

Including incoming LSs, rapporteur inputs, etc.
Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.
Rapporteur of WI can submit a paper on UE capabilities for informational purposes, but it will not be treated during e-meeting
Including outcome of the email discussion [108#38][NR-U] Running 38.331 (Qualcomm)
Including outcome of the email discussion [108#74][NR-U] Running 38.300 (Qualcomm)
Including outcome of the email discussion [108#75][NR-U] Running 38.321 (Ericsson)
Including outcome of the email discussion [108#76][NR-U] Running 38.304 (Qualcomm)
Including outcome of the email discussion [108#77][NR-U] Running 37.340 (Oppo)
The LSs should only be presented if the presenting companies flag it, otherwise they will be noted.

R2-2000018 Reply LS on PHR reporting for NR-U (R1-1913584; contact: Lenovo) RAN1 LS in Rel-16 NR_unlic-Core To:RAN2
=> RAN2 will treat this in offline 502
=> Noted

R2-2000016 Response LS to RAN2 LS on SFN LSB indication in msg2/msgB (R1-1913582; contact: Qualcomm) RAN1 LS in Rel-16 NR_unlic-Core, NR_2step_RACH-Core To:RAN2
=> Noted

R2-2000021 LS on signaling of Q for a serving cell in NR-U (R1-1913592; contact: Nokia) RAN1 LS in Rel-16 NR_unlic To:RAN2
=> Noted

From RAN2 point of view, the CR will be submitted for approval in plenary meeting. Stage 3 corrections and the FFS can be addressed in the April e-meeting. Further enhancements past the agreed FFS are not encouraged

CRs to be endorsed without presentation as baseline. Further agreements will be captured using these CRs as a baseline and companies can continue further discussions over email:

R2-2000414 Running CR to 37.340 for NR-U NR_unlic-Core OPPO CR Rel-16 37.340 16.0.0 0183 - B
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e (if any) and moved to email discussion to be approved for RAN Plenary submission
=> The CR is revised in R2-2001921

R2-2001921 Running CR to 37.340 for NR-U NR_unlic-Core OPPO CR Rel-16 37.340 16.0.0 0183 1 B
Outcome: email approval
Deadline: Wednesday, March 4th
[Offline discussion 511]
=> Coversheet update by MCC: Improved title wording
=> Revised in R2-2001982

R2-2001982 Introduction of NR-U to 37.340 NR_unlic-Core OPPO CR Rel-16 37.340 16.0.0 0183 2 B
=> Agreed

R2-2001254 Running RRC CR for NR Shared Spectrum Qualcomm Incorporated CR Rel-16 38.331 15.8.0 1477 - B NR_unlic-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from week1 and moved to email discussion
=> The CR is revised in R2-2001920

R2-2001920 Introduction of NR operation with Shared Spectrum Access in RRC Qualcomm Incorporated CR Rel-16 38.331 15.8.0 1477 1 B NR_unlic-Core
Intended outcome Phase 1: agreeable CR to be used as baseline to capture further agreements from week2
Deadline: Friday, Feb. 28th
Intended outcome Phase 2: agreeable CR for plenary approval
Deadline: Friday, March 6th (with possibility to extend to March 10th)
[Offline discussion 510]
=> Coversheet update by MCC: tdoc number corrected

R2-2001981 Introduction of NR operation with Shared Spectrum Access in RRC Qualcomm Incorporated CR Rel-16 38.331 15.8.0 1477 2 B NR_unlic-Core
=> Agreed

R2-2001267 Running Stage-2 CR for NR Shared Spectrum Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0199 - B NR_unlic-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e(if any) and moved to email discussion to be approved for RAN Plenary submission
=> The CR is revised in R2-2001922

R2-2001922 Introduction of NR operation with Shared Spectrum Access to Stage-2 Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0199 - B NR_unlic-Core
Outcome: email approval
Deadline: Friday, March 6th
[Offline discussion 512]
=> Coversheet update by MCC: Clauses affected field updated.
=> Revised in R2-2001983

R2-2001983 Introduction of NR operation with Shared Spectrum Access to Stage-2 Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0199 - B NR_unlic-Core
=> Agreed

R2-2001435 Running Idle/Inactive CR for NR Shared Spectrum Qualcomm Incorporated CR Rel-16 38.304 15.6.0 0149 - B NR_unlic-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e(if any) and moved to email discussion to be approved for RAN Plenary submission
=> The CR is revised in R2-2001923

R2-2001923 Introduction of NR operation with Shared Spectrum Access in Idle/Inactive mode Qualcomm Incorporated CR Rel-16 38.304 15.6.0 0149 1 B NR_unlic-Core
Outcome: email approval
Deadline: Friday, March 6th
[Offline discussion 513]
=> Revised in R2-2002385

R2-2002385 Introduction of NR operation with Shared Spectrum Access in Idle/Inactive mode Qualcomm Incorporated CR Rel-16 38.304 15.6.0 0149 2 B NR_unlic-Core
=> Agreed

R2-2001341 Running MAC CR for NR-U Ericsson CR Rel-16 38.321 15.8.0 0694 - B NR_unlic-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion after the last session of week2
=> The CR is revised in R2-2001924

R2-2001924 Running MAC CR for NR-U Ericsson CR Rel-16 38.321 15.8.0 0694 - B NR_unlic-Core
- Nokia would like to remove the instances of regardless of LBT failure. Comments will be taken over the email reflector.

Outcome: email approval
Deadline: Friday, March 6th (with possibility to extend to March 10th)
[Offline discussion 514]
=> Agreed

To be treated in the first slot in the week of Feb. 24th

R2-2001437 Control Plane Open Issues for NR Shared Spectrum Qualcomm Incorporated discussion Late
=> Noted

Agreements
1. Keep the current text in RRC running CR for setting of CAPC priorities for SRBs. Remove the default values in the table in 38.331 Section 9.2.1.
2. Introduce per-cell signalling in Q in measObjectNR.
3. For configured uplink grants configured with cg-RetransmissionTimer, a subset of the total HARQ process ID(s) can be configured for CG(s).
4. For configured uplink grants configured with cg-RetransmissionTimer, same HARQ process ID(s) can be configured for different CG(s).
5. The guard bands for a cell are signalled by using a starting index and length for each guard band, only when the network wants to configure it.
   (FFS – move to offline) RAN2 should further discuss the signalling for the cases when there is no guard band, when RAN4 specs should be used, and when/if the UE does not support guard bands.
6. A single IE for configuring interlaced PUCCH and PUSCH is included in BWP-UplinkCommon.
7. This IE should also be additionally included in BWP-UplinkDedicated.
8. For numPagingMonitoringOccasionPerSSB, support at least the values of 2, 3, and 4.
9. For lbt-FailureInstanceMaxCount, support at least the values of 4, 8, 16, and 32.

10. For lbt-FailureDetectionTimer, support at least the values of 10ms, 20ms, 40ms, 80ms, 160ms, 320ms.
11. For UL, if SDUs from multiple DCCHs (i.e. SRB1 and SRB2) are multiplexed in a MAC PDU, the CAPC of the MAC PDU is the highest priority CAPC of the DCCHs.
12. *(FFS move to offline 503*) RAN2 should further discuss the ASN.1 modelling of RSSI reporting.
13. RAN2 will respond to the RAN1 LS (R2-2000021) that there is no consensus in RAN2 to use our only spare bit in MIB for signalling of Q. RAN2 is also discussing whether a new MIB is needed or not.
14. The UE can stop paging monitoring if it receives a short message for SI update and PWS. FFS on whether we can set the new bit to zero with SI bit set to 1

For further discussion online

It is FFS if a new MIB will be introduced for NR-U.

- Ericsson thinks we should use a new MIB and we don't want to have a hack for a solution
- Oppo thinks that if the UE cannot differentiate between NR and NR-U we may need the new MIB, but otherwise we don't need a new MIB
- Huawei thinks that a lot of fields are not useful for NR-U, like cell reselection and PDCCH config in SIB1 and this is enough motivation to introduce a new MIB. Whether we can differentiate, we can learn from the NB-IoT

=> The discussion will continue in the offline email discussion

=> FFS and move to offline (if there are any issues for handling of forbidden TAs specific to shared spectrum based on company contributions)

=> wait for RAN1 conclusion on search space grouping and further discuss the ASN.1 modelling afterwards.

R2-2001919 LS response to RAN1 on MIB signalling of Q
=> Delete "RAN2 is also discussing whether a new MIB for NR-U is needed or not. "
=> add the agreement on new MIB
=> The LS is approved in R2-2002301

R2-2001343 Summary of open issues for NR-U Running 38.321 Ericsson discussion Rel-16 NR_unlic-Core Late
=> Revised in R2-2001918

R2-2001918 Summary of open issues for NR-U Running 38.321 Ericsson discussion Rel-16 NR_unlic-Core Late
=> Noted

Agreements:

1 When cg-RetransmissionTimer is configured and UE receives a CG (re)activation or deactivation, the UE implementation select one corresponding HARQ process.
FFS whether we need to prioritize the MAC CE and transmission/retransmission.
2 Toggle NDI for CG-UCI for new transmissions and not toggle the NDI in the CG-UCI for retransmissions

FFS moved to offline email discussion 501 in week 2

3 FFS - When RRC BWP switch or DCI BWP switch is received, cancel any triggered consistent LBT failure in this Serving Cell. Need to deal with overlapping case.

4 FFS - The UE is allowed to transmit other UL transmission after?/while? successful RA procedure triggered by UL LBT failure on SpCell.

For discussion

Proposal 2 RAN to select one of:
a) RAN2 expect RAN1 to capture the validation of LSBs of SFN, received in the DCI for RAR when RAR window is extended. Add reference in 5.1.4:
1> else if a valid (see TS 38.213 [6]) downlink assignment has been received on the PDCCH for the RA-RNTI and the received TB is successfully decoded:
- Send LS to RAN1 to indicate desired behaviour

b) Validation of LSBs of SFN, received in the DCI for RAR when RAR window is extended, shall be captured in MAC. Align with the 2-step RACH solution. Add validation in 5.1.4:
1> else if a downlink assignment has been received on the PDCCH for the RA-RNTI and it includes the two LSB bits of the SFN corresponding to the PRACH occasion used to transmit the Random Access Preamble and the received TB is successfully decoded

=> FFS how to handle this (offline 501)
2. What RAN2 has to do and whether we do option a) or b) and what if anything we need to tell RAN1

Proposal 3
RAN2 to select one of:
a) Reuse the harq-procID-offset field introduced in the IIOT WI. The available HP IDs for a CG config, when cg-RetransmissionTimer is configured, is 0 + HPID-offset, 1 + HPID-offset, …, nrofHARQ-Processes-1 + HPID-offset where if harq-procID-offset is configured HPID-offset is equal to harq-procID-offset, and HPID-offset is zero otherwise.
b) Introduce a new field cg-HARQ-Processes in ConfiguredGrantConfig. The available HARQ process IDs for a CG config, when cg-RetransmissionTimer is configured, is given by cg-HARQ-Processes.
=> FFS

Proposal 21 In an SpCell, do not transmit in the uplink, besides as part of the RA procedure, when consistent LBT failure has been triggered and not cancelled in the SpCell.
- Samsung things that we have this situation in Rel-15 and we didn't do anything.
- Lenovo clarifies that until after the successful RA the eNB doesn't know which UE is transmitting and therefore any UL transmissions will be interference. We missed this in Rel-15 so we should fix it for rel-16

=> FFS

Proposal 22 RAN2 to select:
a) When SUL is configured, autonomous BWP switch in SpCell due to consistent LBT failure shall select either NUL or SUL for RA as in Rel-15.
b) When SUL is configured, monitor consistent LBT failures separately in NUL and SUL and do BWP switch in the respective carrier if consistent LBT failure is triggered.
- Huawei thinks b) is more appropriate. Interdigital confirms this is an issue and b) is appropriate.
- Nokia thinks this is an optimization.
- ZTE also thinks this is an optimization and is not even sure if it useful for NR-U.

=> FFS

6.2.2 User plane

To be discussed over email officially kicked off during e-meeting week (as offline email discussion) and treated the second slot, Week of March 2nd:

R2-2001911 NR-U UP Summary for RACH and UL LBT InterDigital discussion Rel-16 NR_unlic-Core
=> Noted
[Offline discussion 501]

Agreements
1. CAPC selection for transmission of the PUSCH payload of MsgA follows the

same mechanism defined for UL CG transmissions.
2. Send an LS to RAN1 to inform on CAPC selection for transmission of the PUSCH payload of MsgA.
3. One SR configuration (SR id) can be configured for SRs triggered by UL LBT failure detection on SCell; the SR configuration can be shared with other LCHs. RACH is triggered if this SR config id is not configured.
4. the UE shall stop any ongoing RA procedure and initiate a new RA procedure after BWP switching caused by LBT failure detection on SpCell. (Consensus)
5. Proposal 13: UE cancels all UL LBT failures triggered for a SCell upon deactivation of the SCell.
6. UE cancels triggered UL LBT failures, if any, upon MAC reset affecting the corresponding serving cell.
7. : a UE in connected mode monitors PDCCH addressed to C-RNTI in addition to the MsgB-RNTI, if LBT fails only for the payload part of MsgA (no spec changes required)
8. Send an LS to asks RAN1 to capture the validation of indicated following on indicating the SFN LSBs in TS 38.213: a downlink assignment is valid for successful RAR reception if the two LSB bits of the SFN indicated in DCI format 1_0 scrambled by RA-RNTI or msgB-RNTI correspond to the PRACH occasion used to transmit the Random Access Preamble
9. Add a clarification in section 5.1.4 of TS 38.321:
1> else if a valid (as specified in TS 38.213 [6]) downlink assignment has been received on the PDCCH for the RA-RNTI and the received TB is successfully decoded:
10. the LBT Failure MAC CE has higher priority than BSR MAC CE, but lower priority configured grant confirmation MAC CE and BFR MAC CE.
11. UE cancels an UL LBT failure triggered for SpCell upon successful completion of the RA procedure initiated after BWP switching due to the detected LBT failure. (14/18)
12. UE cancels a triggered UL LBT failure upon BWP switching on the corresponding serving cell caused by reception of BWP switching DCI or RRC signalling.
13. The UE cancels a triggered UL LBT failure for SCell upon successful transmission of an LBT failure MAC CE indicating the cell, where transmission is successful only if LBT was successful at PHY
14. The UE cancels a pending SR triggered by UL LBT failure upon successful transmission of an LBT failure MAC CE indicating the cell, where transmission is from MAC perspective (i.e. regardless of LBT outcome at PHY)
15. The UE can transmit any uplink transmission upon BWP switching due LBT failure on SpCell, no specification changes are required.
16. UL LBT failure is cancelled if lbt-FailureRecoveryConfig IE is reconfigured for SCell. FFS for SpCell.
17. UE can switch only to BWPs with PRACH on the same UL (e.g. NUL or SUL) on which UL LBT failure was detected, upon detecting an LBT failure on SpCell
18. An additional short format for the LBT failure MAC CE with one octet is introduced
19. The following issues summarized in R2-2001911 are not pursued in Rel-16 (no changes to running CRs)
    - 2.3.1 COT sharing after MsgB transmission
    - 2.3.2 Impacts of SSBs with same QCL relations on RACH
    - 2.3.3 Cancelling MsgA-PUSCH after PRACH LBT failure
    - 2.3.4 changes to 2-step vs. 4-step RACH selection
    - 2.3.5 early RAR window termination
    - 2.3.6 UE Autonomous BWP switching
    - 2.3.7 Additional PRACH transmission opportunities
    - Prioritization of SR triggered for LBT failure MAC CE vs. other overlapping SRs
    - 3.3.2 LBT Failure MAC CE transmission on difference cell for failure detected on SpCell
    - 3.3.3 CAPC of LBT failure MAC CE
    - 3.3.4 Counting LBT Failure on a multi-subband BWP
    - 3.3.5 Consistent UL LBT failure during HO

- 3.3.6 LBT Failures in Non-Connected State and PCell Failure Recovery
- 3.3.7 LBT Failure reporting during RRC Reestablishment

Set of open issues and proposals that can be postponed to next meeting if not agreed:
Proposal 11: the UE can transmit any uplink transmission upon BWP switching due LBT failure on SpCell, no specification changes are required. (8/17)
Rapporteur comment: Proposal is written given there is no majority and option 2 requires no specification changes. Some network vendors don't seem to be concerned with UL interference issues caused by UE-initiated BWP switching (as in R15).
- Lenovo is concerned that the gNB doesn't know this is happening and it might increase the interruption time at BPW and this is against how we designed the Rel-15 BWP switching. ZTE agrees with Lenovo.
- Mediatek also thinks that this is left up to the network configuration and there is no technical issue. Samsung agrees with Mediatek. Ericsson agrees that the network can fix this issue by the network avoiding allocating the resources to other UEs.
- Oppo is good with Proposal 11

=> Companies can think if there is a problem and if there is majority view that there is a problem we can come back to next meeting.

Proposal 16: UE cancels all UL LBT failures triggered for a SCell upon reconfiguration of the SCell. (10/16)
- Nokia thinks we should only capture the cases that the NW cannot deduce. Interdigital and lenovo also don't understand. Samsung also agrees.
- Qualcomm and Ericsson think it is too complicated if we go into details of the configuration.
- Nokia thinks that we have the same think in the MAC as the BFR. Qualcomm explains that if anything changes that impacts LBT failure.
- Samsung thinks that this is too broad and maybe we can just rephrase to LBT failure.

Proposal 17: UE cancels a triggered UL LBT failure upon MAC reconfiguration affecting the corresponding serving cell. (10/16)
- Nokia thinks this is worst performance than not canceling and maybe this is better than proposal 16.
- UL LBT failure is cancelled lbt-FailureRecoveryConfig IE is reconfigured

Flagged for discussion:
Send an LS to asks RAN1 to capture the validation of indicated following on indicating the SFN LSBs in TS 38.213: -If configured response window size is > 10ms, a downlink assignment is valid for successful RAR reception if the two LSB bits of the SFN indicated in DCI format 1_0 scrambled by RA-RNTI or msgB-RNTI correspond to the PRACH occasion used to transmit the Random Access Preamble (11/17)
- Samsung thinks that we should also capture that this only applies if the RAR window is extended beyond 10ms or at least capture in meeting minutes that 'for RAR window size of <=10ms, UE implementation may choose not to compare the LSBs of SFN as there is no collision in this case. Others don't think this is an issue
- LG is concerned that the UE doesn't have the SFN of the new cell when doing RACH for HO case. Others don't think this is an issue and RAN1 can continue discussing.
- Qualcomm is concerned about the case for another UE the window size it is larger than 10ms. Samsung explains that it is not possible for the same BWP.

=> For RAR window size of <=10ms, UE implementation may choose not to compare the LSBs of SFN as there is no collision in this case

R2-2002196 LS on random access procedure in NR-U RAN2 LS out Rel-16 NR_unlic-Core, NR_2step_RACH-Core To:RAN1
=> The LS is approved

R2-2002029 NR-U UP Summary for CG and Others AI OPPO discussion Rel-16 NR_unlic-Core
=> Noted

[Offline discussion 502]

Agreements
1. A new timer to consider the DFI as invalid is not introduced. 2. Repetitions across multiple CG configurations are not supported in this release. 3. It's up to UE implementation on selecting retransmissions, no prioritization is introduced in this release. 4. When CG type 2 (re-)activation DCI is received, UE implementation selects a HARQ process (as agreed), and stops the CGRT and CGT associated with the selected HARQ process, if running. 5. Proposal 7: As already agreed, UE prioritizes retransmission over new transmission. No further optimizations dealing with the transmission of confirmation MAC CE will be considered. 6. The UE uses RV zero for the initial transmission. The RV selection for auto-retransmission is left up to UE implementation, as for feLAA. 7. Confirm that for NR-U, when a MAC PDU contains both data from DTCHs and MAC CEs, the UE selects the CAPC of the lowest priority logical channel with MAC SDUs multiplexed (i.e. priority of multiplexed MAC CEs is not taken into account). No changes required to 38.300. 8. Extend the UE CAPC selection to MsgA PUSCH transmission, Msg3 PUSCH transmission and other UL transmission case where CAT4 is indicated but CAPC is not signaled explicitly. 9. When UE performs auto-retransmission on a different CG configuration with the same TBS, it will not consider the LCP restriction. 10. RAN2 postpones the PHR ambiguity issue to future releases. 11. As a baseline, NR-U features are applied to unlicensed operation. Whether the NR-U specific features can be applied to licensed operation has to be discussed on a case-by-case basis (likely in the main session). 12. With the nrofHARQ-Processes and HPID-offset (introduced in IIoT), UE is allowed to select HPID given by [harq-procID-offset, harq-procID-offset + 1, …, harq-procID-offset + nrofHARQ-Processes – 1]. Understanding is that there is only impact to RRC specification. 13. Add this behaviour as NOTE: the UE is allowed to map generated TB(s) internally to different HARQ processes in case of LBT failure(s), i.e. UE may transmit a new TB on any HARQ process in the grants that have the same TBS, the same RV and the NDIs indicate new transmission.
14. The following optimizations from section 2.5 in R2-2002029 will not be addressed in Rel-16: • "UE should switch to a SS group with denser PDCCH occasion when BWP is switched due to initiation of Random Access procedure or consistent UL LBT failure". • "allow SR transmission on the PUCCH resource colliding with the UL-SCH resource for which LBT fails". (15/15) "enhance the DL opportunity based on the channel busy level dynamically measured by both UE and gNB". • MAC impacts (if any) of multiple CCAs in wideband larger than 20MHz.

Discussion online

Proposal 5 With the nrofHARQ-Processes and HPID-offset (introduced in IIoT), UE is allowed to select HPID given by [harq-procID-offset, harq-procID-offset + 1, …, harq-procID-offset + nrofHARQ-Processes – 1]. (9/17)

- Nokia wants to clarify that this would only impact the RRC. Oppo confirms that this only impacts the RRC paraments. Lenovo had the same concerns. Qualcomm explains that the partitioning will be captured in the field description. Nokia thinks it is quite simple.

Proposal 9 RAN2 try to agree "For multi-TTI UL grant, UE is allowed to map generated TB(s) internally to different HARQ processes in case of LBT failure(s), i.e. UE may transmit a new TB on any HARQ process in the grants that have the same TBS, the same RV and the NDIs indicate new transmission." (7/17), otherwise we revert the agreement (7/17).

- Nokia thinks we can remove this from the specification. Ericsson thinks that this is a UE implementation. Mediatek, LG, and Intel agrees with Nokia. Lenovo thinks that it is anyways to UE implementation. It says that the UE is allowed.
- Nokia thinks that we should discuss this when we talk about PHR. Lenovo explains that this is dynamic grant.

- Mediatek The PHR issue will exist in any place where we move TB to a different TTI - regardless of CG/DG

6.2.2.1 RACH

Aspects of 2/4 step RACH procedure specific to unlicensed operation; including supporting extended RAR window, and LBT impact.
ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should NOT discuss open issues in the email discussion

This will not be treated

R2-2000145	Further Consideration on RACH Procedure in NR-U	vivo	discussion		R2-1914370
R2-2000146	Issue on the Autonomous BWP Awitching in NR-U	vivo	discussion		R2-1914366
R2-2000147	LBT Impacts on 2-step RACH	vivo	discussion		R2-1914368
R2-2000416	2-step RACH for NR-U	OPPO	discussion	Rel-16	NR_unlic-Core
R2-2000771	RA procedure considering SSBs with QCL relationship	Fujitsu	discussion		Rel-16 NR_unlic-Core
R2-2000851	MSGA PUSCH LBT failure and PDCCH decoding	Nokia, Nokia Shanghai Bell	discussion		Rel-16 NR_unlic-Core
R2-2000958	Remaining issue on 2-step random access in NRU	Huawei, HiSilicon	discussion		Rel-16 NR_unlic-Core
R2-2001208	Remaining issues on RACH	Ericsson	discussion	NR_unlic-Core	
R2-2001209	Gapless msgA transmissions in NR-U	Ericsson	discussion	NR_unlic-Core	
R2-2001449	Additional opportunity for Msg1 in 4-step RACH	LG Electronics Polska	discussion		Rel-16 NR_unlic-Core R2-1915920
R2-2001606	Consideration for C-RNTI monitoring in NR-U	LG Electronics Polska	discussion		Rel-16 NR_unlic-Core

6.2.2.2 Handling UL LBT failures

Including detection, recovery, and reporting a consistent UL LBT failure

ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should NOT discuss open issues in the email discussion

This will not be treated

R2-2000148	Remaining Issues of UL LBT Failure	vivo	discussion		R2-1914367
R2-2000415	Remaining issues on consistent uplink LBT failure for NR-U	OPPO	discussion		Rel-16 NR_unlic-Core
R2-2000449	Remaining issues on UL LBT failures handling	Intel Corporation	discussion		Rel-16 NR_unlic-Core
R2-2000534	LBT failure handling considering SUL aspect	Samsung	discussion		Rel-16 NR_unlic-Core
R2-2000563	LBT Failures Handling in Non-Connected State	Spreadtrum Communications	discussion		R2-1915015
R2-2000603	SpCell LBT Failure MAC CE Delivery	Apple, vivo	discussion	Rel-16	NR_unlic-Core
R2-2000737	Handling of consistent UL LBT failures during HO	ITRI	discussion	NR_unlic-Core	R2-1913064
R2-2000772	[Eri10] SR resources for consistent LBT failure	Fujitsu	discussion	Rel-16	NR_unlic-Core
R2-2000822	UE behavior upon consistent LBT failure	Lenovo, Motorola Mobility	discussion		Rel-16 NR_unlic-Core

R2-2000840 Remaining issues on consistent LBT failures and BWP switching MediaTek Inc. discussion Rel-16 NR_unlic-Core

R2-2000904 On counting the LBT failure of a BWP with multiple sub-bands CMCC discussion Rel-16 R2-1915197

R2-2000941 Uplink transmission upon detection of LBT failure Nokia, Nokia Shanghai Bell discussion Rel-15 NR_unlic-Core

R2-2000957 Remaining issue on handling UL LBT failure Huawei, HiSilicon discussion Rel-16 NR_unlic-Core

R2-2000963 Remaining issues on LBT failure MAC CE Huawei, HiSilicon discussion Rel-16 NR_unlic-Core

R2-2000999 The remaining issues for UL LBT failure ZTE Corporation, Sanechips discussion Rel-16

R2-2001207 Handling consistent UL LBT failures Ericsson discussion NR_unlic-Core

6.2.2.3 Configured grant operation

Including HARQ aspects, configuration aspects, multiple active configured grants, and conflicts between dynamic and configured grants (NR-U specific).

ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should NOT discuss open issues in the email discussion

This will not be treated

R2-2000417 Remaining issues on NR-U configured grant OPPO discussion Rel-16 NR_unlic-Core Late

R2-2000821 HARQ process configuration for configured grants Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core

R2-2000841 Issues on retransmissions across different configured grant configurations MediaTek Inc. discussion Rel-16 NR_unlic-Core

R2-2000959 Remaining issue on configured grant Huawei, HiSilicon discussion Rel-16 NR_unlic-Core

R2-2001205 Configured Grant remaining issues Ericsson discussion NR_unlic-Core

R2-2001206 Channel access priority for Configured Grant Ericsson discussion NR_unlic-Core

R2-2001442 Consideration of delayed CG confirmation LG Electronics Polska discussion Rel-16 NR_unlic-Core

6.2.2.4 Other

Includes wideband operation aspects, HARQ, SR and PHR

ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should NOT discuss open issues in the email discussion

R2-2000149 Remaining Issues on CAPC Selection for Configured Grant vivo discussion

R2-2000154 Consideration on SR transmission colliding with PUSCH transmission Xiaomi Communications discussion Rel-16 R2-1915956 Late

R2-2000172 Consideration on SR transmission colliding with PUSCH transmission Xiaomi Communications discussion Rel-16 R2-1915956 Late

R2-2000173 Consideration on SR transmission colliding with PUSCH transmission Xiaomi Communications discussion Rel-16 R2-1915956

R2-2000176 Remaining issues of CAPC Huawei, HiSilicon discussion Rel-16 NR_unlic-Core

R2-2000535 Applicability of NR-U features to licensed carrier Samsung discussion Rel-16 NR_unlic-Core R2-1915222

R2-2000669 LBT failure measurement report handling Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
R2-2000838 PHR for NR-U Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core
R2-2000842 On PHR and autonomous retransmissions MediaTek Inc. discussion Rel-16 NR_unlic-Core R2-1913262
R2-2000960 PHR reporting for NR-U Huawei, HiSilicon discussion Rel-16 NR_unlic-Core
R2-2000961 Reply LS on PHR report Huawei, HiSilicon discussion Rel-16 NR_unlic-Core
R2-2000962 Disucssion PDCCH group switching Huawei, HiSilicon discussion Rel-16 NR_unlic-Core
R2-2001094 CAPC selection for UL transmissions Intel Corporation discussion Rel-16 NR_unlic-Core
R2-2001108 Remaining CAPC aspects for CG when SRB is multiplexed NEC Telecom MODUS Ltd. discussion
R2-2001204 Remaining issue on PHR Ericsson discussion NR_unlic-Core
R2-2001450 Dynamic DL opportunity enhancement based on channel busy level in NR-U LG Electronics Polska discussion Rel-16 NR_unlic-Core R2-1915921
R2-2001451 MAC impacts of multiple CCAs in wide band operation LG Electronics Polska discussion Rel-16 NR_unlic-Core R2-1916153

6.2.3 Control plane

To be discussed over email (as offline email discussion) and treated the second slot, Week of March 2nd.

R2-2002022 NR-U Control Plan Summary Qualcomm Incorporated discussion Rel-16 NR_unlic-Core
=> Noted
[Offline discussion 503]

Agreements
1. From RAN2 perspective, a capability for 2-step RACH for NR operation in shared spectrum is needed. It is noted that this may already be supported by the 2-step RACH capability if signalled per band.
2. A UE capability for consistent UL LBT detection and recovery is introduced. It is FFS if separate capabilities are needed for PCell, PSCell, and SCells (which have different recovery mechanisms).
3. For now do not introduce a new list for signalling of neighbour cells Qs in SIB3 and SIB4 (no changes to the running CR). Further optimization or efficient signalling can be considered during ASN.1 review.
4. RAN2 will not introduce a solution in Rel-16 to address potential issue due to operation of both licensed and shared spectrum in 6Ghz. RAN2 assumes that it is up to RAN1/RAN4 to provide a solution if needed.
5. If IntraFreqReselection in MIB is set “not allowed” and the UE is not able to decode SIB1, it will not bar this frequency, i.e. will continue cell reselection on the frequency. No changes to the running CR are needed.
6. RAN2 should inform RAN4 that there is no “withdraw” procedure for abandoning reporting of measurement results and introduction of such a mechanism will have significant impacts on RAN2 specifications; therefore suggest that RAN4 should not agree to UE abandoning the measurement report due to delay caused by LBT failures.
7. Introduce signalling of “Q” in 36.331 in measurement configuration and SIB(s) to enable Connected and Idle/Inactive mode mobility from E-UTRAN to NR-U.
8. Do not introduce a new MIB for NR-U.
9. Confirm that the UE stops paging monitoring when it receives any type of short message. No changes to the running CRs are introduced except for removing the FFS on this.

10. Change the location of measRSSI-ReportConfig-r16 so that it is located in both PeriodicalReportConfig and EventTriggerConfig.
11. From RAN2 point of view, there is no NR-U specific issue for the handling of forbidden TAs. No changes are introduced to the running 38.304 CR for handling of forbidden TAs.
12. No new RLF trigger based on missing downlink reference signals (due to LBT failure) is introduced.
13. No changes to cell selection based on LBT failures are introduced. It is up to UE implementation to handle RLF due to LBT failures in cell selection.
14. . No changes to SUL selection are introduced for NR-U.
15. Keep the RAN2#107bis agreement that no new triggers for RSSI/CO are introduced for CHO in Rel-16.
16. Replace NR-U with "NR operation with shared spectrum channel access" as used in RAN1 specifications. A formal definition of "shared spectrum" may be introduced in stage-2 by either RAN1 and RAN2 if needed (e.g. a spectrum where the procedures in TS 37.213 are applicable).
17. On signalling default and no guard bands, we will try to follow RAN1 agreements, if nothing is signalled default is used. Details are discussed during running CR.

For discussion flagged from offline :

Proposal 3: Do not introduce a new list for signalling of neighbour cells Qs in SIB3 and SIB4 (no changes to the running CR). (supported by 13 out of 15 companies)

- Ericsson thinks that adding extensions after ". . ." costs 2-3 bytes. Also, signaling of the mandatory cell individual offset costs 5 bits plus signaling of the optionality bits for the three other optional fields costs three bits. So, in total 4 bytes of unnecessary signaling in a neighboring cell list in system information compared to defining new lists.

Set of proposals with no clear consensus but essential for Rel-16 completion – Discuss this in our online session:

Proposal 11. RAN2 further discuss how to signal default and no guard bands (a compromise option could be to have explicit IEs for both no guard band and default case).

- Qualcomm thinks a compromise can be explicit IEs for no guard band and default. Nokia explains that if nothing is configured then we have default.

On the new MIB

- Ericsson has concerns about not having new MIB.

R2-2002203 LS to RAN4 on NR-U Qualcomm
=> The LS is approved in R2-2002300

6.2.3.1 Mobility and RRM

Including camping and cell (re)-selection. Focus should be on idle and inactive mode mobility. For connected mode mobility solutions to be covered by the NR Mobility Enh WI are not to be discussed.

Note RP-191581: RRM Measurements beyond currently agreed ones have lower priority.

ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should NOT discuss open issues in the email discussion

This will not be treated

R2-2000151 Short Message for Stopping Paging Monitoring in NR-U vivo discussion
R2-2000336 Remaining issues on Paging Ericsson discussion NR_unlic-Core
R2-2000337 RRM in NR-U Ericsson discussion NR_unlic-Core
R2-2000403 Handling of SIB1 decoding error Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
R2-2000405 On RLM and RLF Issues in NR-U Mediatek Inc. discussion
R2-2000670 LS on LBT failure measurement report handling Nokia, Nokia Shanghai Bell LS out Rel-16 NR_unlic-Core To:RAN4
R2-2001546 Cell selection after consecutive UL LBT failures LG Electronics Inc. discussion

R2-2001547 Support of conditional handover for NR-U LG Electronics Inc. discussion

6.2.3.2 Other

Other control plane stage-3 aspects including system information. Note RP-191581: Enhancements for System Information has lower priority
ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should NOT discuss open issues in the email discussion
RLM/RLF will not be treated in this meeting

This will not be treated

R2-2000150 UE Capability for NR-U Support vivo draftCR Rel-16 38.306 15.8.0 NR_unlic
R2-2000338 Signaling of Q in NR-U Ericsson discussion
R2-2000404 Including RSSI and Channel Occupancy in NR-U UE Capabilities Mediatek Inc. draftCR Rel-16 38.306 15.8.0 C NR_unlic, NR_unlic-Core R2-1914584
R2-2000418 Stopping criteria for paging monitoring OPPO discussion Rel-16 NR_unlic-Core
R2-2000442 UE Capabilities for Measurements in NR-U Mediatek Inc. discussion
R2-2000671 using spare from SIB1 Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
R2-2000672 Q values per cell and useInterlacePUCCH coding Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
R2-2000673 intraCellGuardBand coding Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
R2-2000905 Further enhancement of reporting for NR-U cell reselection CMCC discussion Rel-16
R2-2000964 Discussion on the remaining issues in RRC signalling Huawei, HiSilicon discussion Rel-16 NR_unlic-Core
R2-2001422 SUL Operating over NR-U Samsung discussion NR_unlic-Core
R2-2001432 On Indicating LBT Failure for NR-U Samsung discussion NR_unlic-Core
R2-2001469 Enhancements to MIB transmission OPPO discussion Rel-16 NR_unlic-Core
R2-2001548 Stopping condition for paging monitoring LG Electronics Inc. discussion
R2-2001549 RLMRLF in NR-U LG Electronics Inc. discussion

6.4 NR V2X

(5G_V2X_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191723). Documents in this agenda item will be handled in a break out session
Time budget: 3 TU
Tdoc Limitation: 12 tdocs

6.4.1 General

Including incoming LSs, rapporteur inputs, etc.

R2-2000022 Reply LS on mapping restriction for LCP procedure (R1-19135932; contact: Vivo) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2 Cc:SA2
R2-2000042 Reply LS to RAN2 on UL-SL Prioritization (R4-1915985; contact: Futurewei) RAN4 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2, RAN1
R2-2000044 LS on channel raster for NR V2X UE (R4-1916146; contact: CATT) RAN4 LS in Rel-16 5G_V2X_NRSL To:RAN2 Cc:RAN1
R2-2000052 Reply LS on LS on PC5S and PC5 RRC unicast message protection (S2-1912002; contact: Qualcomm) SA2 LS in Rel-16 eV2XARC To:SA3 Cc:RAN2, CT1

R2-2000053 LS on clarifying NR PC5 priority level (S2-1912003; contact: LGE) SA2 LS in Rel-16 eV2XARC To:RAN1 Cc:RAN2

R2-2000061 Reply LS on PC5 unicast and groupcast security protection (S2-2000971; contact: Interdigital) SA2 LS in Rel-16 eV2XARC To:SA3, CT1 Cc:RAN2

R2-2000062 Reply LS on Response LS on SL RLM/RLF (S2-2000973; contact: Qualcomm) SA2 LS in Rel-16 eV2XARC To:RAN2, RAN1, CT1

R2-2000063 Reply LS on SL RLF handling (S2-2000974; contact: Ericsson) SA2 LS in Rel-16 5G_V2X_NRSL-Core, eV2XARC To:RAN2

R2-2000075 LS on PC5 unicast and groupcast security protection (S3-194658; contact: Interdigital) SA3 LS in Rel-16 eV2XARC, FS_eV2XARC, FS_eV2X_Sec To:SA2 Cc:RAN3

R2-2000083 Reply LS on signalling of sidelink RSRP and CSI (R1-1913693; contact: LGE) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2

R2-2000084 Reply LS on additional high layer information for sidelink physical layer operations (R1-1913694; contact: LGE) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2

R2-2000085 Reply LS on TX resource (re-)selection and MAC related agreements (R1-1913695; contact: LGE) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2

R2-2000086 Reply LS on sidelink synchronization under multiple synchronization sources with different timing (R1-1913696; contact: Qualcomm) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2, RAN4

R2-2000097 Reply LS on SL RLM/RLF (R1-1913464; contact: InterDigital) RAN1 LS in Rel-16 5G_V2X_NRSL To:RAN2

⇨ All the above LSs are noted. RAN2 specification impacts can be discussed in the corresponding CR discussion if needed.

R2-2000031 LS to RAN2 on Sidelink UE Information (R3-197770; contact: Ericsson) RAN3 LS in Rel-16 5G_V2X_NRSL To:RAN2

R2-2000883 Draft Reply LS on Sideline UE information Ericsson LS out Rel-16 5G_V2X_NRSL-Core To:RAN3

R2-2000262 Discussion on the LS on Sidelink UE Information sent from RAN3 ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core

R2-2000269 (draft)Reply LS on Sidelink UE Information ZTE Corporation, Sanechips LS out 5G_V2X_NRSL-Core To:RAN3

⇨ [Offline discussion #701]: To discuss if option2 is feasible or not and the corresponding RAN2 specification impacts (Ericsson, R2-2001963 for discussion and R2-2001964 for draft response LS to RAN3)

R2-2001963 Report to Offline #701 Ericsson discussion Rel-16 5G_V2X_NRSL-Core

⇨ Noted.

R2-2001964 Draft Reply LS on Sideline UE information Ericsson LS out Rel-16 5G_V2X_NRSL-Core To:RAN3

⇨ Add “but RAN2 assumes RAN3 will make a final decision.”

⇨ Remove the whole sentences from “According to this…”.

⇨ Approved in R2-2001972 with the above changes.

6.4.2 Control plane

6.4.2.1 RRC

Including email discussion [108#44] and remaining Uu and PC5 RRC issues. Note any capability related issues are handled in 6.4.2.2. This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. Summary document is provided by RRC CR rapporteur (Huawei).

R2-2000756 Running CR to TS 38.331 for 5G V2X with NR sidelink Huawei, HiSilicon CR Rel-16 38.331 15.8.0 1493 - B 5G_V2X_NRSL-Core
- ⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2001413 Running CR to 36.331 for NR V2X Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4222 - B 5G_V2X_NRSL-Core
- ⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2000757 Summary of email discussion [108#44][V2X] - Miscellaneous RRC issues for 5G V2X with NR Sidelink Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core Late
- ⇨ Proposal 1 and 3 are agreed.
- ⇨ Proposal 2 is agreed. Whether to use destination index or to use actual QoS flow id is to be discussed in the 38.331 CR discussion.
- ⇨ Proposal 4 and 5 will be discussed in offline (excluding option C).

Agreements on RRC:
1: Not introduce reportOnLeave for CBR measurement in NR SL.
2: Use the QoS ID to indicate the PC5 QoS information associated with a traffic pattern reported in the UE assistance information. Whether to use destination index or to use actual QoS flow id is to be discussed in the 38.331 CR discussion.
3: Upon T400 expiry, TX UE detects PC5-RRC RLF and performs the same operations as RLF.

R2-2002011 Summary document for AI 6.4.2.1 - RRC aspects Huawei (Rapporteur) discussion Rel-16 5G_V2X_NRSL-Core
=> Revised in R2-2002093

R2-2002093 Summary document for AI 6.4.2.1 - RRC aspects Huawei (Rapporteur) discussion Rel-16 5G_V2X_NRSL-Core
- ⇨ Proposal C-1 and C-11 are agreed.
- ⇨ Proposal C-1 was revised Thursday and it was decided as FFS if sl-ZoneIdLongiMod-r16 and sl-ZoneIdLatiMod-r16 are fixed sized with INTEGER (64) and there is no need of configuration from ASN.1.
- ⇨ Proposal C-2b will be discussed in offline.
- ⇨ Proposal C-2 to proposal C-10a will be discussed in offline (specification rapporteur may exclude some proposals. Proposal C-3 will be discussed in MAC offline discussion.).
- ⇨ [Offline discussion #702]: To discuss the proposals identified in the above for further offline discussion (Huawei, R2-2001965)
- ⇨ [Offline discussion #703]: To update and agree 38.331/36.331 CR (Huawei, R2-2001966 for 38.331 CR, R2-2001967 for 36.331 CR)

Agreements on RRC:
1: FFS if sl-ZoneIdLongiMod-r16 and sl-ZoneIdLatiMod-r16 are fixed sized with INTEGER (64) and there is no need of configuration from ASN.1
2: Confirm the SL-SRB configurations currently specified in the TS 38.331 running CR and remove the related Editor's Note for the time being. The SL-SRB configurations may be updated based on the new SA3 progress to be received during/after this e-meeting, whenever needed.

R2-2001965 Report for the offline discussion on Category-2 proposals in RRC summary Huawei (Rapporteur) discussion Rel-16 5G_V2X_NRSL-Core
- ⇨ Proposal 2, 5, 6, 7, 8, and 9 are agreed.

- ⇨ Proposal 3 is agreed with the change of the first sentence to “The RRC layer of the UE configures all the (pre-)configured mode-2 transmission resource pool(s) to the lower layers.” and the removal of the second sentence.
- ⇨ Proposal 4 is agreed with addition of “RRC connected” in front of “TX UE”.

Agreements on RRC:
1: No support of TX-triggered SL-RSRP reporting mechanism at the RX UE.
2: The RRC layer of the UE configures all the (pre-)configured mode-2 transmission resource pool(s) to the lower layers.
3: The RRC connected TX UE reports a new failure cause to the NW upon the reception of RRCReconfigurationFailureSidelink from the RX UE.
4: In case an AS configuration failure message is received from the RX UE, the TX UE shall not apply the SLRB configuration(s), which were included in the corresponding failed AS configuration message.
5: When a peer UE receives the release of an RLC AM/UM SLRB via PC5-RRC from the initiating UE, it reports the release of this SLRB to its own gNB.
6: The UE handles new NR SL configurations using full configuration operations as in Uu, in case the new configuration for SL cannot be performed by delta configuration (i.e. state transition, change of SIB used for NR SL and fullconfig present in dedicated signaling).
7: No further action and discussion is needed in RAN2 on how many PC5-S connection are associated to a PC5-RRC connection (no RAN2 impact, but up to SA2), and a related sentence "One PC5-RRC connection is corresponding to one PC5 unicast link [xx]" will be removed from 5.X.1 in TS 38.331 running CR.
8: No support of reporting SRC L2 ID in Sidelink UE Information.

R2-2001966 38.331 CR Huawei CR 5G_V2X_NRSL
R2-2001967 36.331 CR Huawei CR 5G_V2X_NRSL

R2-2000138 Remaining issues of PC5-RRC Qualcomm Incorporated discussion 5G_V2X_NRSL
R2-2000182 Discussion on Zone Configurations in NR V2X Apple discussion Rel-16 5G_V2X_NRSL-Core Withdrawn
R2-2000185 Discussion on TX resource pool selection Apple discussion Rel-16 5G_V2X_NRSL-Core Withdrawn
R2-2000189 Left issues on SLRB re-configuration due to state transition OPPO discussion 5G_V2X_NRSL-Core
R2-2000190 Left issues on failure case handling for NR V2X OPPO discussion 5G_V2X_NRSL-Core
R2-2000191 Left issues on RRC running CR OPPO discussion 5G_V2X_NRSL-Core
R2-2000192 Left issues on RLC mode collision OPPO discussion 5G_V2X_NRSL-Core
R2-2000257 NR V2X CBR left issues ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000261 UE behaviors upon PC5-RRC connection release and configuration failure ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000263 Consideration on sidelink RLM management ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000264 Consideration on NR V2X cross RAT support ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000279 MAC handling upon PC5 RRC release vivo discussion
R2-2000280 Remaining issues for sidelink SRB vivo discussion
R2-2000282 Resource pool (re-)selection based on HARQ feedback vivo discussion R2-1914927
R2-2000327 Reporting of Sensing Result for Mode 1 UEs Fraunhofer HHI, Fraunhofer IIS, Lenovo, Motorola Mobility, Deutsche Telekom discussion R2-1915552
R2-2000419 PC5-RRC connection scope and identification of unicast link MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-2000420 DRAFT LS on Layer 2 IDs and PC5 unicast link MediaTek Inc. LS out Rel-16 5G_V2X_NRSL-Core To:SA2

R2-2000456 Open aspects on mode 2 operation Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-2000609 Disucssion on PC5 RRC left issues Apple discussion Rel-16 FS_NR_V2X
R2-2000611 Discussion on Zone Configurations in NR V2X Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-2000614 Discussion on TX resource pool selection Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-2000710 Conditions for Uu RRC connection establishment and resume for NR SL Huawei, HiSilicon discussion
R2-2000713 Handling of multiple resource pools for NR sidelink mode-2 Huawei, HiSilicon discussion
R2-2000714 Measurement and reporting for SL-RSRP and SL pathloss for open-loop power control Huawei, HiSilicon discussion
R2-2000739 Tirggering condition for sidelink RSRP reporting MediaTek Inc. discussion Rel-16
R2-2000881 Discussion on SL information reporting over Uu Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1915379
R2-2000884 Handling of SLRB (re)configuration failure Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-2000885 Inter-node resource coordination in NR SL Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1915377
R2-2000947 On PC5-S and PC5-RRC signalling Ericsson discussion 5G_V2X_NRSL-Core
R2-2001077 Zone configuration and Tx Rx distance calculation Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-2001090 Discussion on PC5-RRC AS-layer configuration failure and T400 expiry handling Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-2001099 Support of PC5-S Keep alive signalling Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-2001231 Discussion on timer T400 Nokia, Nokia Shanghai Bell discussion 5G_V2X_NRSL-Core
R2-2001334 Discussion on V2X SIB Specific Validity Area Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1915940
R2-2001335 TX profile for selected sidelink RAT Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1915941
R2-2001336 Aperiodic traffic support in UE Assistance Information Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1911119
R2-2001349 Issues on layer-2 ID update LG Electronics France discussion Rel-16 5G_V2X_NRSL-Core
R2-2001517 NR V2X Zone ID Qualcomm Finland RFFE Oy discussion Rel-16 Withdrawn
R2-2001519 NR V2X Minimum Communication Range values Qualcomm Finland RFFE Oy discussion Rel-16 Withdrawn
R2-2001533 NR V2X Zone ID Qualcomm Finland RFFE Oy discussion Rel-16
R2-2001541 NR V2X Zone ID Qualcomm Finland RFFE Oy discussion Rel-16
R2-2001568 UE behaviour on receipt of RRCReconfigurationFailureSidelink message and T400 expiry Qualcomm Finland RFFE Oy discussion Rel-16
R2-2001570 RRC connection initiation trigger for SLRB configuration handling Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-2001571 Further discussion on SL-RSRP reporting Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-2001593 Clarification on how UE initiates a Sidelink UE Information procedure for NR sidelink communication ASUSTeK discussion Rel-16 38.331 5G_V2X_NRSL-Core
R2-2001594 Clarification on how UE reports sidelink QoS flow release ASUSTeK discussion Rel-16 38.331 5G_V2X_NRSL-Core
R2-2001595 Supporting both IP based and non-IP based V2X messages over PC5 ASUSTeK discussion Rel-16 38.331 5G_V2X_NRSL-Core

6.4.2.2 Others

Including email discussion [108#50], [108#103] and other remaining control plane issues, e.g. capability, idle/inactive UE procedures, etc. This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. Summary documents are provided by CR rapporteurs (capability: OPPO, idle/inactive: ZTE).

R2-2000266 Report of open issues on V2X 38.304 and 36.304 running CR discussion Rel-16 5G_V2X_NRSL-Core — ZTE Corporation, Sanechips
- ⇨ Noted (remaining open issue is covered by R2-2001961)

R2-2000268 (running)38.304CR on cell selection(reselection) for NR V2X UE draftCR Rel-15 38.304 15.6.0 5G_V2X_NRSL-Core — ZTE Corporation, Sanechips
- ⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2000267 (running)36.304CR on cell selection(reselection) for NR V2X UE draftCR Rel-15 36.304 15.5.0 B 5G_V2X_NRSL-Core — ZTE Corporation, Sanechips
- ⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2001961 Summary of NR V2X cell selection/reselection related contributions — ZTE Corporation, Sanechips — discussion — 5G_V2X_NRSL-Core
- ⇨ [Offline discussion #709]: To discuss proposal 1 to 5 (ZTE, R2-2001974)

R2-2001974 Report of offline discussion 709 — ZTE Corporation, Sanechips — discussion — 5G_V2X_NRSL-Core
- ⇨ Proposal 1-1, 1-2, 1-3, 2, and 4 are agreed.

Agreements on cell (re)selection:
1: The description of NR V2X UE determination for its coverage status should be captured into both TS 36.304 and TS 38.304.
2: The UE coverage status should be described with respect to each RAT independently in the corresponding CR.
3: When NR V2X UE is under limited service state, the UE is allowed to perform NR V2X communication and/or LTE V2X communication.
4: In the scenario that when a V2X UE is configured to perform both NR SL and LTE SL communication, but fail to find a frequency which can provide dual RAT SL communication configuration, UE may consider the frequency providing either NR SL communication configuration or LTE SL communication configuration to be the highest priority.
5: It is not necessary for NR V2X UE to consider validity area when performing cell reselection.

R2-2000194 Summary of [108#50][V2X] Feature List and UE caps (OPPO) — OPPO — report — 5G_V2X_NRSL-Core — Late
- ⇨ Proposal 1, 5, and 11 are agreed.
- ⇨ Proposal 2 is agreed with the removal of “e.g., as in LTE” and instead addition of “by referring to a list of PC5 band combinations”.
- ⇨ Proposal 3 is agreed with the removal of “LTE”. FFS for inter-RAT case.
- ⇨ Proposal 6, 7, 8, and 10 are noted (need more time to check).
- ⇨ [Offline discussion #710]: To prepare draft LS to RAN4 to ask (NG)ENDC/NEDC scenarios (OPPO, R2-2001975)

Agreements on UE capabilities:
1: In Uu-RRC, capture SL per-band capability as a sidelink band list within RF-parameters in UE-NR-Capability (pending final RAN1 conclusion on L1 feature list).
2: In Uu-RRC, introduce supported LTE / NR PC5 band combination(s) for each NR Uu band combination by referring to a list of PC6 band combinations.
3: In Uu-RRC, when rat-Type=nr, UE reports NR-PC5 capability for NR standalone / NR-DC controlled NR-PC5 via UE-NR-Capability.
4: In Uu-RRC, introduce supported NR PC5 band combination(s) for each LTE Uu band combination.

5: For PC5-RRC, include frequencyBandListFilter in UECapabilityEnquirySidelink to indicate the requested frequency band of sidelink capability report on PC5-RRC. RAN2 to confirm that rat-Type in not included in UECapabilityEnquirySidelink.

R2-2001975 LS on Sidelink UE capability for (NG)EN-DC and NE-DC OPPO draftLS To: RAN4 5G_V2X_NRSL-Core
⇨ Revised into R2-2001978

R2-2001978 LS on Sidelink UE capability for (NG)EN-DC and NE-DC OPPO draftLS To: RAN4 5G_V2X_NRSL-Core
⇨ Approved with the addition of “provide” in front of feedback in ACTION in R2-2001979.

R2-2002264/R2-2002263/R2-2002265 38.300/36.300/37.340 CRs LG
⇨ [Offline discussion #711]: To update and agree 38.300/36.300/37.340 CRs (LG)

R2-2002023 Summary of sidelink capability related contributions OPPO report Rel-16 5G_V2X_NRSL-Core
⇨ [Long] [Email discussion#703]: To discuss the essential issues raised in R2-2002023 (including L1/2/3 capabilities) (OPPO)

R2-2000193 Left issues on SL capability OPPO discussion 5G_V2X_NRSL-Core
R2-2000199 Open issues on system information OPPO discussion Rel-16 5G_V2X_NRSL-Core
R2-2000204 Discussion on inter-RAT Cell Selection/Reselection CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000281 Mode switch for QoS guarantee in NR V2X vivo discussion R2-1914934
R2-2000530 PC5 L2/L3 protocols for unicast and groupcast Kyocera discussion
R2-2000712 General framework for the introduction of UE capabilities for 5G V2X with NR SL in TS 38.306 Huawei, HiSilicon discussion
R2-2000882 Discussion on SL Mode 2 left issues Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1915378
R2-2000886 Remaining issues on capability transfer in sidelink Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1915382
R2-2001001 Remaining issues on V2X System Information LG Electronics Inc. discussion
R2-2001417 Remaining issues on cell reselection Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core
R2-2001418 Remaining issue on sidelink AS configuration Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core
R2-2001569 Further discussion on cell reselection for V2X Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-2001578 NR sidelink communication resource selection Qualcomm Finland RFFE Oy discussion Rel-16

6.4.3 User plane

6.4.3.1 MAC

Including email discussion [108#99], [108#100] and remaining MAC issues. This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. Summary document is provided by MAC CR rapporteur (LG).

R2-2000235 Running CR to 38.321 on Introduction of 5G V2X with NR Sidelink LG Electronics France draftCR Rel-16 38.321 15.8.0 B 5G_V2X_NRSL
⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2000236 Running CR to 36.321 on Introduction of 5G V2X with NR Sidelink LG Electronics France draftCR Rel-16 36.321 15.8.0 B 5G_V2X_NRSL
- ⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2001962 Summary of contributions to MAC for 5G V2X with NR Sidelink LG Electronics discussion Rel-16 5G_V2X_NRSL
- ⇨ Proposal 1.1 is agreed with the correction of TYPO.
- ⇨ Proposal 2.2, 2.3, 2.4, 4, 7, 10, and 15.1 are agreed.
- ⇨ Proposal 3.1 is agreed with the removal of “zero”. FFS for “zero” case
- ⇨ Proposal 11 is agreed. FFS for the configured grant case.
- ⇨ Proposal 1.2, 2.1 (including the need of the scenario to be considered), 3.2, 3.3, 5.1, 5.2, 6.1, 6.2, 8, 9.1, 9.2, 12.1, 12.2, 13.1, 14.1, 14.2, 14.3, 14.4, 15.2 and 15.3 will be discussed in offline.
- ⇨ [Offline discussion #704]: To discuss the proposals identified in the above for further offline discussion (LG, R2-2001968)
- ⇨ [Offline discussion #705]: To update and agree 38.321/36.321 CR (LG, R2-2001969 for 38.321 CR, R2-2001970 for 36.321 CR)

Agreements on MAC:
1: Modify clause 5.13 at least for broadcast and groupcast as follows:
When a MAC entity receives a MAC PDU on SL-SCH containing a reserved LCID value, the MAC entity shall:
1> discard the received subPDU.
2: Confirmation MAC CE for NR controlled V2X sidelink transmission should not be introduced in either 36.321 or 38.321.
3: LTE SR/SL-BSR is not supported for LTE controlled NR SL dynamic mode 1 resource allocation.
4: NR SR/SL-BSR is not supported for NR controlled LTE SL dynamic mode 3 resource allocation.
5: Confirm the working assumption “For mode1 if there is no configured SL-resource, a SL CQI/RI reporting MAC CE may trigger SR and be mapped to one SR configuration” as an agreement. FFS for “zero” case.
6: Confirm the working assumption “For mode2 if there is no configured SL-resource, the UE will perform resource selection for SL CQI/RI reporting” as an agreement.
7: The priority of SL CG confirmation MAC CE is fixed and it is below the priority order of the CG confirmation MAC CE and above the priority orders of the BSR MAC CE and SL BSR MAC CE (even when prioritized) in UL LCP.
8: If the MAC entity is given a sidelink grant size that is equal to or larger than 12 bytes while having data available for transmission, the MAC entity shall not transmit only padding.
9: Confirm how UE determine Sidelink process ID in SCI is left to UE implementation for both mode 1 and 2 as specified in the running CR. FFS for the configured grant case.
10: Simultaneous operation of NR Sidelink Mode 1 and 2 is not supported for a UE performing transmission of NR sidelink communication.

R2-2001968 [Offline Disc#704] Identified proposals to V2X MAC LG Electronics discussion Rel-16 5G_V2X_NRSL
- ⇨ Recommendation 1A, 2A-1, 3A, 3C, 5A, 5B, and 5C are agreed.
- ⇨ Option B2 is set as a working assumption in recommendation 3B.
- ⇨ Recommendation 6A is agreed with the removal of “and/”.
- ⇨ Recommendation 6B is agreed with the modification “Among multiple CSI reports, it is up to UE implementation to select destination to which CSI reporting.”

Agreements on MAC:
1: As in Uu, when a MAC entity receives a MAC PDU on SL-SCH containing an LCID value which is not configured by RRC, the MAC entity shall discard the received subPDU.
2: RAN may not always provide SL configuration/function to UE e.g. when the RAN node is not upgraded yet.

3: Regardless of which destination the UE need to report Sidelink CSI for, the gNB may configure an SR configuration ID associated with the Sidelink CSI reporting for all unicast links of the UE. When the SR is triggered by the Sidelink CSI reporting of any destination, the UE shall use the SR configuration that is indicated by the associated SR configuration ID to transmit the SR.
4: Working Assumption: The pending SR triggered according to the SL-CSI reporting for a destination shall be cancelled and each respective sr-ProhibitTimer shall be stopped when the SL grant(s) can accommodate the SL-CSI reporting that have been triggered but not cancelled.
5: All pending SR(s) triggered by either Sidelink BSR or Sidelink CSI report can be cancelled when UE is reconfigured to autonomous resource selection mode.
6: The priority value of the CSI Reporting MAC CE is set to a fixed value, '1'.
7: The prioritization between UL data/UL SR and SL CSI report is to follow NR rule between UL data and SL data according to the priority value of the SL CSI reporting.
8: A UE selects a Destination having the logical channels satisfying all conditions or CSI reporting with the highest priority in SL LCP.
9: Among multiple CSI reports, it is up to UE implementation to select destination to which CSI reporting.

- ⇨ Remaining recommendations from level 1 issues will be resubmitted by MAC rapporteur.
- ⇨ [Long] [Email discussion#704]: To discuss essential level 2 issues which are required for Rel-16 V2X completion (LG)
- ⇨ [Long] [Email discussion#705]: To discuss MAC specification impacts from new RAN1 agreements (LG)

R2-2001969 38.321 CR LG Electronics discussion Rel-16 5G_V2X_NRSL
R2-2001970 36.321 CR LG Electronics discussion Rel-16 5G_V2X_NRSL

R2-2000237 Report of [108#100][V2X]: Miscellaneous issues on MAC CR for 5G V2X with NR Sidelink LG Electronics France discussion Rel-16 5G_V2X_NRSL
⇨ Noted (covered by R2-2001962).

R2-2000543 Report on email discussion on [108#99][V2X] HARQ based TX side RLM/RLF InterDigital discussion Rel-16 5G_V2X_NRSL-Core
=> Revised in R2-2002074
R2-2002074 Report on email discussion on [108#99][V2X] HARQ based TX side RLM/RLF InterDigital discussion Rel-16 5G_V2X_NRSL-Core

- ⇨ Proposal 1 is agreed with the addition "It is up to UE implementation."
- ⇨ [Long] [Email discussion#701] Discuss the need, technical challenges and details of HARQ feedback based TX side RLM/RLF (Interdigital).

Agreements on RLM/RLF:
1: Not introduce any explicit indication to upper layers to reset the upper layer keep-alive timer.

R2-2000544 Draft CR to 38.321 for HARQ-Based RLF at TX UE InterDigital draftCR Rel-16 38.321 15.8.0 5G_V2X_NRSL-Core
R2-2000545 Draft CR to 38.331 for HARQ-Based RLF at TX UE Interdigital draftCR Rel-16 38.331 15.8.0 5G_V2X_NRSL-Core

R2-2000140 Remaining MAC issues on NR V2X mode 1 Qualcomm Incorporated discussion 5G_V2X_NRSL
R2-2000181 Discussion on Tx-Side RLM Support Apple discussion Rel-16 5G_V2X_NRSL-Core Withdrawn
R2-2000183 Discussion on HARQ feedback for Sidelink groupcast Apple discussion Rel-16 5G_V2X_NRSL-Core Withdrawn

R2-2000184 Draft Reply LS on Sidelink HARQ Feedback for Groupcast Apple LS out Rel-16 5G_V2X_NRSL-Core To:SA2 Cc:RAN1 Withdrawn
R2-2000186 Discussion on remaining issues on SL HARQ process Apple discussion Rel-16 5G_V2X_NRSL-Core Withdrawn
R2-2000195 Left issues on MAC running CR for NR-V2X OPPO discussion 5G_V2X_NRSL-Core
R2-2000196 Left issues on HARQ for NR-V2X OPPO discussion 5G_V2X_NRSL-Core
R2-2000200 Open issues on prioritization OPPO discussion Rel-16 5G_V2X_NRSL-Core
R2-2000202 Discussion on multiple configured grants OPPO discussion Rel-16 5G_V2X_NRSL-Core
R2-2000205 MAC open issues CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000206 Leftover Issue of SL SR CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000207 New Resource (Re-) Selection Triggers CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000208 Draft LS to RAN1 on New Resource (Re-) Selection Triggers CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000209 Remaining Issues on NR SL RLM/RLF Procedure CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000210 Draft LS to RAN1 on NR SL RLM/RLF Procedure CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000211 Leftover Issues on LCP CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000212 Remaining Issues on Multiple SL CGs CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000213 Draft LS to RAN1 on the maximum number of HARQ process used by one SL CG configuration CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000229 Remaining Issues of Sidelink CSI Reporting Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-2000234 [Draft] LS to RAN1 on cast type indication CATT LS out Rel-16 5G_V2X_NRSL-Core To:RAN1
R2-2000258 Groupcast HARQ feedback related issue ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000259 Discussion on left MAC issues ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000260 Discussion on LTE-SL/NR-UL prioritizationZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000283 Left issues on CSI report vivo discussion
R2-2000284 The UE behivour of deactivated sidelink BWP vivo discussion
R2-2000285 HARQ feedback of SL transmission reporting on uplink vivo discussion
R2-2000286 MAC PDU handling for reserved/unkonwn LCID vivo discussion
R2-2000287 Remaining issues on HARQ support for NR Sidelink vivo discussion
R2-2000288 SL BSR triggered by retxBSR-Timer expiry vivo discussion
R2-2000328 Open HARQ Issues Fraunhofer HHI, Fraunhofer IIS discussion
R2-2000454 Remaining aspects for SL HARQ operation Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-2000455 Open aspects on SL Configured Grant design Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-2000457 Open issues on mode 2 resource selection Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-2000458 Cross-RAT scheduling for NR V2X SL Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core R2-1914853
R2-2000532 Remaining issues of UL/SL prioritization MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-2000546 HARQ Buffer Management at the RX UE InterDigital, Lenovo, Motorola Mobility, ZTE discussion Rel-16 5G_V2X_NRSL-Core
R2-2000547 Remaining Aspects of CSI Reporting InterDigital discussion Rel-16 5G_V2X_NRSL-Core

R2-2000548 Remaining Asoects of Sidelink HARQ Feedback for Groupcast InterDigital discussion Rel-16 5G_V2X_NRSL-Core

R2-2000549 Details of Flexible BSR Prioritization InterDigital, Apple discussion Rel-16 5G_V2X_NRSL-Core

R2-2000550 Remaining Aspects of HARQ for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core

R2-2000562 Miscellaneous MAC issues for 5G V2X with NR Sidelink Spreadtrum Communications discussion

R2-2000608 UL-SL Prioritization under SL incapable RAN Apple discussion Rel-16 FS_NR_V2X R2-1915442

R2-2000610 Discussion on Tx-Side RLM Support Apple discussion Rel-16 5G_V2X_NRSL-Core

R2-2000612 Discussion on HARQ feedback for Sidelink groupcast Apple discussion Rel-16 5G_V2X_NRSL-Core

R2-2000613 Draft Reply LS on Sidelink HARQ Feedback for Groupcast Apple LS out Rel-16 5G_V2X_NRSL-Core To:SA2 Cc:RAN1

R2-2000615 Discussion on remaining issues on SL HARQ process Apple discussion Rel-16 5G_V2X_NRSL-Core

R2-2000709 On SL LCP mapping restriction for HARQ feedback enable and disable Huawei, HiSilicon discussion

R2-2000711 Further discussion on the Sidelink CSI reporting related issues Huawei, HiSilicon discussion

R2-2000715 On the left FFS on SR trigger for SL Mode 1 Huawei, Lenovo, Motorola Mobility, ZTE, Sanechips, OPPO, HiSilicon discussion

R2-2000773 Discussion on sidelink SR trigger Fujitsu discussion Rel-16 5G_V2X_NRSL-Core R2-1914998

R2-2000774 Discussion on remaining PDB Fujitsu discussion Rel-16 5G_V2X_NRSL-Core

R2-2000820 SL BWP operation Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core

R2-2000823 Remaining aspects of SL HARQ protocol operation Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core

R2-2000944 On the need of HARQ based RLF Ericsson discussion 5G_V2X_NRSL-Core

R2-2000946 Discussion on congestion control Ericsson discussion 5G_V2X_NRSL-Core

R2-2000948 Discussion on SL Mode 1 left issues Ericsson discussion 5G_V2X_NRSL-Core

R2-2000950 MAC miscellaneous issues Ericsson discussion 5G_V2X_NRSL-Core

R2-2001000 Remaining Exceptional Pool Aspects LG Electronics Inc. discussion Rel-16

R2-2001022 Considerations on QoS based resource pool for NR V2X Lenovo, Motorola Mobility discussion Rel-16

R2-2001023 Views on miscellaneous issues for NR V2X MAC layer Lenovo, Motorola Mobility discussion Rel-16

R2-2001073 Blind HARQ retransmissions Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core

R2-2001074 Ensuring timeliness of CSI Reporting Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core

R2-2001076 RLM Procedure Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core

R2-2001078 Remaining aspects of NR V2X Tx UE behavior Lenovo, Motorola Mobility, Deutsche Telekom, Fraunhofer HHI and Fraunhofer IIS, Continental Automotive GmbH discussion 5G_V2X_NRSL-Core
=> Revised in R2-2002054

R2-2002054 Remaining aspects of NR V2X Tx UE behavior Lenovo, Motorola Mobility, Deutsche Telekom, Fraunhofer HHI and Fraunhofer IIS, Continental Automotive GmbH, MediaTek, BOSCH discussion 5G_V2X_NRSL-Core

R2-2001107 Discussion on BSR prioritization issue Beijing Xiaomi Software Tech discussion

R2-2001337 Remaining issue in SL SCH subheader Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1915939

R2-2001338 Clarification for LCP procedure with HARQ feedback Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-2001339 Handling of error in MAC PDU for SL unicast Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-2001346 Logical Channel with/without HARQ Feedback Multiplexing Panasonic Corporation discussion

R2-2001414 Configuration Aspects for Configured Sidelink Grant in Mode-1 Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core R2-1915967

R2-2001416 Remaining issues on HARQ operation for NR SL Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

R2-2001481 Need of clarification on NDI in SCI for configured grant type 2 ITL discussion Rel-16

R2-2001550 Remaining issues for SL-SCH MAC subheader Qualcomm Finland RFFE Oy discussion Rel-16

R2-2001552 Remaining issues on RLM/RLF Qualcomm Finland RFFE Oy discussion Rel-16

R2-2001588 PC5 groupcast handling Qualcomm Finland RFFE Oy discussion Rel-16

R2-2001596 Considerations of CSI reporting regarding SL LCP ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core

6.4.3.2 Others

Including email discussion [108#101], [108#102] and other remaining user plane issues, e.g. RLC, PDCP, SDAP, etc. This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. Summary documents are provided by CR rapporteurs (RLC: Ericsson, PDCP: CATT, SDAP: Vivo)

R2-2000887 Running CR for 38.322 for NR V2X Ericsson CR Rel-16 38.322 15.5.0 0030 - B 5G_V2X_NRSL-Core

⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2002019 Summary for NR V2X RLC left issues Ericsson discussion Rel-16 5G_V2X_NRSL-Core

⇨ [Offline discussion #706]: To discuss and decide proposal 1, 2 and 3 (Ericsson, R2-2001976)

R2-2001976 Report for offline discussion on RLC left issues Ericsson discussion Rel-16 5G_V2X_NRSL-Core

⇨ Proposal 1 and 2 are agreed.

⇨ [Long] [Email discussion#702]: To discuss Question 4 raised in R2-2001976. Note the discussion should be only for RLC UM. (Ericsson)

Agreements on RLC:
1: Both uni-directional and bi-directional RLC UM SL-DRB are supported for SL unicast.
2: For SL unicast, TX side and RX side of the same bi-directional RLC UM/AM SL-DRB can adopt different SN lengths.

R2-2000214 Summary of Email discussion [108#102][V2X] Remaining issues on PDCP CATT discussion Rel-16 5G_V2X_NRSL-Core

⇨ Proposal 3 and 4 are agreed with the removal of “Only” and “types of”.

⇨ Proposal 5, 6, 7, 8, 10, and 12 are agreed.

⇨ [Offline discussion #707]: To discuss proposal 1, 2, 9, 11, 13, 14, and 15 (R2-2001977).

⇨ [Offline discussion #708]: To prepare draft LS to SA3 to inform RAN2 agreements made this e-meeting (CATT, R2-2001973)

Agreements on PDCP:

1: Capture which SLRB need confidentiality protection in TS 38.331. The specific functionalities for confidentiality protection (e.g. parameters needed, procedures, etc.) are captured in TS 38.323.
2: Capture which SLRB need integrity protection in TS 38.331. The specific functionalities for integrity protection (e.g. parameters needed, procedures, etc.) are captured in TS 38.323.
3: For SL DRBs of groupcast and broadcast, the MAC-I field is not present.
4: For SL DRBs of unicast, if the integrity protection is not configured, the MAC-I field is not present.
5: For the first PC5 Signalling, i.e., Direct Communication Request, the MAC-I field is not present.
6: Except for Direct Communication Request, the MAC-I field is always present in the PDCP format for other PC5 Signallings and SL RRC signallings.
7: The D/C field is not present and the corresponding bit is present as a Reserved bit in data PDU format for groupcast and broadcast.
8: 4 different LCIDs are allocated for the following SL SRBs:
- The PC5-S signalling that is not protected, e.g., Direct Communication Request.
- The PC5-S signalling to activate security, i.e., Direct Security Mode Command and Direct Security Mode Complete.
- Other PC5-S signallings that are protected.
- PC5-RRC signallings that are protected.

R2-2000203 38.323 CR for NR V2X 5G_V2X_NRSL-Core CATT CR Rel-16 38.323 15.6.0 0038 - B

R2-2002018 38.323 CR for NR V2X 5G_V2X_NRSL-Core CATT CR Rel-16 38.323 15.6.0 0038 1 B

⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2002017 Summary of PDCP remaining issues on NR V2X 5G_V2X_NRSL-Core CATT discussion Rel-16

⇨ Proposal 1 (Note will be captured in 38.323) is agreed.
⇨ Include the discussion of proposal 2, 3, 4, 5, 6, 7, 8, and 9 into offline discussion #707.

Agreements on PDCP:
1: Add the following note in 38.323.
"NOTE: As the PC5-S message which activates the integrity protection function is itself integrity protected with the configuration included in this PC5-S message, this message needs first be decoded by upper layer before the integrity protection verification could be performed for the PDU in which the message was received."

R2-2001973 [Draft] LS to SA3 on NR V2X Security issues on PDCP 5G_V2X_NRSL-Core CATT draftLS To: SA3 Rel-16

⇨ Will be updated in R2-2001980
⇨ The LS is Approved.

R2-2001977 Summary of offline discussion for open issues on V2X PDCP (CATT) CATT discussion Rel-16 5G_V2X_NRSL-Core

⇨ Proposal 1 and 6 are agreed.
⇨ The PDCP SN size of Direct Communication Request message is 18 bits.
⇨ Will ask rekeying issues to SA3 (details will be discussed in the email discussion of the LS)
⇨ Will ask the questions to SA3 according to proposal 3, 7, 8, 9 and 10.

Agreements on PDCP:
1: Capture one Note that it's up to UE implementation to select HFN for RX_NEXT as such that initial value of RX_DELIV should be a positive value.
2: Change the previous agreement for SDU type in NR sidelink from 2-bits to 3-bits.
3: The PDCP SN size of Direct Communication Request message is 18 bits.

R2-2000278 Running CR to 37324 for 5G_V2X_NRSL vivo (Rapporteur) draftCR Rel-15 37.324 15.1.0 5G_V2X_NRSL-Core
⇨ Endorsed as the baseline CR to be agreed this e-meeting. Will be updated including further agreements made this e-meeting.

R2-2002051 [Pre109e][V2X] Summary on SDAP vivo discussion Rel-16 5G_V2X_NRSL-Core
⇨ Widthdrawn (no SDAP issues submitted this e-meeting)

R2-2000201 Discussion on PDCP open issues OPPO discussion Rel-16 5G_V2X_NRSL-Core
R2-2000215 Draft LS to SA3 on NR V2X Security issues on PDCP CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-2000945 On PDCP re-establishment Ericsson discussion 5G_V2X_NRSL-Core
R2-2000949 Discussion on RLC left issues Ericsson discussion 5G_V2X_NRSL-Core
R2-2001308 Initialization of HFNs of RX_DELIV and RX_NEXT Futurewei discussion Rel-16 5G_V2X_NRSL-Core
R2-2001340 Security impact in SL PDCP Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-2001499 Initial Value of RX_DELIV and RX_NEXT Samsung discussion Rel-16 5G_V2X_NRSL-Core
R2-2001544 PDCU SDU Type Length Qualcomm Finland RFFE Oy discussion Rel-16

6.4.4 Others

Including other essential issues for V2X completion, which may have both control and user plane aspects. This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on submitted tdocs).

R2-2000197 Discussion on resource allocation mode for NR-V2X OPPO discussion 5G_V2X_NRSL-Core
R2-2000265 Discussion on multi-mode co-existence ZTE Corporation, Sanechips discussion Rel-16 5G_V2X_NRSL-Core
R2-2000696 Remaining issue on Groupcast and Broadcast Support ITRI discussion 5G_V2X_NRSL-Core
R2-2001075 MCR for Option 2 FB and group size ambiguity Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-2001091 PC5 QoS information in UAI Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-2001415 Remaining issue for groupcast HARQ feedback option 1 and option 2 Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

6.5 Optimisations on UE radio capability signalling

(RACS-RAN-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: RP-191088). Documents in this agenda item will be handled in a break out session
Time budget: 0.5 TU
Tdoc Limitation: 2 tdocs
Apart from running CRs, it's possible to contribute to sub agenda items 6.5.2 and 6.5.3, if any new issues are identified. This Work Item will likely only be handled via offline email discussions kicked off at the e-meeting start.

6.5.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs, etc

R2-2000424 Work plan for RACS-RAN work item RACS-RAN-Core MediaTek Inc., CATT discussion Rel-16
⇨ Noted

R2-2000421 Introduction of RACS [36.300] MediaTek Inc. CR Rel-16 36.300 16.0.0 1258 - B RACS-RAN-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

R2-2000422 Introduction of RACS [38.300] MediaTek Inc. CR Rel-16 38.300 16.0.0 0187 - B RACS-RAN-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

✉ **[AT109e][101][RACS] Stage 2 CRs (Mediatek)**
Intended outcome: Agreed 36.300 and 38.300 CRs, also taking into account proposals in R2-2000939
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

⇨ CRs revised to cover also DL RRC segmentation (TEI16 item)

R2-2001687 Introduction of RACS and DL RRC segmentation MediaTek Inc., Ericsson, CATT CR Rel-16 36.300 16.0.0 1258 1 B RACS-RAN-Core, TEI16
⇨ Agreed

R2-2001688 Introduction of RACS and DL RRC segmentation MediaTek Inc., Ericsson, CATT CR Rel-16 38.300 16.0.0 0187 1 B RACS-RAN-Core, TEI16
⇨ Agreed

R2-2000354 Introduction of UECapabilityInformation segmentation in TS38.331 ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd, MediaTek Inc, CATT, Ericsson, Intel Corporation, Spreadtrum Communications CR Rel-16 38.331 15.8.0 1441 - B RACS-RAN-Core
⇨ Remove reference to "Athens, Greece" in the CR header
⇨ Endorsed as baseline CR with the change above. Moved to offline email discussion for agreement

R2-2000423 Introduction of UECapabilityInformation segmentation in 36.331 MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO, Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4189 - B RACS-RAN-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

✉ **[AT109e][102][RACS] Stage 3 CRs (ZTE)**
Intended outcome: Agreed 36.331 and 38.331 CRs
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

R2-2001689 Introduction of UECapabilityInformation segmentation in TS38.331 ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd, MediaTek Inc, CATT, Ericsson, Intel Corporation, Spreadtrum Communications CR Rel-16 38.331 15.8.0 1441 1 B RACS-RAN-Core
⇨ Agreed

R2-2001690 Introduction of UECapabilityInformation segmentation in 36.331 MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO, Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4189 1 B RACS-RAN-Core
⇨ Agreed

6.5.2 UE radio capability signalling using UE capability identity

Other aspects, if any, can also be covered here

R2-2001227 Inter-node signaling of UE Capabilities Ericsson discussion
- ⇨ Offline email discussion 103 (Ericsson): discuss proposals 1&2
- ⇨ During the Offline email discussion it was agreed to draft an LS to SA2

✉ **[AT109e][103][RACS] Optional signalling of UE capabilities at handover (Ericsson)**
Intended outcome: Decision on proposals in R2-2001227 and possible drafting of LS to SA2.
Deadline for companies' feedback: Monday 2020-03-02 12:00 CET
Deadline for rapporteur's version for agreement: Tuesday 2020-03-03 12:00 CET

R2-2001691 Draft LS on Optional signalling of UE capabilities at handover Ericsson LS out Rel-16 RACS-RAN -Core To:SA2 Cc:RAN3
- ⇨ Revised in R2-2001702 (to remove 'Draft' and put 'RAN2' as source)

R2-2001702 LS on Optional signalling of UE capabilities at handover Ericsson LS out Rel-16 RACS-RAN -Core To:SA2 Cc:RAN3
- ⇨ Approved
- ⇨ Revised by MCC to update the WI code (FS_RACS -> RACS-RAN-Core)
- ⇨ Approved in R2-2001891

The following two papers will be noted but not treated (feedback from RAN3 is needed first)

R2-2000355 UE radio capability ID in inter-node RRC messages ZTE Corporation, Sanechips discussion Rel-16 RACS-RAN-Core
- ⇨ Noted

R2-2000356 Introduction of UE radio capability ID in inter-node RRC messages ZTE Corporation, Sanechips CR Rel-16 38.331 15.8.0 1485 - B RACS-RAN-Core
- ⇨ Noted

6.5.3 Segmentation of UE radio capabilities

R2-2000939 Generic stage-2 description for RRC segmentation Ericsson discussion Rel-16 RACS-RAN-Core
- ⇨ Proposals in this paper to be considered as part of the offline email discussion 101

The following two papers will be noted but not treated

R2-2000765 Transfer of segmented UECapabilityInformation by SRB2 Samsung discussion Rel-16 RACS-RAN-Core R2-1915246
- ⇨ Noted

R2-2001329 Remaining issues on UE capability segmentation Huawei, HiSilicon discussion Rel-16 RACS-RAN-Core
- ⇨ Noted

6.6 Void

6.7 NR Industrial Internet of Things (IoT)

(NR_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: RP-192324)
Time budget: 3 TU
Tdoc Limitation: 12 tdocs

6.7.1 General

Rapporteur input. UE feature List UE cap etc
Including outcome of the email discussion [108#47][IIOT] UE feature list (Nokia)
Including outcome of the email discussion [108#32][IIOT] Running CR 38.331 (Ericsson)

Including outcome of the email discussion [108#52][IIOT] Running CR 38.323 (LG)
Summary UE feature list, UE capabilities (Nokia) if needed.

By Email and web conf

WI Open issue list

R2-2001046 Summary of open issues for IIOT WI 16 NR_IIOT Nokia, Nokia Shanghai Bell discussion Rel-

⇒ **Noted**

Incoming LS

R2-2000060 Reply LS on reference time delivery (S2-1912769; contact: Qualcomm) SA2 LS in Rel-16 Vertical_LAN, NR_IIOT To:RAN2
- Chair think there was a misunderstanding in Sa2

⇒ **Noted**

RRC CRs

R2-2000783 RRC running CR for NR IIoT Core Ericsson draftCR Rel-16 38.331 15.8.0 NR_IIOT-
=> Revised in R2-2001657

R2-2001657 RRC running CR for NR IIoT NR_IIOT-Core Ericsson CR Rel-16 38.331 15.8.0 1498 B

⇒ **Endorsed as baseline**

R2-2002359 RRC running CR for NR IIoT NR_IIOT-Core Ericsson CR Rel-16 38.331 15.8.0 1498 B

⇒ **[AT109e][027][IIOT] Agreed**

R2-2000784 LTE RRC running CR for NR IIoT Core Ericsson draftCR Rel-16 36.331 15.8.0 NR_IIOT-
=> Revised in R2-2001658

R2-2001658 LTE RRC running CR for NR IIoT NR_IIOT-Core Ericsson CR Rel-16 36.331 15.8.0 4228 B

⇒ **Endorsed as baseline**

R2-2002360 LTE RRC running CR for NR IIoT NR_IIOT-Core Ericsson CR Rel-16 36.331 15.8.0 4228 B

⇒ **[AT109e][027][IIOT] Agreed**

R2-2000785 Remaining minor issues in [108#32][IIoT] Running CR 38.331 NR_IIOT-Core Ericsson discussion

✉ **[AT109e][027][IIOT] CR RRC 38331 36331 (Ericsson)**
Scope: Progress RRC CRs
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

PDCP CR

R2-2001280 Summary of e-mail discussion on PDCP Running CR for NR IIOT Rel-16 NR_IIOT-Core LG Electronics Inc. report

R2-2001281 PDCP running CR for NR IIOT 38.323 15.6.0 0039 - B NR_IIOT-Core PDCP Rapporteur (LG Electronics Inc.) CR Rel-16

⇒ **Endorsed (as baseline)**

R2-2002169 PDCP running CR for NR IIOT PDCP Rapporteur (LG Electronics Inc.) CR Rel-16
38.323 15.6.0 0039 1 B NR_IIOT-Core

R2-2002366 PDCP running CR for NR IIOT PDCP Rapporteur (LG Electronics Inc.) CR Rel-16
38.323 15.6.0 0039 2 B NR_IIOT-Core

⇒ **[AT109e][028][IIOT] Agreed**
=> Coversheet update by MCC: Source to WG/TSG field values to be swapped
=> Revised in R2-2002408

R2-2002408 Introduction of NR IIOT PDCP Rapporteur (LG Electronics Inc.) CR Rel-16 38.323
15.6.0 0039 3 B NR_IIOT-Core
=> Agreed

R2-2001282 Introducing EHC in LTE PDCP PDCP Rapporteur (LG Electronics Inc.) CR Rel-16
36.323 15.5.0 0278 - B NR_IIOT-Core
=> to be submitted to RAN#78 as a company contribution

R2-2002170 Introducing EHC in LTE PDCP PDCP Rapporteur (LG Electronics Inc.) CR Rel-16
38.323 15.5.0 0043 - B NR_IIOT-Core

R2-2002367 Introducing EHC in LTE PDCP PDCP Rapporteur (LG Electronics Inc.) CR Rel-16
38.323 15.5.0 0043 1 B NR_IIOT-Core

⇒ **[AT109e][028][IIOT] Agreed**

INITIAL DISCUSSION
- Nokia wonder if we can refer to NR wrt the appendix. LG think it is better to have separate.
- QC think we should discuss the LTE CR a bit more before endorsing

⇒ **Discuss and check by email.**

✉ **[AT109e][028][IIOT] CR PDCP 38323 36323 (LG)**
Scope: Progress PDCP CRs
Intended outcome: **Address comments to R2-2001282**. Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

=> Revised in R2-2002409

R2-2002367 Introducing EHC in LTE PDCP PDCP Rapporteur (LG Electronics Inc.) CR Rel-16
38.323 15.5.0 0043 2 B NR_IIOT-Core
=> Withdrawn

MAC CR

R2-2001487 MAC Running CR for NR IIOT Samsung CR Rel-16 38.321 15.8.0 0698 -
B NR_IIOT-Core
- Samsung clarifies that this version is just editorially updated cmp last endorsed version.
=> Revised in R2-2002341

R2-2002341 MAC Running CR for NR IIOT Samsung CR Rel-16 38.321 15.8.0 0698 1
B NR_IIOT-Core

⇒ **[AT109e][029][IIOT] Agreed**

✉ **[AT109e][029][IIOT] CR MAC 38321 (Samsung)**
Scope: Progress MAC CR
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

Stage-2 CRs

R2-2002013 Introduction of NR Industrial IoT features Nokia, Nokia Shanghai Bell CR Rel-16
38.300 0203 B NR_IIOT

⇒ **[AT109e][030][IIOT] Agreed**

R2-2002356 Introduction of NR Industrial IoT features Nokia, Nokia Shanghai Bell CR Rel-16 36.300 xxxx B NR_IIOT

⇒ **[AT109e][030][IIOT] Agreed**

INITIAL DISCUSSION

⇒ **Will have a 36300 CR (Nokia)**

✉ **[AT109e][030][IIOT] CR Stage-2 38300 36300 (Nokia)**
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

Feature List and UE capabilties
Input status – nothing agreed yet.

R2-2001053 Summary of e-mail discussion: [108#47][IIOT] UE feature list discussion Rel-16 NR_IIOT Nokia, Nokia Shanghai Bell

R2-2002072 Summary: UE features and capabilities Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core

R2-2001052 UE feature list and capabilities remaining issues Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-2001054 UE radio access capabilities introduction for NR IIOT WI Nokia, Nokia Shanghai Bell CR Rel-16 38.306 15.8.0 0244 - B NR_IIO
- Nokia think we can endorse this as baseline.
- LG has concerns on padding addition. Chair think we will update based on decisions at this meeting
- QC has concerns on items that are related to L1.

Chair: it seems we cannot endorse now, but this can anyway serve as baseline for continued discussion.
=> Revised in R2-2002279

R2-2002279 UE radio access capabilities introduction for NR IIOT WI Nokia, Nokia Shanghai Bell CR Rel-16 38.306 15.8.0 0244 1 B NR_IIOT

R2-2001055 UE feature list introduction for NR IIOT WI Nokia, Nokia Shanghai Bell CR Rel-16 38.822 15.0.1 0002 - B NR_IIOT
- Huawei think this TR is not maintained any longer.

=> Revised in R2-2002280

R2-2002280 UE feature list introduction for NR IIOT WI Nokia, Nokia Shanghai Bell CR Rel-16 38.822 15.0.1 0002 1 B NR_IIOT

✉ **[AT109e][031][IIOT] IIOT UE capabilities (Nokia)**
Scope: Progress Feature List and UE capabilities, way forward.
Intended outcome: Treat email discussion [108#47] and other papers above, Endorse 38306 CR,
CLOSED

R2-2002282 Summary of [AT109e][031][IIOT] IIOT UE capabilities Nokia, Nokia Shanghai Bell

On-Line DISCUSSION on parts not only related to UE cap
P4
- QC support separate as these target separate use cases. Ericsson agrees and think they have different requirements wrt gNB reception. Nokia agrees. MTK agrees and think complexity in MAC is not a problem.
- Samsung think they have same purpose, and we don't need overhead and complexity of separate config. Huawei Agrees. LG also think separate config is complex in MAC. CATT agrees.

- Chair think we cannot agree now need to keep open. For the sake of the MAC CR it doesn't matter so much what is there.

P7bis
- LG think fixed size for one DRB is important. Nokia think we configure per DRB
- Ericsson wonder if we would have different capability. Nokia think this is still open

⇒ **FFS whether data vs. data and SR vs. data prioritization can be configured separately.**

⇒ **Both 1-byte header and 2-bytes header is supported and the choice depends on RRC configuration (of DRB). For one DRB the header size is fixed.**

Agreements and FFSes [AT109e][031][IIOT]:

⇒ **The UE supporting multipleCG-Configs shall also support lch-ToConfiguredGrantMapping.**

⇒ **A single capability for PDCP duplication with more than two RLC entities covers both RLC AM and RLC UM mode.**

⇒ **UE signals the maximum number of supported EHC contexts as a capability.**

⇒ **A separate UE capability is defined for EHC context continuation.**

⇒ **FFS whether signalling of maximum value of additional SPS periodicities and additional CG periodicities supported by a UE is required.**

⇒ **FFS whether to support allowing CG periodicities of multiple of 2/7 symbols as a separate capability with a cross-slot boundary capability as a pre-requisite.**

⇒ **FFS if Data vs. data and SR vs. data prioritization are signalled as a single capability.**

⇒ **FFS whether LCH based prioritization can be supported without PHY prioritization. It is expected this can be discussed once RAN1 has defined feature/capability related to PHY layer prioritization**

6.7.2 TSC

6.7.2.1 Accurate reference timing

Accurate reference timing delivery from gNB to UE using broadcast and unicast RRC signalling for synchronization requirements defined in TS 22.104

Rapporteur guidance: Remaining issues:
- *Propagation delay compensation*
- *How to determine whether a UE requires to be provisioned with reference time information*

Summary Accurate reference timing (Nokia)

By Email and web conf

R2-2002012 Summary: Accurate reference timing Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT
DISCUSSION
2a
- Ericsson don't understand why this is needed. Nokia think the network can know situations when UE based prop delay comp would make it worse
- LG don't think this is essential, especially since UE behaviour is unspecified.
- Oppo support 2a and think it allows the network to do Prop delay comp. CATT also support Nokia, esp for the case to avoid that both network and UE do Prop delay Comp.
- MTK think we can wait until R17
- QC think P1 cannot be agreed if not P2a is agreed

2b
- Chair wonder if we can just skip this. Nokia want this. Vivo think we should mention that network shall not do compensation.
- CMCC think 2b cannot be used
- Ericsson want this

P5
- vivo are ok to skip

P4
- Chair: should stick to a simple solution.

⇒ **2a seems non-agreeable**

⇒ **P5: No particular support for EN-DC**

⇒ **Can continue offline**

✉ **[AT109e][032][IIOT] Accurate Reference Timing (Nokia)**
Scope: Treat summary on accurate ref timing (other papers if needed)
Intended outcome: Resolve issues, Describe Open Issues accurately.
CLOSED

R2-2002281 Summary of [AT109e][032][IIOT] Accurate Reference Timing Nokia, Nokia Shanghai Bell

⇒ **Noted**

Agreements [AT109e][032][IIOT]

⇒ **Capture for the reference time information in 38.331 that "The indicated time is referenced at the network, i.e., without compensating for RF propagation delay."**

⇒ **In Rel-16, propagation delay compensation may be done by UE implementation.**

⇒ **Do not capture propagation delay compensation aspect in stage-2 specifications.**

⇒ **No EN-DC specific enhancements are pursued for accurate reference time objective of Rel-16 IIOT WI.**

⇒ **Do not make any specifications changes to indicate which of the received reference time information takes precedence in case the UE receives reference time via both unicast and broadcast signalling.**

⇒ **It is FFS if UE in RRC Connected can request SIB9 using on-demand SI request (by reusing OSI mechanism defined for RRC Connected UEs, with assumption of no additional work is needed in IIOT WI).**

R2-2000110 Remaining Issues on Propagation Delay Compensation CATT discussion NR_IIOT-Core
R2-2000427 Discussion on propagation delay compensation Huawei, HiSilicon discussion NR_IIOT-Core
R2-2000428 Remaining issues of reference time delivery Huawei, HiSilicon discussion NR_IIOT-Core
R2-2000489 UE report of the TSC interest vivo discussion
R2-2000490 Discussion on propagation delay compensation in rel-16 vivo discussion
R2-2000491 Discussion on provisioning of timing information for EN-DC vivo discussion
R2-2000492 TP on 38.331 of provisioning of timing information for EN-DC vivo discussion
R2-2000493 TP on 36.331 of provisioning of timing information for EN-DC vivo discussion
R2-2000705 Consideration on propagation delay compensation for TSC OPPO discussion Rel-16 Late
R2-2000786 On downlink delay compensation Ericsson, LG, Samsung discussion NR_IIOT-Core
R2-2000787 On UE need for time synch Ericsson discussion NR_IIOT-Core
R2-2001047 Propagation delay compensation Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT
R2-2001048 Determining the need for accurate reference time delivery Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-2001212 Propagation Delay Compensation in TSC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-16 NR_IIOT-Core R2-1914725 Late

R2-2001233 Request for accurate reference timing delivery in TSC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-16 NR_IIOT-Core Late

R2-2001297 Open issues in Accurate Reference Timing Delivery Qualcomm Incorporated discussion

R2-2001426 Remaining Issues for Propagation Delay Compensation CMCC discussion Rel-16 NR_IIOT-Core

R2-2001427 TP on IIoT Running RRC for Propagation Delay Compensation CMCC discussion Rel-16 NR_IIOT-Core

6.7.2.2 Scheduling Enhancements

Enhancements to satisfy QoS for wireless Ethernet when using TSC traffic patterns and support for TSC message periodicities with non-integer multiple of NR supported CG/SPS periodicities.

Rapporteur guidance: Remaining issues:

- *Multiple SPS/CG enhancements (CG confirmation MAC CE, SFN misalignment for CG type 1 etc.)*
- *LCP restrictions (PHY priority-based restriction, allowed CG list)*
- *Other issues as identified in the e-mail discussions*

Summary Scheduling Enhancements (Ericsson)

By Email

R2-2001660 [Summary document for AI 6.7.2.2] Ericsson discussion Rel-16 NR_IIOT-Core
=> Revised in R2-2002091

R2-2002091 Summary on Scheduling Enhancement for IIoT (6.7.2.2) Ericsson discussion Rel-16 NR_IIOT-Core

✉ **[AT109e][033][IIOT] Scheduling Enhancements (Ericsson)**
Scope: Treat summary on Scheduling Enhancements
Intended outcome: Resolve issues, Describe Open Issues accurately.
Deadline: Mar 3 1200 CET (conclusions on “easy agreements” by Feb 27 1200 CET)

R2-2002294 Summary on [AT109e][033][IIOT] Scheduling Enhancements Ericsson discussion Rel-16 NR_IIOT-Core

⇒ **Noted**

Agreements [AT109e][033][IIOT]

⇒ **Confirm LCH configured with allowedCG-List is allowed to be mapped to dynamic grant**

⇒ **LCH configured with allowedPHY-PriorityIndex is allowed to be mapped to dynamic grant without any priority indication only in case the configuration allows it to be mapped on low priority grant.**

⇒ **allowedPHY-PriorityIndex restriction applies only to dynamic grants.**

⇒ **If configuredGrantConfigList-r16 is configured in the MAC entity, the multiple entry configured grant confirmation MAC CE is always used.**

⇒ **As in legacy, the multiple entry configured grant confirmation MAC CE is generated if 1) the MAC entity has UL resources allocated for new transmission; 2) there is at least one triggered but not cancelled confirmation.**

⇒ **Confirm that Multiple Entry Configured Grant Confirmation MAC CE has the same priority as Confirmation Grant Confirmation MAC CE.**

⇒ **For Type-1 CG, after receiving the configuration, UE should first identify the lowest N value corresponding to the nearest available CG occasion, then, N is incremented after each CG occasion starting from the N identified in the first step.**

⇒ **Introduce timeReferenceSFN in RRC CG type 1 configuration.**

⇒ **Align the terminology and use name "phy-PriorityIndex" in TS 38.300, TS 38.321, TS 38.331 to indicate the priority of the grant/SR-source agreed by RAN1**

⇒ **Maximum 32 CG configurations per MAC entity.**

⇒ **MAC CE for CG configuration has a fixed size of 4 bytes.**

⇒ **Confirm that multiple entry configured confirmation MAC CE only confirms configured grant type 2 configurations and other entries can be ignored.**

⇒ **Multiple entry confirmation MAC CE confirms the reception of (re)-activation/de-activation DCI.**

⇒ **Two CGs of any type, one activated in UL and another activated in SUL, are not time-overlapping by the control of the network. This can be captured in the stage-2 spec.**

R2-2000111 Remaining issues for multiple CG configurations CATT discussion NR_IIOT-Core
R2-2000429 Configured grant configurations for SUL serving cell Huawei, HiSilicon discussion NR_IIOT-Core
R2-2000430 Discussion on the new CG type 2 confirmation MAC CE Huawei, HiSilicon discussion NR_IIOT-Core
R2-2000431 Method to avoid confusion between UE and network for CG type 1 Huawei, HiSilicon discussion NR_IIOT-Core
R2-2000564 Consideration on collision of measurement gap and TSN traffic Spreadtrum Communications discussion
R2-2000697 SFN misalignment issue on periodicities of non-divisor of 10240ms OPPO discussion Rel-16
R2-2000699 Left issue on multiple entry confirmation MAC CE OPPO discussion Rel-16
R2-2000706 Support mapping LCHs configured with allowedCG-list to dynamic grant OPPO discussion Rel-16
R2-2000788 LCP restriction enhancement based on PHY priority indcation Ericsson discussion NR_IIOT-Core
R2-2000789 SPS and CG remaining MAC aspects Ericsson discussion NR_IIOT-Core
R2-2000790 TSC AI clarifications: meaning of arrival time Ericsson discussion NR_IIOT-Core
R2-2000791 Draft LS: TSC AI clarifications for arrival time Ericsson LS out NR_IIOT-Core To:SA2
R2-2001049 Remaining issues on TSC scheduling Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT
R2-2001171 LCP restrictions in IIoT Intel Corporation discussion Rel-16 NR_IIOT-Core
R2-2001290 Open issues in Scheduling Enhancements Qualcomm Incorporated discussion
R2-2001428 Remaining Issues for Multiple SPS-CG enhancements CMCC discussion Rel-16 NR_IIOT-Core
R2-2001429 Remaining Issues for LCP restrictions CMCC discussion Rel-16 NR_IIOT-Core
R2-2001461 The considerations on scheduling enhancement ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core
R2-2001476 TP on IIoT Running RRC for Scheduling Enhancements CMCC discussion Rel-16 NR_IIOT-Core
R2-2001489 Remaining Issues on CG Confirmation MAC CE Samsung discussion Rel-16 NR_IIOT-Core
R2-2001493 LCP Restriction for allowedCG-List and allowedPHY-PriorityIndex Samsung discussion Rel-16 NR_IIOT-Core

R2-2001498 Type 1 Configured Grant with Integer Periodicity Samsung discussion Rel-16 NR_IIOT-Core
R2-2001555 Consideration on multiple entry CG confirmation MAC CE LG Electronics Inc. discussion Rel-16 NR_IIOT-Core
R2-2001613 Multiple Entry Configured Grant Confirmation MAC CE Intel Corporation discussion Rel-16 NR_IIOT-Core
R2-2001627 Impact of CG/SPS with periodicities non dividing HF length Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1916231

6.7.2.3 Ethernet Header Compression

Specify Ethernet header compression based on structure-aware algorithm.
Including outcome of the email discussion [108#53][IIOT] EHC remaining issues (Huawei)
Rapporteur guidance: Remaining issues:
- *Padding removal support*
- *EHC compressed and ucompressed packet formats*
- *EHC and ROHC joint operation*
- *Other issues unresolved during e-mail discussions*

Summary Ethernet Header Compression (Mediatek)

By Web Conf and email

R2-2002097 Reply LS on need for Ethernet padding compression (S1-201085; contact: Qualcomm) SA1 LS in
- Huawei think they use profinet, and there was no evidence for this.

⇒ **EHC doesn't handle padding, no removal/compression etc.**

R2-2000175 Report of email discussion [108#53] [IIOT] EHC remaining issues Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
P3
- Chair wonder if we should discuss CID
- LG think we need to decide fixed or variable size.
- Chair wonders if the overhead is very significant. CATT think yes, and think we could go for small fixed size. QC support CATTs view. Samsung agree with CATT as well.
- MTK think that in addition to small fixed size it could be useful to have a second size.
- Oppo are ok with fixed size but think "large" size is needed. Think that in ROHC size is 14 or 17.
- Docomo think that SA hasn't concluded how many devices are connected to a UE so > 1 octet CID may be needed.
- Intel think CID size need to be "large".
- Nokia could be ok to compromise and have two sizes.
- ZTE think the no of devices doesn't relate to
- LG cannot agree to 2 sizes.
- Chair: In a first round the following agreed FFS was captured "FFS if we have 1 CID size or 2 CID sizes: one byte, two bytes, Configured by RRC", but it was later superseded by an agreement (see R2-2002282).

⇒ **Noted**

R2-2002020 Summary of submissions on Ethernet header compressions MediaTek Inc. discussion Rel-16 NR_IIOT-Core

✉ **[AT109e][034][IIOT] Ethernet Header Compression (Mediatek, Huawei)**
Scope: Treat email discussion [108#53] and summary on EHC
Intended outcome: Resolve issues, Describe Open Issues accurately.
CLOSED

R2-2002182 [AT109e][034][IIOT] EHC Phase 1 summary NR_IIOT-Core — MediaTek Inc. — discussion — Rel-16

⇒ **Noted**

R2-2002296 [AT109e][034][IIOT] EHC Phase 2 summary NR_IIOT-Core — MediaTek Inc. — discussion — Rel-16

⇒ **Noted**

DISCUSSION
P35
- MTK think majority would like to leave this to impl. Two companies think we don't need to compress.
- LG think we cannot mandate compressor behaivor.
- QC are ok now to leave to impl.
- CATT think the length field is dynamic and not compressible. If compressor decides to compress then the CIDs will run out, MTK think we do support CID override.

P36
- Nokia think we should have one reserved bit for extension. Ericsson agrees, at least for 2 byte header. Docomo agrees as well, and think the bit can indicate profile ID. QC as well. Huawei.
- Vivo think also a CID code point could be used.
- MTK and CATT don't want to reserve 1 bit in the one byte header., Huawei think there is no particular problem for the one byte header as the two byte header can be used.
- LG want a single format for 1 byte and 2 byte, could accept a reserved bit, but wonder what it is used for. For profile ID we need more than 1 bit, .

⇒ **If the Ethernet frame header contains a LENGTH field, the header can be sent compressed or uncompressed, no special handling**

⇒ **EHC header only contains Context ID field, format indication bit, and reserved bit(s) if needed. The number of reserved bit(s) are FFS**

Agreements [AT109e][034][IIOT]

⇒ **Each different PCP/DE value combination in a flow across all Q Tags (single or multiple) is associated with a separate context ID.**

⇒ **The ROHC header is located after EHC header (illustrated below).**

⇒ **When a DRB is configured with RoHC and EHC, the sender/compressor behaviour for a non-IP Ethernet packet shall be to bypass ROHC and deliver that packet from EHC compressor to lower layers.**

⇒ **When a DRB is configured with RoHC and EHC, the receiver/decompressor behaviour for a packet that has non-IP Ethertype (after EHC decompression) is to bypass RoHC and deliver the packet directly to higher layers.**

⇒ **For SDAP Control PDU, the EHC header is not generated.**

⇒ **1-bit Indication in EHC header is used for header format differentiation.**

⇒ **CID overwriting mechanism is supported.**

⇒ **Use a NOTE to specify CID overwriting mechanism in the specification.**

⇒ **The compressor can use an "all zeros" context ID to indicate that no context is to be established, when transmitting uncompressed packets.**

⇒ **EHC feedback is transmitted via PDCP Control PDU.**

⇒ **No need to specify how the compressor to determine that a context establishment procedure was unsuccessful.**

⇒ **Configuration of a parameters (e.g. drb-ContinueEHC) indicates whether or not EHC is reset at PDCP re-establishment.**

⇒ **EHC context continue function can be indicated separately for UL and DL, through configuration of parameters, e.g. ul-drb-ContinueEHC and dl-drb-ContinueEHC.**

⇒ **The processing order of the EHC and ROHC is up to UE implementation.**

⇒ **Only the feedback based mechanism is supported for EHC context establishment.**

⇒ **No enhancement needed on the compressor side. The compressor keeps sending full header packets till the first feedback is received and start to transmit the compressed header packets.**

⇒ **No special mechanism is needed on the decompressor side to control the number of feedbacks.**

R2-2000112 Discussion on the processing order of ROHC and EHC CATT discussion NR_IIOT-Core

R2-2000113 Remaining Issues of EHC CATT discussion NR_IIOT-Core

R2-2000432 Further discussion on EHC related issues Huawei, HiSilicon discussion NR_IIOT-Core

R2-2000477 Remaining issues in Ethernet header compression Intel Corporation discussion Rel-16 NR_IIOT-Core

R2-2000494 Remaining issues for EHC vivo discussion R2-1914960

R2-2000726 SDAP control PDU handling in Rel-16 EHC Samsung discussion NR_IIOT R2-1915077

R2-2000792 EHC solution Ericsson discussion NR_IIOT-Core

R2-2000793 EHC padding removal Ericsson discussion NR_IIOT-Core

R2-2000834 EHC absence of Q-Tags and NACK feedback Sony discussion Rel-16 NR_IIOT-Core

R2-2000867 Further Consideration on Ethernet Header Compression China Telecom Corporation Ltd. discussion

R2-2001050 Joint IP and Ethernet Header compression Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-2001051 Ethernet Header compression remaining issues Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-2001229 Remaining issues for EHC in TSC ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core Late

R2-2001287 CR for introducing Ethernet Headere Compression features Huawei,HiSilicon CR Rel-16 38.323 15.6.0 0040 - B NR_IIOT-Core Withdrawn

R2-2001298 Open issues in Ethernet Header Compression Qualcomm Incorporated discussion

R2-2001309 Configuration and Processing Order of ROHC and EHC Futurewei discussion Rel-16 NR_IIOT-Core

R2-2001501 Discussion on EHC feedback LG Electronics Inc. discussion NR_IIOT-Core

R2-2001502 Discussion on performing ROHC and EHC LG Electronics Inc. discussion NR_IIOT-Core

R2-2001521 Discussion on support of the padding removal LG Electronics Inc. discussion NR_IIOT-Core Late

6.7.3 Intra-UE prioritization and multiplexing

Resource conflicts between dynamic grant (DG) and configured grant (CG) PUSCH and conflicts involving multiple CGs. UL data/control and control/control resource collision according to WID.

6.7.3.1 Handling of deprioritized transmissions

Rapporteur guidance: Remaining issues:

- *Usage of the same HARQ process with different CG*
- *Whether processing timeline needs to be considered*
- *Other issues as identified in the e-mail discussions*

Summary Deprioritized transmissions (CATT)

By Web Conf

R2-2000485 Summary on deprioritized transmissions CATT discussion NR_IIOT-Core Late

✉ **[AT109e][035][IIOT] Deprioritized transmissions (CATT)**
Scope: Treat summary on deprioritized transmissions.
Intended outcome: Resolve issues, Describe Open Issues accurately.
CLOSED

R2-2002286 Report of [035][IIOT] Deprioritized transmissions (CATT) CATT
DISCUSSION
P13

- CATT indicate that most companies are ok with this.
- Sony don't understand the technical reasons, for DG it is already supported. Sony think that UEs that don't support auto-retransmission there will be a problem.
- Ericsson think that if we have auto-retransmission then we don't need this. And think the situation of CG and DG is different as DG always use DCI. ZTE agrees with Ericsson.
- Lenovo was originally supporting but are ok to go with majority. Nokia think we can discuss this in a future release
- LG are ok with P13, majority of companies think this is not needed.
- Chair: there seems to be some support, but majority are ok to just rely on auto-retx in this release

Issue 5

- Leonovo think that at least the UE should be allowed to use a subsequent CG resource. CMCC agrees. Ericsson think such situation would be rare. Huawei think that the current text doesn't preclude this. Vivo think current spec means immediate next.

⇒ **Retransmission grants are not reused for new transmissions in Rel-16. No specification changes are required.**

⇒ **When the CG is de-prioritized, it is up to the UE implementation to determine the processing time restriction determining whether the very next CG resource with same HARQ process can be used, or the/a following one, for an autonomous transmission**

Agreements [AT109e][035][IIOT]

⇒ **UE autonomous transmission uses the same HARQ process and the same CG configuration. No change to the current running CR.**

⇒ **A PDU from a de-prioritized DG scheduled for a re-transmission of a de-prioritized CG cannot be autonomously transmitted using the subsequent CG with same HARQ process. No change to the current running CR.**

⇒ ***autonomousReTx* is only configurable per configured grant configuration.**

⇒ **No limit (timer or counter) is specified in Rel-16 on the number of times a MAC PDU is consecutively de-prioritized. No specification changes are required.**

⇒ **No optimization of the *configuredGrantTimer* procedure is foreseen to reduce the delay to the next available CG for autonomous transmission.**

⇒ **No new condition on whether at least some DM-RS symbols associated with the de-prioritized PUSCH have been transmitted is added to trigger/no trigger an autonomous transmission.**

⇒ **No optimization is foreseen to address the issue of a PDCCH scheduling a dynamic retransmission of the deprioritized TB received before the PUSCH used for the autonomous transmission whereas the PUSCH corresponding to the PDCCH occurs after the PUSCH resource for the autonomous transmission**

⇒ **The issue of a type-2 CG configuration change between the de-prioritized CG and the new CG resource for autonomous transmission preventing the de-prioritized PDU to fit the new CG resource will be addressed.**

⇒ **A HARQ process cannot be shared between different CGs.**

⇒ **The issue of a running *configuredGrantTimer* when the HARQ buffer of the corresponding HARQ process is empty is not addressed.**

⇒ **The issue of a LCH mapping restrictions mismatch when rescheduling a dropped CG with new transmission DG (as opposed to re-transmission DG) is not addressed.**

⇒ **Postpone the discussion on the solution addressing autonomous transmission when type-2 CG's configuration changes to the next meeting.**

R2-2000114 Remaining Issues on Autonomous Transmission CATT discussion NR_IIOT-Core
R2-2000495 Discussion on the MAC PDU recovery procedure vivo discussion
R2-2000593 Open Issues on TSC Scheduling Enhancement Apple discussion Rel-16 NR_IIOT-Core
R2-2000698 Left issues on autonomous transmission OPPO discussion Rel-16
R2-2000703 Consideration on CG timer for the deprioritized MAC PDU OPPO discussion Rel-16
R2-2000755 Deprioritized transmissions on configured grants III discussion Rel-16 NR_IIOT-Core
R2-2000794 Handling of de-prioritized MAC PDUs Ericsson discussion NR_IIOT-Core
R2-2000813 Remaining Issues on Autonomous Transmission of Pending MAC PDUs Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-2000825 HARQ retransmissions for deprioritized PDU with empty HARQ buffer Sony discussion Rel-16 NR_IIOT-Core R2-1915228
R2-2000839 Remaining details for autonomous retransmission functionality Lenovo, Motorola Mobility discussion Rel-16 NR_IIOT-Core
R2-2000845 On UL intra-UE prioritisation MediaTek Inc. discussion Rel-16 NR_IIOT-Core
R2-2001028 Consideration on the de-prioritized PDU transmission Lenovo, Motorola Mobility discussion Rel-16
R2-2001033 Remaining issues on Configured Grant Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
R2-2001291 Open issues in autonomous retransmission Qualcomm Incorporated discussion
R2-2001420 Autonomous transmission on different CG configuration LG Electronics Polska discussion Rel-16 NR_IIOT-Core
R2-2001475 Remaining Issues for LCP restrictions CMCC discussion Rel-16 NR_IIOT-Core Revised
R2-2001477 Remaining Issues for Handling of deprioritized transmission CMCC discussion Rel-16 NR_IIOT-Core R2-2001475
R2-2001490 Autonomous Retransmissions of Different CG Configurations and Timeline Restriction Samsung discussion Rel-16 NR_IIOT-Core
R2-2001628 Rescheduling dropped CG when PDU was not generated Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1916233

6.7.3.2 Data Data prioritization and SR Data Prioritization

Rapporteur guidance: Remaining issues:
- *Consideration of MAC CE when doing prioritization*
- *Other issues as identified in the e-mail discussions*

Summary Data Data Prioritization and SR Data Prioritization (Samsung)

By Email and Web Conference

R2-2001488 Summary of Data-Data Prioritization and SR-Data Prioritization Samsung discussion
Rel-16 NR_IIOT-Core Late
=> Revised in R2-2002083

R2-2002083 Summary of Data-Data Prioritization and SR-Data Prioritization Samsung discussion
Rel-16 NR_IIOT-Core Late
DISCUSSION
- QC think 4.2 does'nt work from several aspects
- LG think L1 priority is completely different from MAC priority

⇒ **We follow P5**

✉ **[AT109e][036][IIOT] Data Data and Data SR prioritization (Samsung)**
Scope: Treat summary on Data Data and Data SR prioritization.
Intended outcome: Resolve issues, Describe Open Issues accurately.
CLOSED

R2-2002190 Report of [Offline-036][IIOT] Data Data and Data SR prioritization Samsung discussion
Rel-16 NR_IIOT-Core

⇒ **Noted**

DISCUSSION 5/5b
- QC think there is no need for an LS, and think R2 should look for solutions. LG agrees and think the TS is clear.
- MTK think L1 behaviour is clear, and we don't need to ask R1. The issue look academic. IDT also think no LS is needed.
- CATT think pre-emption is not completely decided in R1 and R1 need an LS, Oppo think we should indicate our agreement/observation. ZTE think we need to ask R1.

⇒ **Observation, acc to current R2 agreements: In case that two MAC PDUs with the same L1 priority (i.e. high-high or low-low) are delivered by MAC, the second PDU has priority from RAN2 perspective (based on LCH priority).**

Agreements [AT109e][036][IIOT]

⇒ **RAN2 confirms to introduce *lch-basedPrioritization* (configuration parameter of intra-UE prioritization based on LCH priority) in MAC running CR.**

⇒ **RAN2 confirms that UE can perform autonomous transmission of the de-prioritized configured uplink grant by the prioritized SR transmission.**

⇒ **An uplink grant addressed to CS-RNTI with NDI=1 (retransmission of CG) is a dynamic grant in prioritization.**

⇒ **An uplink grant addressed to CS-RNTI with NDI=0 ((re-)activation of type 2 CG) is a configured grant in prioritization.**

⇒ **RAN2 confirms the current MAC running CR already captures that CG with *configuredGrantTimer* running is not considered in prioritization.**

⇒ **An uplink grant is not de-prioritized by other de-prioritized SR or uplink grant. TP in Phase-2 discussion is a baseline.**

R2-2000115 Remaining issues for intra-UE multiplexing and prioritization CATT discussion NR_IIOT-Core
R2-2000116 MAC CE priorities and LCP mapping restrictions CATT discussion NR_IIOT-Core
R2-2000486 Avoiding unnecessary preemption among eMBB traffic CATT discussion NR_IIOT-Core R2-1914411
R2-2000496 Intra-UE Prioritization with CA vivo discussion
R2-2000497 Remaining issues for SR and PUSCH collision vivo discussion
R2-2000701 Grant collision with the same HARQ process OPPO discussion Rel-16
R2-2000702 Discussion on SR cancelling on intra-UE prioritization involving SR OPPO discussion Rel-16
R2-2000722 Consideration of configured grant timer for Intra-UE prioritization Asia Pacific Telecom co. Ltd discussion
R2-2000795 On PHY and MAC interaction to support intra-UE prioritization Ericsson discussion NR_IIOT-Core
R2-2000796 Draft LS on PHY and MAC interaction to support intra-UE prioritization Ericsson LS out NR_IIOT-Core To:RAN1
R2-2000797 Remaining details of intra-UE prioritization Ericsson discussion NR_IIOT-Core
R2-2000814 Intra-UE Prioritization for conflicts with existing MAC PDU Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-2000815 Intra-UE Prioritization Considering MAC CEs and Configured Grant Timer Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-2001010 HARQ process collision between CG and DG Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
R2-2001011 Prioritization issues for MAC CEs and PUSCH Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
R2-2001029 L1-priority applies for CG Lenovo, Motorola Mobility discussion Rel-16
R2-2001101 Handling of dropped SRs InterDigital discussion Rel-16 NR_IIOT-Core
R2-2001289 Open issues in Intra-UE prioritization Qualcomm Incorporated discussion
R2-2001431 The handling of de-prioritized CG due to SR transmission LG Electronics Polska discussion Rel-16 NR_IIOT-Core
R2-2001434 CS-RNTI ambiguity in IIoTLG Electronics Polska discussion Rel-16 NR_IIOT-Core
R2-2001457 Remainiing issues on intra-UE multiplexing ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core
R2-2001458 Consideration on HARQ Conflict Between Configured Grant and Dynamic Grant ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core
R2-2001459 Consideration on the multiplexing between BSR MAC CE and URLLC data ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core
R2-2001492 UL-SCH Resource De-prioritization by Deprioritized SR Samsung discussion Rel-16 NR_IIOT-Core
R2-2001494 Condition of Priority Value Determination Samsung discussion Rel-16 NR_IIOT-Core
R2-2001495 Transmission of Deprioritized Data by Retransmission Grant Samsung discussion Rel-16 NR_IIOT-Core
R2-2001496 lch-basedPrioritization and MAC CE Priority Samsung discussion Rel-16 NR_IIOT-Core
R2-2001497 Prioritization of SR Transmission Samsung discussion Rel-16 NR_IIOT-Core
R2-2001557 Priority determination considering MAC CE LG Electronics Inc. discussion Rel-16 NR_IIOT-Core
R2-2001597 Additional prioritization for configured uplink grant ASUSTeK discussion Rel-16 NR_IIOT-Core

R2-2001598 Handling UL grant prioritization with non-overlapping PUSCH duration discussion Rel-16 NR_IIOT-Core ASUSTeK

6.7.3.4 Other

R2-2000700 Intra-UE prioritization between multiple SRs OPPO discussion Rel-16

R2-2001566 Measurement gap skipping for TSN traffic LG Electronics Inc. discussion Rel-16 NR_IIOT-Core R2-1915919

6.7.4 PDCP duplication enhancements

Network Controlled duplication. PDCP duplication with up to 4 RLC entities configured by RRC. Mechanisms or enhancements relating to dynamic control of how a set or subset of configured RLC entities or legs are used for PDCP duplication, duplication activation/deactivation.

Rapporteur guidance: Remaining issues:

- *Rel-15 and Rel-16 duplication MAC CEs utilization*
- *Duplicated PDU discarding upon RLC entity deactivation*
- *Other issues as identified in the e-mail discussions*

Summary PDCP duplication Enhancements (LG)

By Email and Web Conf

R2-2001286 Summary of PDCP duplication enhancements LG Electronics Inc. report Rel-16 NR_IIOT-Core Late

✉ **[AT109e][037][IIOT] PDCP Duplication Enhancements (LG)**
Scope: Treat summary on PDCP Duplication Enhancements.
Intended outcome: Resolve issues, Describe Open Issues accurately.
CLOSED

R2-2002171 Summary of [AT109e][037][IIOT] PDCP Duplication EnhancementsLG Electronics Inc. report Rel-16 NR_IIOT-Core

⇒ **Noted**

Agreements [AT109e][037][IIOT]

⇒ **Rel-16 PDCP duplication is applied to SRBs.**

⇒ **For SRBs, all secondary RLC entities are activated when configured.**

⇒ **MAC CE based activation/deactivation of PDCP duplication is not supported for SRBs.**

⇒ **When a secondary RLC entity is deactivated (but PDCP duplication is still activated), the UE shall discard duplicated PDCP PDUs in the deactivated secondary RLC entity.**

⇒ **If Rel-16 MAC CE indicates all secondary RLC entities are deactivated for a DRB, the UE shall deactivate PDCP duplication for the DRB. FFS whether and how this has TS impact.**

⇒ **DRBdup ID in Rel-16 MAC CE is set to 5bits full DRB ID.**

⇒ **FFS if and how Rel-15 MAC CE is used for Rel-16 Duplication**

R2-2000117 Discussion on the Rel-15 Duplication MAC CE CATT, Sharp discussion NR_IIOT-Core

R2-2000118 On the Open Issues of PDCP Duplication CATT discussion NR_IIOT-Core

R2-2000119 LCH-to-Cell Restriction in Rel-16 CATT discussion NR_IIOT-Core R2-1914418

R2-2000498 Reusing legacy MAC CE for multi-leg PDCP duplication vivo discussion

R2-2000499 Discussion on LCID restriction vivo discussion R2-1914961

R2-2000565 Discussion on configured selective PDCP duplication mechanism Spreadtrum Communications discussion R2-1915019
R2-2000597 Open Items for usage of R15 MAC CE for PDCP Duplication Apple discussion Rel-16 NR_IIOT-Core
R2-2000704 Cell restriction for PDCP duplication in IIoT OPPO discussion Rel-16
R2-2000775 MAC CE for duplication per UE or per MAC entity Fujitsu discussion Rel-16 NR_IIOT-Core
R2-2000776 R15 MAC CE duplication on/off for R16 duplication on/off Fujitsu discussion Rel-16 NR_IIOT-Core
R2-2000798 Remaining issues related to MAC CEs for PDCP duplication Ericsson discussion NR_IIOT-Core
R2-2000816 On MAC CEs for PDCP Duplication Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-2000817 PDCP Duplication for SRB in Rel-16 Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-2000818 PDCP PDU Discarding by Secondary RLC entities Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-2000868 Discussion on MAC CE for PDCP Duplication China Telecom Corporation Ltd. discussion
R2-2000929 To discard duplicate PDUs for the RLCs deactivated for PDCP duplication Sharp, CATT discussion
R2-2000940 CR for discarding duplicate PDUs for the RLCs deactivated for PDCP duplication Sharp draftCR Rel-16 38.323 15.6.0 NR_IIOT
R2-2001012 Discussion on PDCP duplication activation/deactivation Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
R2-2001013 Remaining issues of cell restriction for PDCP duplication Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
R2-2001030 Reuse R15 MAC CE on/off for R16 configurations Lenovo, Motorola Mobility discussion Rel-16
R2-2001172 Remaining issues in PDCP duplication enhancements Intel Corporation discussion Rel-16 NR_IIOT-Core
R2-2001283 Issues on Duplicate PDU discard LG Electronics Inc. discussion Rel-16 NR_IIOT-Core
R2-2001284 Issues on Duplication Activation-Deactivation MAC CE LG Electronics Inc. discussion Rel-16 NR_IIOT-Core
R2-2001288 Open issues in PDCP duplication enhancements Qualcomm Incorporated discussion
R2-2001460 Discussion on UE based PDCP dupllication activation/deactivation ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core
R2-2001462 Remaining issues on PDPC duplication enhancement ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core
R2-2001491 Remaining Issues of PDCP Duplication for IIOT Samsung discussion Rel-16 NR_IIOT-Core

6.8 NR Positioning Support

(NR_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191156). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

6.8.1 Organisational

Including incoming LSs, rapporteur inputs, etc. Note running CRs will be treated under the corresponding agenda items.
LSs will only be treated if flagged by the contact companies. LSs not flagged will be automatically noted.

The following LS(s) will be treated in the first session the week of February 24

R2-2000010 LS on agreements related to NR Positioning (R1-1913522; contact: Nokia) RAN1 LS in Rel-16 NR_pos To:RAN2, RAN3, RAN4
Huawei wonder if the SMTC is configured by LMF or gNB. Intel understand that the configuration comes from the gNB; Ericsson agree.
Intel think the LMF could still provide the SMTC. Nokia understand that it is an open issue. Intel confirm it is captured as an open issue in the stage 3.
Offline discussion to draft a reply LS if needed, pending resolution of the open issue in the stage 3 discussion.

✉ **[AT109e][609][POS] Reply LS to R2-2000010 (Nokia)**
Intended outcome: Agreeable draft LS in R2-2001933
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001933 Draft reply LS on agreements related to NR Positioning Nokia LS out Rel-16 NR_pos To:RAN1 Cc: RAN3, RAN4
Nokia think this may not be critical to send.
Huawei have some concerns about how the SMTC will be managed between one or more gNBs and the LMF, and how the timing will be determined by the LMF.
Nokia think this is a somewhat fundamental question about the validity of the RAN1 WA.
⇨ No LS sent at this time.

The following LS(s) will not be treated

R2-2000033 LS on DL-AOD procedure (R3-197794; contact: Huawei) RAN1 LS in Rel-16 NR_pos-Core To:RAN2
⇨ Noted without presentation

R2-2000038 Response LS on Reference Point for Timing Related Measurements in FR2 (R4-1915801; contact: CATT, Ericsson) RAN4 LS in Rel-16 NR_pos-Core To:RAN1 Cc:RAN2, RAN3
⇨ Noted without presentation

6.8.2 Architecture and protocol aspects

6.8.2.1 Stage 2

Including impact to 36.305 and 38.305. This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on submitted tdocs).
Including outcome of the email discussion [108#84][NR/Pos] Running stage 2 CR on positioning (Intel)
Summary document to be provided by Huawei

Running CRs

The following running CRs will be treated in the first session the week of February 24

R2-2001080 Stage 2 CR for the introduction of SSR positioning support into LTE Intel Corporation, ESA CR Rel-16 36.305 15.4.0 0085 - B NR_pos-Core
⇨ Revised in R2-2002111

R2-2002111 CR for the introduction of SSR positioning support into LTE Intel Corporation, ESA CR Rel-16 36.305 15.4.0 0085 1 B NR_pos-Core
⇨ Agreed

R2-2000473 Running stage 2 CR on NR positioning ([108#84][NR Pos]) Intel Corporation, ESA CR Rel-16 38.305 15.5.0 0017 - B NR_pos-Core
Intel clarify there are still open issues to be resolved from this meeting.

✉ **[AT109e][610][POS] Revision of running CR to 38.305 (Intel)**
Intended outcome: Agreeable CR taking into account decisions of this meeting, in R2-2001934
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001934 Running stage 2 CR on NR positioning ([108#84][NR Pos]) Intel Corporation, ESA CR Rel-16 38.305 15.5.0 0017 1 B NR_pos-Core

✉ **[AT109e][625][POS] Final check of running CR to 38.305 (Intel)**
Intended outcome: Agreed CR in R2-2002241
Deadline: Friday 2020-03-06 1200 CET

R2-2002241 Running stage 2 CR on NR positioning ([108#84][NR Pos]) Intel Corporation, ESA CR Rel-16 38.305 15.5.0 0017 2 B NR_pos-Core
=> Coversheet update by MCC: Improved title
=> Revised in R2-2002399

R2-2002399 Introduction of NR positioning Intel Corporation, ESA CR Rel-16 38.305 15.5.0 0017 3 B NR_pos-Core
=> Agreed

Summary document
The following summary document will be treated the week of February 24
R2-2001931 Summary on the Stage-2 Aspects of R16 Positioning Huawei, HiSilicon, Intel Corporation discussion Rel-16 NR_pos-Core

ProposalToDisc1: RAN2 should discuss whether R15 SRS can be supported for R16 multi-RTT positioning.
Qualcomm understand that RAN1 have not agreed on this, but if they do later, it should be easy to incorporate. Not in RAN2 scope to decide.
Ericsson agree it would be easy to incorporate and point out the reporting would be over NRPPa since it affects the gNB Rx-Tx measurement.
CATT agree with Qualcomm.
We will wait for input from RAN1 on this point.

ProposalToDisc2: RAN 2 should discuss whether Semi-persistent SRS for positioning is supported.
- If Semi-persistent SRS for positioning is needed, an email discussion for the design of activation/deactivation MAC CE is needed.

ProposalToDisc3: RAN2 should discuss whether aperiodic SRS for positioning can be supported.
Qualcomm think there is no big signalling difference between the aperiodic and SP cases.
Huawei think the difference between SP and aperiodic is the need to design a new MAC CE for SP; for aperiodic nothing new is needed.
CATT support the use of SP but agree the new MAC CE will be a lot of effort.
Intel understand that if aperiodic is used for intra-node cases there is no extra impact ,but to use it between nodes we need an extra trigger.
vivo understand that RAN1 agree to support both cases.
Ericsson do not see a strong need for both SP and aperiodic and are fine to postpone these cases to Rel-17. They don't think QC's proposal for the MAC CE design is desirable in its current form and see some complexity from the design. They also understand that the RAN1 support for aperiodic is contingent on discussion in RAN2/3.

Agreement:
Support semi-persistent SRS for positioning.

ProposalToDisc4: RAN2 to discuss on the following aspects
- whether the gNB or the LMF triggers the decision of non-periodic SRS activation/deactivation.
- whether the delay for NRPPa signalling is considered as an issue for non-periodic SRS activation/deactivation
- whether NRPPa message MEASUREMENT REQUEST can convey the non-periodic SRS configuration

✉ **[AT109e][611][POS] Support of non-periodic SRS cases (Huawei)**
Intended outcome: Summary of agreements on support of aperiodic SRS including triggering by gNB or LMF, and progress towards design of a MAC CE for SP activation/deactivation. Summary in R2-2001935.
Deadline: Wednesday 2020-03-04 1300 CET

ProposalToDisc5: RAN2 should discuss
- whether spatial relation is determined by gNB or recommended by LMF
- whether Xn exchange of PRS configuration is needed
- whether gNB should be allowed to retrieve measurements from the UE for the purpose of spatial relation setup

Qualcomm understand that since the AD are provided by the LMF for DL-only positioning and UL+DL, the LMF needs to know about the spatial relation. Intel think for the gNB to make the decision on the spatial relation, it would need all the configuration information from neighbour cells, and it may be easier to have the LMF take the decision. vivo think for the UL case it should be determined by the gNB, since the gNB has the measurement information to determine the spatial relationship; but they are fine to have it determined by LMF for DL and UL+DL.

Ericsson think the SSB configuration itself could be provided by RRC, with indices to indicate the spatial relation in the AD, for DL-only.

Huawei think the spatial relation should be determined by the LMF because it has the neighbouring cell information. Qualcomm agree and think the serving gNB cannot make this decision. Intel and CATT also agree.

Ericsson think the gNB is already doing the UL-DL alignment for the serving cell. For DL-only it would be OK for them to have the configuration from the LMF, but for the cases with uplink involved they see it as easier for the gNB to configure, with coordination over Xn.

Intel think we should have one solution covering DL and UL. For DL the LMF makes sense and we should align to this solution.

vivo think the RRM information available in the gNB can help determine the spatial relationship.

Ericsson are not sure of the value of having one solution. They wonder if there would be additional delay for coordinating between the gNB and the LMF in multi-cell RTT.

Huawei think the recommendation can be from the LMF with the final decision in the gNB using its own RRM measurements.

CATT agree that for DL-only the LMF should configure the spatial relationship, and in the UL-involved cases the LMF has better insight into the neighbour cells and should also configure the spatial relationship. Coordination over Xn may not always be possible in real networks.

QC understand we agreed last meeting that for multi-RTT, all the AD are provided by the LMF. They don't see a need to distinguish positioning methods in this respect, and they agree with CATT about the potential unavailability of Xn coordination.

Ericsson see that the SSB configuration will come from the gNB, and the AD from LMF can just use indices to indicate which SSB is referred to, to avoid duplicating the SSB information on two interfaces.

✉ **[AT109e][612][POS] Spatial relationship configuration (Huawei)**
Intended outcome: Summary of agreements on how the spatial relationship is determined for UL-involved cases and how SSB configuration is signalled. Summary in R2-2001936.
Deadline: Wednesday 2020-03-04 1300 CET

ProposalToDisc6:RAN2 should clarify whether R16 positioning methods can be based on LTE signals.

CATT understand based on the LS from RAN1 that only E-CID uses Rel-15 signals and other methods use Rel-16 signals only. Qualcomm have the same view.

Nokia point out we have positioning with LTE signals in Rel-15.

Qualcomm understand that RAN1 did not agree to any support of inter-RAT signals.

Agreement:
There is no support of Rel-16 NR RAT-dependent positioning methods with LTE signals.

ProposalToDisc7: RAN2 should discuss whether SUPL can be supported for R16 positioning methods.

Qualcomm understand that this would need to be discussed in OMA and we can't take a decision here. Nokia agree. CATT agree that OMA should make the decision but wonder if we should send an LS to OMA to tell them to take the new version of LPP into account. Chair thinks we should wait until we have a stable spec for such an LS.

Intel suggest we mark it as unsupported rather than TBD, until OMA take a decision.

CATT think we would also need to inform OMA of the spec numbering change. Intel think they should know this. Nokia point out that 36.355 points to 37.355.

Agreement:
SUPL will be marked as not supported (can be revisited if OMA take some action).

ProposalToDisc8:RAN2 should discuss whether UL PRS-RSRP and DL-PRS RSRP should be optionally reported for UL-TDOA and DL-TDOA and whether both should be optionally reported for multi-RTT.

To be discussed as part of the stage 3 topics.

Furthermore, the following issues seem agreeable for most companies and RAN2 should confirm on them.
ProposalToConf1: RAN2 should confirm that uplink E-CID is also supported.

CATT understand that per RAN1, UL E-CID is not required.

QC understand that there is no RAN2 impact. Intel agree and understand that it is also out of RAN1 scope.

Huawei observe that RAN3 has no agreements or discussion on this, but they think there is no blocking issue for us to support it and we could take the decision and let RAN3 add the measurements. Intel think we cannot take this decision without RAN1 guidance.

No action on this point.

R2-2001935 Summary of offline discussion #611 on non-periodic SRS for positioning Huawei, HiSilicon discussion Rel-16 NR_pos-Core

R2-2002330 Running CR for the introduction of NR positioning on MAC spec Huawei, HiSilicon draftCR 38.321 Rel-16 15.8.0 B NR_pos-Core

- ✉ **[109e#xx][NR/Pos] Non-periodic SRS for positioning (Huawei)**
  Discuss the proposals from R2-2001935.
  Intended outcome: Summary for next meeting
  Deadline: Long

- ✉ **[AT109e][628][POS] MAC CE design for activation/deactivation of SP SRS for positioning (Huawei)**
  Intended outcome: Agreed CR in R2-2002246, based on R2-2002330
  Deadline: Friday 2020-03-06 1200 CET

R2-2002246 Running CR for the introduction of NR positioning on MAC spec Huawei, HiSilicon CR Rel-16 38.321 15.8.0 0704 - B NR_pos-Core
=> Coversheet update by MCC: Improved title + spec number format
=> Revised in R2-2002400

R2-2002400 Introduction of NR positioning on MAC spec Huawei, HiSilicon CR Rel-16 38.321 15.8.0 0704 1 B NR_pos-Core
=> Agreed

R2-2001936 Summary of offline discussion #612 on spatial relationship for positioning Huawei, HiSilicon discussion Rel-16 NR_pos-Core

- ✉ **[109e#xx][NR/Pos] Details of spatial relation for positioning (Huawei)**
  Continue the discussion from R2-2001936 and resolve open issues.
  Intended outcome: Summary for next meeting
  Deadline: Long

Non-periodic SRS

The following documents will not be individually treated

R2-2000513 Discussion on non-periodic SRS resource for positioning ZTE Corporation discussion Rel-16 NR_pos-Core

R2-2000967 Remaining issues on SRS configuration Huawei, HiSilicon discussion Rel-16 NR_pos-Core

R2-2001214 Semi-persistent and aperiodic SRS-for-positioning Qualcomm Incorporated discussion Rel-16 NR_pos-Core

R2-2001237 Spatial Relations and MAC CE Ericsson discussion Rel-16

After final session: It was raised from RAN1 that there are RAN1 agreements that should be captured in TS 38.300, thus the following discussion is launched to capture them in a CR:

✉ **[AT109e][629][POS] 38.300 CR for RAN1 agreements (Intel)**
Intended outcome: Agreed CR in R2-2001960
Deadline: Friday 2020-03-06 1200 CET

R2-2001960 RAN1 stage 2 agreements related to positioning Intel Corporation CR Rel-16 38.300 16.0.0 xxxx - B NR_pos-Core
=> Agreed

6.8.2.2 RRC

Including impact to 36.331 and 38.331. This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting.

Including outcome of the email discussion [108#41][NR/Pos] Running CR to 38.331 on positioning (Ericsson)

Summary document to be provided by the CR rapporteur (Ericsson)

Running CRs

The following running CRs will be treated in the first session the week of February 24

R2-2001216 Introduction of PPP-RTK (SSR) Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4215 - B NR_pos-Core
posSIB numbers need to be aligned to 37.355.
Qualcomm clarify the numbers are aligned with the outcome of discussion 601.
⇨ Agreed

✉ **[AT109e][613][POS] PPP-RTK CR to 36.331 (Qualcomm)**
Intended outcome: Agreeable CR in R2-2001937
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001937 Introduction of PPP-RTK (SSR) Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4215 1 B NR_pos-Core
⇨ Not provided (no revision to R2-2001216 is needed)

R2-2001333 Running CR for the introduction of NR positioning Ericsson draftCR Rel-16 38.331 15.8.0 B NR_pos-Core
⇨ Revised in R2-2002112

R2-2002112 Running CR for the introduction of NR positioning Ericsson draftCR Rel-16 38.331 15.8.0 B NR_pos-Core
Qualcomm do not understand the need for the “type 2 SRS” terminology and think we need to distinguish the Rel-15 and Rel-16 spatial relations more clearly. Apple have the same concern and think it would be better to implement a new SRS configuration IE for this purpose. Nokia also agree on the terminology issue.

✉ **[AT109e][614][POS] Running CR to 38.331 on positioning (Ericsson)**
Intended outcome: Agreeable CR in R2-2001938
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001938 Running CR for the introduction of NR positioning Ericsson discussion Rel-16 38.331 15.8.0 B NR_pos-Core

PROPOSAL 1 THE CURRENT NAME COMPRISING OF TYPE2 SHALL BE CHANGED TO REFLECT "POS". USE BASELINE AS PER RRC RAPPORTEUR SUGGESTION BELOW.

```
srs-ResourcePosSetToAddModList-r16
srs-ResourcePosToReleaseList-r16
srs-ResourcePosToReleaseList-r16
srs-ResourcePosToAddModList-r16

SRS-ResourcePosSetId-r16
SRS-ResourcePosId-r16
SRS-ResourcePos-r16
SRS-ResourcePosSet-r16

maxNrofSRS-ResourcePosSets
maxNrofSRS-ResourcesPos
```

Nokia would prefer "SRS-Pos" or "Pos-r16". Apple also prefer "SRS-Pos". vivo think we should align with the terminology in 38.214: SRS-positioning-config. LG think "SRS-Pos" is good, and wonder if we could separate SRS-Config from SRS-PosConfig.
Ericsson think adding the positioning to SRS-Config is in line with how we normally do extensions.
Names to be changed to "SRS-Pos" rather than "SRS-ResourcePos".
CR to be checked in discussion 626.

✉ **[AT109e][626][POS] Final check of running CR to 38.331 (Ericsson)**
Intended outcome: Agreed CR in R2-2002242
Deadline: Friday 2020-03-06 1200 CET

R2-2002242 Running CR for the introduction of NR positioning Ericsson CR Rel-16 38.331 15.8.0 1504 - B NR_pos-Core
=> Revised in R2-2002247

R2-2002247 Running CR for the introduction of NR positioning Ericsson CR Rel-16 38.331 15.8.0 1504 1 B NR_pos-Core
=> Coversheet update by MCC: Improved title, WI code: NR_pos-Core
=> Revised in R2-2002401

R2-2002401 Introduction of NR positioning Ericsson CR Rel-16 38.331 15.8.0 1504 2 B NR_pos-Core
=> Agreed

R2-2001255 Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED for Positioning Ericsson draftCR Rel-16 38.331 15.8.0 NR_pos
⇨ Noted (considered in the broadcast agenda item)

Summary document
The following summary document will be treated the week of February 24
R2-2002052 Summary for Positioning RRC running CR Ericsson discussion Rel-16 NR_pos-Core

Proposal 5 Gap pattern should be included in LocationMeasurementInfo field.

Qualcomm understand this will come from RAN4 and we can't decide it here. Nokia wonder if there was a request from RAN1 or RAN4. Intel have the same question. Qualcomm understand that RAN1 agreed the UE can request measurement gaps and RAN4 will decide the pattern.
Noted (wait for RAN4)

SRS

The following documents will not be individually treated

R2-2000243 UL SRS UE capabilities captured by RRC in TS 38.331. CATT discussion Rel-16 NR_pos-Core

R2-2001228 Introduction of NR positioning Qualcomm Incorporated CR Rel-16 38.321 15.8.0 0693 - B NR_pos-Core

Other documents

The following document will not be individually treated

R2-2000968 Discussion on GAP request for RSTD measurement Huawei, HiSilicon discussion Rel-16 NR_pos-Core

6.8.2.3 LPP

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting.
Including outcome of the email discussion [108#85][NR/Pos] Running CR to 36.355 (Intel)
Including outcome of the email discussion [108#86][NR/Pos] Single positioning method approach in LPP (Ericsson)
Including outcome of the email discussion [108#87][NR/Pos] Additional path reporting (Ericsson)
Summary document to be provided by the CR rapporteur (Intel)
Running CRs

The following running CRs will be treated the week of February 24

R2-2001168 Introduction of Rel-16 NR positioning Intel Corporation CR Rel-16 37.355 15.0.0 0250 - B NR_pos-Core Late
⇨ Not provided (replaced by R2-2001942)

R2-2000474 LPP CR Capturing RAN1 parameters for positioning ([108#85][NR Pos]) Intel Corporation draftCR Rel-16 37.355 15.0.0 NR_pos-Core R2-1914728
Intel clarify the CR needs to be updated, including merge of PPP-RTK and UE-based positioning.

✉ **[AT109e][615][POS] Update RAN1 parameters part of 37.355 CR (Intel)**
Intended outcome: Agreeable draft CR that can be merged with the other running CRs.
Updated draft CR in R2-2001941, report in R2-2001959.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001941 LPP CR Capturing RAN1 parameters for positioning ([108#85][NR Pos]) Intel Corporation draftCR Rel-16 37.355 15.0.0 NR_pos-Core R2-2000474
⇨ Endorsed to be merged into the LPP CR

R2-2001959 Report of [AT109e][615][POS] Update RAN1 parameters part of 37.355 CR (Intel) Intel Corporation discussion Rel-16

Agreements:
Beam level measurement results as in Rel-15 are added in NR ECID method.
The ProvideAssistanceData in running CR[2] can be upgraded as below.
- The required physical resources are put in:
- nr-DL-PRS-ProvideAssistanceData-r16 (nr-DL-PRS-AssistanceDataList-r16,

nr-SSB-Config-r16)
- The selected physical resources index for some positioning method are put in:
- nr-Multi-RTT-ProvideAssistanceData-r16
- nr-DL-AoD-ProvideAssistanceData-r16
- nr-DL-TDOA-ProvideAssistanceData-r16

Non-critical extension is used in message body to capture Rel-16 NR dependent positioning methods, and prefix "nr" is used to distinguish LTE and NR. The EN is removed;
Common NR positioning IEs are captured in section 6 as new sub-clause. NR-PhysCellId is moved to section 6.4.1.
Do not group report configuration, indicate requested measurement per positioning method.
UL SRS/DL PRS RSRP measurements is optional for multi-RTT.

Huawei think the beam level measurements should not be based on PRS. Intel think we followed Rel-15.

Qualcomm think the subsections of Common NR Positioning IEs are not needed.

✉ **[AT109e][616][POS] 37.355 running CR merge (Intel)**
Intended outcome: Agreeable updated CR in R2-2001942
Deadline: Thursday 2020-03-05 1200 CET

R2-2001942 Introduction of Rel-16 NR positioning Intel Corporation CR Rel-16 37.355 15.0.0 0250 1 B NR_pos-Core
⇨ Not provided (replaced by R2-2002243)

✉ **[AT109e][627][POS] Final check of running CR to 37.355 (Intel)**
Intended outcome: Agreed CR in R2-2002243
Deadline: Friday 2020-03-06 1200 CET

R2-2002243 Introduction of NR positioning Intel Corporation CR Rel-16 37.355 15.0.0 0250 2 B NR_pos-Core
=> Agreed

R2-2001230 Introduction of PPP-RTK (SSR) Qualcomm Incorporated CR Rel-16 37.355 15.0.0 0251 - B NR_pos-Core
⇨ Endorsed for merging into the 37.355 running CR

Email discussions
The following email discussion summaries will be treated the week of February 24

R2-2001279 Summary of [108#86][NR/Pos] Single positioning method approach in LPP Rel-16 Ericsson report
⇨ Revised in R2-2002115

R2-2002115 Summary of [108#86][NR/Pos] Single positioning method approach in LPP Rel-16 Ericsson report
Nokia consider that we have given a lot of review time to the CR with independent methods, and think the selection is somewhat a matter of preference. Considering the time they would prefer that we stick to the current running CR.
Qualcomm think it is not a matter of preference and the single method would restrict the functionality. In their understanding everyone agrees that multiple methods can work without issues.
Ericsson think the bulk of the time spent is on the representation of the PRS which is not affected by the single method proposal, so there isn't a big time cost. They think we have used a mapping of methods to signals in LTE (e.g. OTDOA corresponds to PRS) and this is similar, so there is some precedent for this approach. Since multi-RTT and DL-TDOA use the same signals it makes sense to group them.

Huawei generally agree with Nokia and Qualcomm and think there are a lot of details to be resolved, e.g. RSRP may be reported differently for different positioning methods, so the "single method" cannot be truly agnostic to the positioning method. They also feel we can be sure the multiple methods will work and prefer to keep the current CR.
CATT agree with Huawei that different methods can use different configurations and think it does not work well to combine all the methods.

✉ **[AT109e][617][POS] Single positioning method (Ericsson)**
Intended outcome: Summary of discussion and potential agreements. Summary in R2-2001943.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001943 Summary of [AT109e][617][POS] Single positioning method Ericsson report Rel-16
⇨ Postponed

R2-2000475 UE capability on positioning ([108#85][NR Pos]) Intel Corporation discussion Rel-16 37.355 NR_pos-Core

Agreements:
For RAT dependent positioning method, introduce following RAN2 related NR positioning capabilities as a baseline:
DL-TDOA, DL-AoD: positioning mode (UE based or UE assisted);
DL-TDOA, DL-AoD, NR E-CID, Multi-RTT: Support of periodical Reporting;
NR ECID: Support of triggered Reporting;

Nokia generally agree with the proposal but think there could be other capabilities and we could take more time for a final decision, considering that we expect to hear from RAN1.
Intel understand that RAN1 have not discussed yet, and this proposal is in line with the current running CR.

Proposal 2. For RAT dependent positioning method, ask RAN2 to confirm the need of "supported freqs list";

CATT think the frequency list is needed. Qualcomm think something like this will be needed but it may not be the same as LTE, and we need RAN1 input. Nokia think we should wait to understand the need. CATT think RAN2 need to confirm the frequency list information with RAN4.
Intel understand the LMF needs to know this to provide appropriate AD. They agree it may not be the same as LTE, but think we may not get the needed information from RAN1.
Huawei generally agree with the proposal but think it should be a band list instead of a frequency list. Also wonder if we should discuss gNB capability. Intel think there could be some capability information in NRPPa to let the LMF know the gNB capability, but it should be discussed in RAN3.
Nokia think the use case needs to be understood.

✉ **[AT109e][618][POS] Supported frequency/band list (Intel)**
Intended outcome: Summary of agreements on use cases, band vs. frequency list, and what is needed to provide to the LMF. Summary in R2-2001944.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001944 Summary of [AT109e][618][POS] Supported frequency/band list Intel discussion Rel-16
⇨ Postponed

R2-2001243 Summary of [108#87][NR/Rel-16] Additional path reporting Ericsson discussion Rel-16
=> Revised in R2-2001659

R2-2001659 Summary of [108#87][NR/Rel-16] Additional path reporting Ericsson discussion Rel-16

Agreements:
Add support for additional path reporting to LPP for timing-based measurements, similar to LTE.
Recommend RAN3 to support timing-based additional path reporting in NRPPa.

CATT support P1 but think the NRPPa aspect could be postponed to Rel17 to allow time for RAN1 to decide.
Qualcomm think both P1 and P2 should specify the same approach as LTE, and only for timing-based methods. Intel agree.
Huawei think if we support additional DL paths there is no reason not to support additional UL paths, because the situation is completely symmetric.
vivo are OK with the proposals but think in LTE we only report one RSTD per TRP pair, and here we should consider the overhead and report deltas for the additional paths.
Ericsson agree with Qualcomm that it is only for timing-based methods. They think the number of paths needs to be determined and could differ from LTE. On vivo's comment, they clarify that deltas are already proposed in the TP.
Huawei think P1 could also apply to DL-AoD which is not timing-based. Nokia understood that there was agreement to do this for the timing-based measurements (only). Huawei think the understanding is clear that the proposal refers to measurements at different timing instants. Qualcomm think it is rather about detecting separate peaks at the time of measurement, which doesn't work for RSRP, so it has to apply to timing-based measurements. Intel agree.
Huawei think angular measurements could also be included. Qualcomm are not sure how this would work since there is no time dimension in the angular measurement. Nokia have the same question and wonder if Huawei's question applies to DL or just UL. Huawei clarify they are thinking only of UL; the transmission may arrive at the gNB with different AoA. Qualcomm think this would be multiple measurements, not additional paths. Intel have the same view.

✉ **[AT109e][619][POS] Draft LS to RAN3 on uplink additional path reporting (Ericsson)**
Intended outcome: LS recommending to RAN3 that they include additional path reporting in NRPPa. Draft LS in R2-2001945.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001945 Draft LS on uplink additional path reporting Ericsson LS out Rel-16 NR_pos
To:RAN3
"Up to FFS paths" needs to be replaced by "up to 2 paths".
⇨ Approved with this change in R2-2992244

✉ **[AT109e][620][POS] Text proposal for merge into 37.355 CR (Ericsson)**
Intended outcome: Agreeable TP in R2-2001946, to be merged into 37.355, including number of additional paths.
Deadline: Wednesday 2020-03-04 1300 CET

The following items can be subject for discussions at RAN2 #109-eletronic
- FFS if relative path strength is to be included
- FFS if strongest path indication among reported can be considered.

R2-2001946 Text proposal on additional path reporting Ericsson draftCR Rel-16 37.355 15.0.0 B NR_pos-Core
Huawei think the NR propagation environment is more complex than LTE, so there should be more paths supported. They suggest 8.

Intel think RAN1 did not evaluate this, but as a compromise they can accept it with the same parameters as LTE, i.e. 2 paths.
Nokia think the LTE value would be OK as a baseline; otherwise it should be left FFS. They also understand that it was intended only to be used for timing-based measurements, not RSRP. Ericsson agree the latter was a mistake.
Intel think there was quite some support for delaying this to Rel-17.
CATT agree with the LTE value as a baseline, and think evidence of the benefits of more paths should be shown. Ericsson think evidence was presented in previous discussions.
Huawei could accept 2 paths as a baseline for the sake of progress.
Ericsson think we could send an LS to RAN4. Huawei think this is too much overhead. Intel have a similar view to Huawei and think we could take 2 paths now and consider more in Rel-17.
Number of paths to be changed to 2.
⇨ Endorsed to be merged into the 37.355 running CR with this change.

Summary document
The following summary document will be treated the week of February 24

R2-2001173 Summary on LPP for aganda 6.8.2.3 NR_pos-Core Late | Intel Corporation | discussion | Rel-16

Agreements:
The name DL-AoD is kept.
Confirm (same as current running CR) when a UE is configured to report multiple DL PRS RSTD, PRS RSRP, RxTX measurements with each measurement between a different pair of DL PRS resources or DL PRS resource sets, and those multiple measurements being performed on the same pair of TRPs, the UE reports one full measurement results and additional delta measurement(s).
Confirm that same as stage 2/3 CR and follow RAN3 preference, AoD is calculated in LMF.
PRS resource set ID and PRS resource ID should be indicated within dl PRS QCL.

Proposal S1_2: Remove prefix “DL” from the name of PRS related fields.

Qualcomm think this would be a lot of editorial work and we would need a new prefix to prevent confusion with the PRS in LPP; NR-PRS or something similar.
Nokia would prefer to keep the DL prefix for future compatibility (e.g. if we introduce SL-PRS).
Ericsson think NR-PRS would be OK.
CATT would prefer to keep DL and think we should use the same terms as RAN1.
Keep the DL prefix.

Proposal S1_3: Beam level measurement results are added in NR ECID method.

Qualcomm don’t think RAN1 agreed to this. Ericsson think the RAN1 measurements are defined per resource and it is in RAN2 scope how to combine per-resource measurements into a per-cell measurement. They understand that the UE therefore has beam-level measurements available and it is reasonable to report what it already has.
Huawei have the same understanding as Qualcomm that there is no RAN1 agreement, but also think most companies support this. Qualcomm point out the LS from RAN1 referred to “RRM measurements”.
Ericsson think the RAN1 guidance points to 38.215 where the measurements are defined per resource.
Companies can check offline with their RAN1 colleagues. To be considered in updating LPP CR.

Proposal S1_4: confirm (same as current running CR) when a UE is configured to report multiple DL PRS RSTD, PRS RSRP, RxTX measurements with each measurement between a different pair of DL PRS resources or DL PRS resource sets, and those multiple measurements being performed on the same pair of TRPs, the UE reports one full measurement results and additional delta measurement(s).

Huawei think we need an LS to RAN4 to confirm the ranges and granularity. Intel think RAN4 are already working on this and companies can coordinate.
Ericsson point out we also have the measurement quality and uncertainty to consider. Qualcomm think we should stick to RAN1 agreements in this respect and discuss possible enhancements later. Huawei agree with Qualcomm. Intel agree: RAN1 have sent the parameters to us.

Proposal S1_5: To confirm whether same as stage 2/3 CR and follow RAN3 preference, AoD is calculated in LMF.

CATT agree with the proposal. Nokia also agree and think we should follow the expressed RAN3 preference.

DISC S2_1: To discuss whether indicate PRS-ID, PCI, CGI and ARFCN individually or just change TRP-ID name to TRP-ID-Set.

To be discussed as part of the update of the LPP CR.

DISC S2_2: To discuss whether PRS resource set ID and PRS resource ID should be indicated within dl PRS QCL.

Qualcomm think this is needed. Ericsson have the same view. CATT understand that this was agreed in RAN1.

DISC S2_3: To discuss whether/how to handle SSB duplication issue.

eMailDISC S3_8: To discuss whether nr-UL-RequestCapabilities-r16 is needed considering UL SRS is configured via RRC.
eMailDISC S3_9: To discuss if UL capability is needed, what UL capabilities are needed, e.g. whether nr-UL-SRS-MeasCapability is needed

✉ **[AT109e][623][POS] LS to RAN4 on measurement range and granularity (Intel)**
Intended outcome: Draft LS in R2-2001948 to RAN4 (Cc: RAN1) providing our measurements from the running CR and asking for range and granularity.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001948 Draft LS on positioning measurement range and granularity Intel LS out Rel-16 NR_pos To:RAN4
⇨ Approved in R2-2002245

✉ **[AT109e][622][POS] Uplink capability for positioning (Huawei)**
Intended outcome: Summary of agreements on whether/what UL capability is needed at LMF. Summary in R2-2001947.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001947 Summary of [AT109e][622][POS] Uplink capability for positioning Huawei discussion Rel-16 NR_pos-Core
⇨ Postponed

The posSIB numbers will be aligned in the following email discussion (output to be recorded in this agenda item):

✉ **[AT109e][601][POS] Harmonise posSIB numbering across CRs (Intel)**
Scope: Align posSIB numbering between the following CRs:

- R2-2001333 (38.331 running CR)
- R2-2001216 (36.331 CR to introduce PPP-RTK)
- R2-2001255 (38.331 CR to introduce on-demand SI request in connected mode)
- R2-2001230 (37.355 CR to introduce PPP-RTK)
- R2-2001234 (TPs to 37.355 to introduce UE-based DL positioning)
- R2-2000006 (37.355 CR to introduce barometric pressure broadcast)
- R2-2000188 (36.331 CR to introduce barometric pressure broadcast)
- R2-2000396 (36.331 CR to introduce TBS AD broadcast)
- R2-2000426 (37.355 CR to introduce TBS AD broadcast)
- R2-2000153 (37.355 CR to introduce NavIC)
- R2-2000157 (36.331 CR to introduce NavIC)

Intended Outcome: Agreed document listing the posSIB numbers, for reference by individual CR authors

Deadline: Thursday 2020-02-27 1200 CET

R2-2001951 Report of [AT109e][601][POS] Harmonise posSIB numbering across CRs (Intel) Intel Corporation discussion Rel-16 NR_pos-Core

⇨ Endorsed in email discussion [AT109e][602]

⇨ CR authors are asked to take the contents into account

R2-2002331 Way forward on the AoD calculation Huawei, HiSilicon discussion Rel-16 NR_pos-Core

Huawei are concerned about the NRPPa overhead between the gNB and LMF. If the gNB does not use a fixed beam pattern it will need frequent updating.

Ericsson have some sympathy but think this could be addressed in Rel-17. They think RAN3 should avoid reopening the issue.

Intel think NRPPa overhead is a RAN3 issue.

CATT think if the selected TRP does not belong to the serving gNB, it is hard for the serving gNB to calculate the AoD.

Qualcomm think overhead on a network interface is not a big concern, and think we should stick to the architectural principle that the LMF calculates the position information.

Nokia agree with Intel that this is a RAN3 issue and they expect RAN3 would have taken overhead into account.

Huawei think any gNB transmitting PRS should be responsible for calculating the AoD, and they don't see this proposal as changing the architecture since anyway the angle will be passed to the LMF.

⇨ Noted

The following documents will be treated by email discussion under the positioning session

R2-2000007 Sensor Provide Location Information Elements Correction Polaris WirelessCR Rel-16 37.355 15.0.0 0002 - F TEI16

To be agreed by email discussion:

✉ **[AT109e][605][LTE TEI] Barometric pressure sensor bias CR (Polaris)**
Scope: Agree to the CR in R2-2000007
Intended Outcome: Agreed CR
Deadline: Wednesday 2020-02-26 1200 CET

R2-2001940 Sensor Provide Location Information Elements Correction Polaris WirelessCR Rel-16 37.355 15.0.0 0002 1 F TEI16

⇨ Agreed in email discussion [AT109e][605]

R2-2000006 Addition of broadcast of barometric pressure assistance data Polaris Wireless, FirstNet, Intel, AT&T, NextNav CR Rel-16 37.355 15.0.0 0001 - C LCS_LTE_acc_enh-Core, TEI16

⇨ Revised in R2-2001955

R2-2001955 Addition of broadcast of barometric pressure assistance data Polaris Wireless, FirstNet, Intel, AT&T, NextNav CR Rel-16 37.355 15.0.0 0001 1 C LCS_LTE_acc_enh-Core, TEI16
⇨ Revised in R2-2001957

R2-2001957 Addition of broadcast of barometric pressure assistance data Polaris Wireless, FirstNet, Intel, AT&T, NextNav CR Rel-16 37.355 15.0.0 0001 2 C LCS_LTE_acc_enh-Core, TEI16
⇨ Agreed in email discussion [AT109e][604]

R2-2000188 Addition of broadcast of barometric pressure assistance data Polaris Wireless, FirstNet, Intel, AT&T, NextNav CR Rel-16 36.331 15.8.0 4026 2 C LCS_LTE_acc_enh-Core, TEI16R2-1912737
⇨ Revised in R2-2001956

R2-2001956 Addition of broadcast of barometric pressure assistance data Polaris Wireless, FirstNet, Intel, AT&T, NextNav CR Rel-16 36.331 15.8.0 4026 3 C LCS_LTE_acc_enh-Core, TEI16R2-1912737
⇨ Agreed in email discussion [AT109e][604]

⇨ Above tdocs on barometric pressure assistance data to be agreed by email discussion:

✉ **[AT109e][604][LTE TEI] Broadcast of barometric pressure assistance data CRs (Polaris)**
Scope: Agree to the CRs in R2-2000006 and R2-2000188. Note: Updates to the CRs will be needed to align with the output of [AT109e][601].
Intended Outcome: Agreed CRs
Deadline: Tuesday 2020-03-03 1200 CET

R2-2000396 Broadcast of TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 36.331 15.8.0 4134 2 C LCS_LTE_acc_enh-Core, TEI16R2-1914075
⇨ Revised in R2-2001958

R2-2001958 Broadcast of TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 36.331 15.8.0 4134 3 C LCS_LTE_acc_enh-Core, TEI16R2-1914075
⇨ Agreed in email discussion [AT109e][606]

R2-2000426 Addition of broadcast TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 37.355 15.0.0 0249 - C LCS_LTE_acc_enh-Core, TEI16
⇨ Revised in R2-2002191

R2-2002191 Addition of broadcast TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 37.355 15.0.0 0249 1 C LCS_LTE_acc_enh-Core, TEI16
⇨ Agreed in email discussion [AT109e][606]

⇨ Above tdocs to be agreed by email discussion:

✉ **[AT109e][606][LTE TEI] Broadcast of TBS assistance data CRs (NextNav)**
Scope: Agree to the CRs in R2-2000396 and R2-2000426. Note: Updates to the CRs will be needed to align with the output of [AT109e][601].
Intended Outcome: Agreed CRs
Deadline: Tuesday 2020-03-03 1200 CET

R2-2000398 Broadcast of TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 36.355 15.6.0 0246 2 C LCS_LTE_acc_enh-Core, TEI16R2-1914076
Withdrawn

Other documents

The following documents will not be individually treated

R2-2000241 Design of ProvideAssistantData for RAT-Dependent positioning methods CATT discussion Rel-16 NR_pos-Core
R2-2000289 Reduce overhead of RSTD measurement report vivo discussion
R2-2000290 Remaining issues on support of NR RAT-dependent positioning vivo discussion
R2-2000476 Open issues in LPP CR Intel Corporation discussion Rel-16 NR_pos-Core
R2-2000966 Remaining issues on DL positioning procedure Huawei, HiSilicon, MediaTek discussion Rel-16 NR_pos-Core
R2-2000969 Discussion on DL-AoD positioning procedure Huawei, HiSilicon discussion Rel-16 NR_pos-Core
R2-2000970 Discussion on SRS capability transfer Huawei, HiSilicon discussion Rel-16 NR_pos-Core
R2-2000991 SSB Configuration for UL-PRS and DL-PRS LG Electronics Inc. discussion Rel-16
R2-2001232 posSIBs for NR positioning Qualcomm Incorporated discussion NR_pos-Core
R2-2001278 Single positioning method approach in LPP Ericsson CR Rel-16 37.355 15.0.0 0253 - B NR_pos-Core
R2-2001353 Strongest first path indication with RSTD and UE RxTx measurements Ericsson discussion Rel-16

6.8.2.4 Broadcast assistance data

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting.
Including outcome of the email discussion [108#88][NR/Pos] Remaining issues on broadcast assistance data (Ericsson)
Summary document to be provided by the email discussion rapporteur (Ericsson)
Email discussion
The following email discussion summary will be treated the week of February 24
R2-2001241 Summary of [108#88][NR/Rel-16] Remaining issues on broadcast assistance data Ericsson discussion Rel-16 Late

Agreements:
For positioning On-demand SI request message sent by the UE in RRC_CONNECTED is per SIB.
For positioning, On-demand SI request message sent by the UE in RRC IDLE/INACTIVE is per SI.
Subscription based mechanism is not pursued in Rel-16.

Proposal 5 Introduce a new posSystemInformationAreaID and NW may configure pos-SystemInformationAreaID same as SystemInformationAreaID.
Nokia are not convinced a separate ID is needed and think the areas would be managed by the RAN based on what the operator wants to deploy.
CATT think RAN3 agreed that the area ID would come from the LMF via NRPPa and the AD could have quite a different scope from the other SI.
Nokia are not sure if this is critical; it seems more of an additional functionality and they doubt if the flexibility is needed. Think it could be done in a future release.
CATT think RAN3 already agreed and RAN2 can follow the agreement.
Intel think it would be difficult to enhance the broadcast in a future release.

Proposal 6 Request RAN3 to define a new posSystemInformationAreaID.

Proposal 3 A new SIB is defined to host posSIB scheduling information.
Ericsson clarify there was a small majority for SIB1, but some operators were interested in a new SIB.

Qualcomm think the concern was that a new SIB may not always be possible for the UE to receive, and it's clear that SIB1 works. CATT have the same concern that the UE may not be able to receive the new SIB when there is no CSS. Ericsson think we have solutions for delivering SI when there is no CSS.

Agreement:
Use SIB1 for scheduling as a baseline in the running CR.

Proposal 7 Support unicast tag for indication of idle/inactive to connected mode for on demand data request/retrieval.
CATT think we would need to define a new access category and involve CT1 to make this change. Ericsson think it could be done with a new cause code.
Postponed.

✉ **[AT109e][621][POS] Positioning system information area ID (CATT)**
Intended outcome: Summary of agreements on whether to have a separate positioning system information area ID. Summary in R2-2001950.
Deadline: Wednesday 2020-03-04 1300 CET

Discussion scope later updated to:

✉ **[AT109e][621][POS] Open issues on broadcast assistance data (CATT)**
Scope: Discuss the following issues on broadcast assistance data:
- whether to have a separate positioning system information area ID or reuse the existing area ID;
- whether to support the UE including GNSS ID/SBAS ID in the on-demand SI request;
- whether to include segment number in NRPPa metadata.

Intended outcome: Summary of agreements on the identified issues. Summary in R2-2001950.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001950 Summary of [AT109e][621][POS] Open issues on broadcast assistance data CATT discussion Rel-16 NR_pos-Core
⇨ Postponed

Summary document
The following summary document will be treated the week of February 24
R2-2002053 Summary for Broadcast of Assistance Data Ericsson discussion Rel-16 NR_pos-Core

Agreement:
RAN2 confirm for posSIBs, UE should make an on-demand request for the SIB based on the feature requirement and not based on SIB update mechanism.

Proposal 13 RAN2 to consider the solution outlined in [LPP: R2-2001268] and [RRC: R2-2001268]
Postponed.

Other documents
The following documents will not be individually treated
R2-2000242 Further Considerations on Broadcast Assistance Data CATT discussion Rel-16 NR_pos-Core Late
R2-2000971 Discussion on on-demand SI in connected for NR positioning Huawei, HiSilicon discussion Rel-16 NR_pos-Core

R2-2001236 Segmentation info in gNB Ericsson discussion Rel-16
R2-2001239 Overhead in current structure Ericsson discussion Rel-16
R2-2001268 Restructuring of LPP Broadcast solution to remove overheads Ericsson draftCR Rel-16 37.355 15.0.0 B NR_pos-Core
R2-2001269 Restructuring of RRC Broadcast solution to remove overheads Ericsson draftCR Rel-16 38.331 15.8.0 B NR_pos-Core
R2-2001636 On supporting of SIB for positioning Samsung R&D Institute UK discussion

6.8.2.5 UE-based positioning

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting.
Including outcome of the email discussion [108#89][NR/Pos] UE-based downlink positioning assistance data (Qualcomm)
Summary document to be provided by the email discussion rapporteur (Qualcomm)

Email discussion
The following email discussion summary will be treated the week of February 24

R2-2001234 Summary of [108#89][NR/Pos] UE-based downlink positioning assistance data Qualcomm Incorportaed discussion NR_pos-Core

Proposal: RAN2 to discuss and decide
(a) whether beamwidth information can be provided in the assistance data in Rel-16 or should be deferred to e.g. Rel-17;
(b) whether to support LCS-to-GCS translation parameter for the spatial direction information;
(c) whether to include RTD drift rate in the assistance data;
(d) whether to include RTD per DL-PRS Resource.

✉ **[AT109e][624][POS] Open issues on UE-based downlink positioning assistance data (Qualcomm)**
Intended outcome: Updated TP reflecting agreement where possible on the open issues:
(a) whether beamwidth information can be provided in the assistance data in Rel-16 or should be deferred to e.g. Rel-17;
(b) whether to support LCS-to-GCS translation parameter for the spatial direction information;
(c) whether to include RTD drift rate in the assistance data;
(d) whether to include RTD per DL-PRS Resource.
Updated TP in R2-2001949.
Deadline: Wednesday 2020-03-04 1300 CET

R2-2001949 Summary of [AT109e][624][POS] Open issues on UE-based downlink positioning assistance data Qualcomm Incorporated discussion

Agreements:
Provide the LCS-to-GCS translation parameter in the assistance data as part of the spatial direction information of the DL-PRS Resources (IE NR-DL-PRS-BeamInfo).
Do not include the RTD Drift Rate in the assistance data in Rel-16.
RTD is not provided per DL-PRS Resource in the assistance data in Rel-16.
For the baseline CR, the angular information is provided using a single field with 0.1-degrees resolution. FFS if we migrate in the future to a more compact representation.

Ericsson are concerned about the size of the assistance data and think an assessment is needed. Suggest an email discussion on the structure.
Intel think we could use this TP as a baseline for the merge, and optimisations to the structure can be discussed at the next meeting.
Qualcomm think we cannot try to optimise the structure separately from the rest of LPP.

On P1, CATT think we need guidance from RAN1.

On P2, vivo wonder how we can distinguish UE-based and UE-assisted information. Qualcomm think they are signalled separately.

⇨ TP endorsed to be merged in the running CR, with the understanding that concerns about data size and structure can be discussed in future meetings.

Summary document

The following summary document will be treated the week of February 24

R2-2001245 Summary of UE-based positioning Agenda Item 6.8.2.5 Qualcomm Incorporated discussion Late

Other documents

The following documents will not be individually treated

R2-2000837	On supporting UE-based positioning	Sony	discussion	Rel-16	NR_pos-Core
R2-2001240	UE-based configuration options	Ericsson	discussion	Rel-16	
R2-2001244	Remaining details for UE-based downlink positioning assistance data	Qualcomm Incorporated	discussion	NR_pos-Core	

6.8.3 Other

R2-2000291 Inactive state measurement message sending for positioning vivo discussion Withdrawn

6.9 NR mobility enhancements

(NR_Mob_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-192277). Documents in this agenda item will be handled in a break out session

No documents should be submitted to 6.9.

Treated together with 7.3,

Joint 6.9 and 7.3 Time budget: 3 TU

Joint 6.9 and 7.3 Tdoc Limitation: 12 tdocs

This agenda item will utilize a summary document procedure for some sub-agenda items to facilitate treatment of topics during the e-meeting, which may lead to postponement of some topics to next meeting.

A web conference may be used for handling some of the discussions in this WI.

6.9.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc
Including outcome of email discussion [108#62][NR Mob] Running Stage-2 CR (Intel)
Including CHO part of the outcome of email discussion [108#66][LTE NR Mob] Open issues for LTE and NR mobility (Intel)
Including NR part of the outcome of email discussion [108#45][LTE NR Mob] UE feature list for LTE and NR mobility (Intel)

A web conference may be used to treat some topics in this agenda item.

Noted

R2-2000015 Reply LS to RAN1&4 on UE capabilities on DAPS HO (R1-1913581; contact: Intel) RAN1 LS in Rel-16 NR_Mob_enh-Core, LTE_feMob-Core To:RAN2 Cc:RAN4

⇒ **Not flagged**

⇒ **Noted**

R2-2000037 Reply to LS on UE capabilities on DAPS HO (R4-1915781; contact: Qualcomm) RAN4 LS in Rel-16 NR_Mob_enh-Core, LTE_feMob-Core To:RAN2 Cc:RAN1

⇒ **Not flagged**

⇒ **Noted**

R2-2000071 Reply LS to LS on AS key derivation for conditional handover (S3-194447; contact: Apple) SA3 LS in Rel-16 NR_Mob_enh-Core, LTE_feMob-Core To:RAN2 Cc:RAN3

⇒ **Not flagged**

⇒ **Noted**

By Web Conf

Stage-2 running CR for NR mobility (outcome of 108#62):

R2-2000460 Running CR for the introduction of NR mobility enhancement Intel Corporation CR Rel-16 38.300 16.0.0 0172 2 B NR_Mob_enh-Core R2-1913995

⇒ **Endorsed as running CR**

RRC running CR for NR mobility (outcome of 108#34):

R2-2001271 RRC running CR for introduction of NR mobility enhancement [108#34] Intel Corporation CR Rel-16 38.331 15.8.0 1478 - B NR_Mob_enh-Core

⇒ **Endorsed as running CR**

List of open issues in LTE/NR mobility WID (report of 108#66):

R2-2000461 Report of [108#66][LTE NR Mob] Open issues for LTE and NR mobility Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

Discussion:

- Intel indicates that some DAPS proposals are under offline emails in this discussion

P13

- Nokia wonders if also CPC is considered here – is this only for CHO? Intel clarifies only CHO so far, but in 108#67 most companies want to avoid CHO+CPC so total number should be 8 at most. CATT agrees this is the majority view for CPC.
- Charter wonders if we consider both intra- and inter-frequency: Can we have 8+0, 0+8 or 4+4, i.e. any combination that is 8 at most? OPPO thinks we should first decide whether to support CHO+CPC. Intel thinks we still have limitation on measurements by RAN4 and they will decide on that.

P6

- LGE wonders if Need M can be used. Chair asks to discuss that offline.

P4

- Mtek thinks this is already being discussed in offline so we don't need to agree to it yet.

P37

- Ericsson thinks there have not been good arguments for this proposal. Similar to A3+A5. Intel indicates 12 companies opposed this and 2 companies wished to support it. A3+A5 didn't require changes, this requires additional changes. Apple would also think this could be done in Rel-16. Samsung would also like to support this in Rel-16., i.e. not have P37. Google also thinks we should remove P37.
- Ericsson could be fine to limit to e.g. intra-node handovers. Qualcomm doesn't see a motivation to support this. Could also affect CHO failure handling.
- Intel points out that we agreed UE would discard CHO configurations upon HO and this would change that.

Agreements for CHO

MeasId aspects

Proposal 2. measID and reportConfig associated with CHO config shall be removed when CHO configuration is autonomously removed.;

Proposal 7. For the same candidate target cell, allows 1 execution condition with 2 trigger events and corresponding 2 measIDs;

RRC configuration
Proposal 34. Upon reception of RRCReconfiguration message with CHO configuration, the UE shall generate RRCReconfigurationResponse message and delivery it to low layer (same handling as legacy HO command), no matter whether CHO condition is met immedicately or not.
Proposal 12. CHO configuration stored in UE shall be removed by the UE when entering IDLE or INACTIVE;
Proposal 13. The max number of CHO candidate cells is 8; Send LS to RAN4 to inform our conclusion.

EN notes and behaviour left up to UE/NW implementation
Proposal 3. The EN on FFS on Stage-3 details: whether there are issues with configuration of different events (e.g. A3+A5)., can be removed;
Proposal 11. EN in LTE CR on UE autonomous actions regarding VarMeasConfig associated to conditional handover can be removed;
Proposal 4. It is up to UE implementation whether the measurement on other candidate cell shall be continued during CHO execution period. The EN can be removed;
Proposal 5. The quantity configuration is needed for CHO for filtering purpose. The EN can be removed;
Proposal 37. Scenarios, target CHO configuration in legacy HO command or target CHO configuration in target CHO command are not supported in Rel-16.
Proposal 38. The issue, race condition on CHO is left to network implementation.

=> Can discuss if these agreements work also for CPC.

P15/16
- LGE indicates these are discussed in offline discussion. Mtek thinks we could still agree to them now. Mtek wonders if we need clarification in specs for P16.
- Huawei agrees with P16 but not P15. Unclear if UE or network or both do something to avoid this. It might be neither does anything. Intel thinks anyway we leave it, it will be either UE or NW implementation.
- Ericsson thinks we need to specify UE behaviour for PDCP re-establishment so would like to specify it for P16 as well.

P19
- Nokia wonders if this is done when DRBs are established or when HO is triggered – should only apply to the HO case. This is also discussed in one fo the offline discussions. Intel agrees that this was the intention. LGE agrees.

P42
- LGE thinks this is only for NR.

P44
- LGE wonders what is “PDCP/RLC state” and does it include RoHC and security. Intel calrifies this is counters, variables and retransmission states but not security and RoHC.
- vivo thinks we can reuse PDCP re-establishment procedure in this case. QC thinks for non-DAPS we retain legacy behaviour. OPPO thinks this may not be sufficient for security and we need to trigger PDCP re-establishment to use the source cell keys. Intel clarifies that we just revert back to old key since we don’t have key derivation.
- Apple thinks we had an earlier agreement for SRB that covers this. OPPO thinks this is different as SRBs are suspended and not established for target node. DRBs are re-established during HO.
- Samsung thinks everyone assumes PDCP re-establishment is done at HO comamnd reception. If we delay that to RACH completion, there are no problems.
- LGE thinks P28 is also associated.

P43
- Ericsson wonders if there are issues with stored RRC messages.

P24
- vivo thinks the accumulated PC commands needs to be also released.

P30-32
- vivo wonders if we autonomously releases some Need R fields.
- QC has concerns on P30 since it's different than legacy re-establishment case. Intel thinks this is simpler because we need to do nothing here.
- OPPO has concern on P32 since network coordination may not be possible so re-establishment could be triggered. Should use non-DAPS handover in case UE capabilities are exceeded. ZTE agrees. Intel thinks this would require UE to distinguish different cases (source+ target or target only exceeds) and this is anyway an error case. Majority preferred this. OPPO thinks UE always knows which configuration exceeds the capabilities. NEC would also like to support fallback behaviour.
- Huawei wonders if legacy handling means RRC re-establishment.
- QC thinks P31 is not allowed. Network would have to send these in different TTIs. Ericsson thinks UE processes PDCP PDUs in order of SN.
- LGE wonders how RRC processing delay would work: Would we have combined processing delay for two RRC messages.
- QC thinks P30 makes the DAPS performance worse and therefore would not like to have it.

Agreements for DAPS

Not-supported features with DAPS
Proposal 14. EHC is not considered for DAPS.
Proposal 33. CHO+DAPS is not supported in Rel-16.

PDCP-related configuration
Proposal 22. PDCP parameters discardTimer, pdcp-SN-SizeUL, pdcp-SN-SizeDL, outOfOrderDelivery, t-Reordering and cipheringDisabled. cannot be changed for DRB with DAPS;
Proposal 19. Indication of DAPS per DRB is put under drb-ToAddModList.
Proposal 20. recoverPDCP is not applied for DAPS handover.
Proposal 40. statusReportRequired can be changed during DAPS HO as legacy HO.
Proposal 42. Same as legacy HO, Key change is optional for DAPS HO in NR.

RRC reconfiguration
Proposal 23. Full configuration is not supported for DAPS HO;
Proposal 24. all target specific configuration, PDCP (security, ROHC), SDAP, RLC, MAC and L1 shall be removed upon DAPS HO failure;

Source + target configuration
Proposal 30. Source+target configuration cannot be sent in the same RRC message for DAPS HO.
Proposal 31. If source wants to change it's configuration during DAPS handover, the source could send two RRC messages in one TTI, i.e. DAPS handover command for target, and RRC reconfiguration message for source. But it is up to network implementation.
Proposal 32. Following legacy handling on network configuration error if network (source+target) configuration exceeds the UE capability, no specification change is needed.

Removal of editor notes:
Proposal 21. Remove the EN TBC, whether there is need to capture to avoid configuring twice during DAPS HO.
Proposal 26. For source link failure, remove EN and add release source connection in running CR.

DAPS HO failure
Proposal 27. All current triggerings (T310 expires, RACH failure, RLC failure) for RLF are applied for source in DAPS HO.
Proposal 29. Upon DAPS HO failure, source RRM configuration is reversed as legacy HO failure.

⇒ **P19 only applies for HO case**

⇒ **P24: accumulated PC commands belong to L1 configuration (as in legacy)**

⇒ **P32: "Legacy handling" means RRC re-establishment**

⇒ **P31: RAN2 will not define combined RRC processing delay for two RRC messages in this case.**

⇒ **Discuss P44 and P28 further offline in offline email discussion [210] (Huawei):**

Proposal 44. For non DAPS DRB, upon DAPS HO failure, the reverted PDCP/RLC state includes data stored in transmission and reception buffers in PDCP and RLC entities.

⇒ **For P44, Intent is to ensure UE reverts back source cell keys for non-DAPS DRBs. Discuss offline how to handle this in Stage-3**

Proposal 28. Upon DAPS handover failure, UE reverts back to the original source configuration (including RLC and PDCP state, but do not re-establish PDCP and RLC) for the DRB that is not configured with DAPS.

⇒ **The proposals below were not discussed online.**

DAPS - need further discussion
Proposal 15. Leave it to UE/network implementation (without specification impact) on the issue caused by duplicate discarding if duplication is enabled.Proposal 6. Change the need code of cho-RRCReconfig to Need S, and clarify that allow the delta signaling for cho-RRCReconfig (i.e. replace the whole field if present, or keep the stored value if absent.) For the first configuration, it must be present;
Proposal 16. Before releasing the source ROHC protocol, the PDCP should decompress PDCP SDUs received from the source node and stored in the reordering buffer using the source ROHC protocol. It can be left to UE implementation.Proposal 17. Online discussion on whether second status report is needed when upper layer requests a PDCP reconfiguration with RLC entity release.
Proposal 18. Online discussion on whether status report is needed for RLC UM.
Proposal 25. Online discussion on whether explicitly capture in RRC spec, the UE shall stop RLM in source after RACH successful to garget PCell, and whether current running CR's way has problem (it was discussed before, stopping RLM means the UE does not start T310).
Proposal 39. Ask RAN2 to discuss whether to explicitly capture in spec, there are two purposes for reordering, one for decompression, another for in order delivery. .
Proposal 41. Ask RAN2 to discuss whether moreThanonRLC (for CA duplication) can be configured together with DAPS HO.Proposal 43. reestablishPDCP is not applied for SRB in DAPS HO.
Proposal 45. When resume SRB upon DAPS HO failure, the old stored RRC message if any, (i.e.. the PDCP PDUs for SRB) shall be discarded. How to capture this in spec needs further discussion, e.g. change PDCP or RRC?
Proposal 46. For LTE, the DAPS network coordination is based on source link configuration to be used during DAPS HO, UE capabilities, maxSCH-TB-BitsDL, maxSCH-TB-BitsUL, powerCoordinationInfo within HandoverPreparationInformation message;
Proposal 47. For NR, the DAPS network coordination is based on source link configuration to be used during DAPS HO, UE capabilities, maxSCH-TB-BitsDL (to be redefined for NR), maxSCH-TB-BitsUL (to be redefined for NR), powerCoordinationInfo within HandoverPreparationInformation message; FFS on additional parameters

CHO - need further discussion
Proposal 1. Regarding what field name should be used cho-Config (as NR) or conditionalReconfiguration (as LTE), no change for now until we have clear view on CPC;
Proposal 8. T312 is not stopped upon the reception of RRC Reconfiguration with cho-Config;
Proposal 9. T312 is stopped upon the execution of CHO;
Proposal 10. CHO based RLF failure handling is also applied for RLF caused by the expiry of T312;
Proposal 35. Ask RAN2 to continue the discussion on "and" issue, e.g. how to improve option A, or whether Option B is chosed as solution for "and" issue.
Proposal 36. "And" means "Both events need to still meet the entry criteria when the second TTT expires (regardless of which event met entry condition first and whether TTT1 is the same or different than TTT2).", e.g. the event is considered fulfilled if the leaving conditions is not fulfilled after TTT1 has expired i.e. event 1 was fulfilled at t0+TTT1 and remains fulfilled as long as after t0+TTT1 the leaving

condition is not fulfilled. Then, event 2 gets fulfilled (e.g. at t0'+TTT2) AND, at that time t0+TTT2, event 1 is also fulfilled."

R2-2000466 Open issues in RRC CR on NR mobility Intel Corporation discussion Rel-16 NR_Mob_enh-Core

⇒ **Noted (not discussed online)**

⇒ **The proposals below were not discussed online.**

Misc
Proposal 1. Keys used in source is discarded upon source release;
Proposal 2. Keep using "source" and "target" in the RRC specification unless it is necessary;
Proposal 3. CHO (MCG) + DC is allowed configuration.

MeasId
Proposal 4. Keep current sentence on the condition "if more than one triggered cell exists".
Proposal 5. In 5.3.7.3, removal of CHO related measurement is handled together with the removal of VarCHO-Config when selected cell is CHO cell;
Proposal 6. Keep in the field description that When the network removes the stored CHO configuration for a candidate cell, the network releases the measIDs associated to the cho-ExecutionCond if it is not used by the cho-ExecutionCond of other candidate cells.

Processing delay
Proposal 7. RRC processing requirement on CHO is not captured in the table 12.1-1.

R2-2000463 RRC running CR for introduction of NR mobility enhancement [108#66 P2] Intel Corporation draftCR Rel-16 38.331 15.8.0 B NR_Mob_enh-Core

⇒ **Noted (not discussed online)**

R2-2000329 Major CHO issues discussed in [108#66][NR Mob] phase-2 Ericsson discussion NR_Mob_enh-Core

(moved from 6.9.3.1)

⇒ **Noted (not discussed online)**

⇒ **The proposals below were not discussed online.**

Proposal 1 An event is considered to be fulfilled if all measurements after L3 filtering satisfy the entry condition during TTT1.
Proposal 2 If the leaving condition is fulfilled the entry condition of an event is considered to be non-fulfilled.
Proposal 3 CHO is executed if all events are considered fulfilled.

Proposal 5 Confirm that different RS types in A3 + A5 combinations are supported.
Proposal 6 Confirm that different measurement object in A3 + A5 combinations are supported.

Proposal 7 RAN2 will not add restrictions to cho-Config inclusion in RRCReconfiguration.
Proposal 8 The field cho-RRCReconfig is OPTIONAL with Need Code S. If cho-RRCReconfig is present, the stored value is replaced by new value. If cho-RRCReconfig is absent, the stored value is used.

Proposal 9 *The field cho-ExecutionCond is OPTIONAL with Need Code S. If cho-ExecutionCond is present, the stored value is replaced by new value. If cho-ExecutionCond is absent, the stored value is used.*

R2-2000330 Major CHO issues not discussed in [108#66][NR Mob] Ericsson discussion NR_Mob_enh-Core

(moved from 6.9.3.1)

⇒ **Noted (not discussed online)**

⇒ **The proposals below were not discussed online.**

Proposal 1 *Update running CR according to the understanding that a measId with associated reportConfig whose reportType is set to cho-TriggerConfig may not have a reporting entry in VarMeasReportList.*
Proposal 2 *UE shall autonomously remove measObject(s) only associated to CHO upon suspend/release, CHO/HO execution and re-establishment.*

Proposal 4 *UE can be configured with SCG addition while monitoring CHO configurations.*
Proposal 7 *UE can be configured with cho-Config in RRCResume.*

Proposal 3 *UE can be configured with CHO while operating in MR-DC.*
Proposal 5 *Upon CHO execution the UE performs MR-DC release and the release of SN-terminated bearers.*
Proposal 6 *No RAN3 changes are introduce to support CHO configuration while operating in MR-DC.*

UE feature list for LTE/NR mobility WID (report of 108#45) – email discussion report:

R2-2000459 UE feature list for LTE and NR mobility Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

⇒ **Noted (not discussed online)**

⇒ **The proposals below were discussed as part of offline email discussion [211].**

Proposal 1. *Agree the capabilities (x1-1, x1-3, x2, x3) including the revisions as indicated in the table for NR.*
Proposal 2. *Agree the capabilities (x1-1, x1-3) including the revisions as indicated in the table for LTE.*

<u>Capability aspects that need further discussion</u>

Proposal 3. *SCells not released during DAPS HO (If SCell is supported during DAPS HO) should be counted against the total number of CCs the UE can support.*
Proposal 4. *For intra freq DAPS, the capability intra-FreqDAPS is put under bandParameter, and for bandwidthClass B/C UE, the UE supports intraF DAPS with bandwidth class A for the band against source and target.*
Proposal 5. *For inter freq DAPS, the capability inter-FreqDAPS is put under existing CA bandcombiantion, and same as CA, the CCs in the bandcombination with UL can all be source or target PCell.*
Proposal 6. *In Rel-16, DAPS HO only supports source PCell and target PCell.*
Proposal 7. *During DAPS HO, SCells (if configured in source) shall be released based on existing way, i.e. explicitly release from network using DAPS HO command.*
Proposal 8. *RAN4 capabilities are introduced as*
Per BC: AsyncDAPS, supportedNumberTAG, singleUL-Transmission;
Per Band per BC: intraBandDiffSCS, intraBandIntraFreq-DAPS;

Proposal 9. Double check whether any capabilities have been covered by existing capability in the bandcombination;
Proposal 10. Per Band per BC capability is put in BandParameters
Proposal 11. UplinkPowerSharingDAPS-HO, pdcch-BlindDetectionMCG1-UE and pdcch-BlindDetectionMCG2-UE are introduced as per BC capabilities.

Discussed over email only
Proposal 12. The ASN.1 parts for LTE and NR in section 6 are used as baseline for further discussion.

UE feature list for NR mobility WID:

R2-2001270 UE Capability for Rel-16 NR mobility enhancement Intel Corporation CR Rel-16 38.306 15.8.0 0250 - B NR_Mob_enh-Core

⇒ **Noted (not discussed online)**

By Email

NR_MBB: Copy-paste of LTE Rel-14 MBB handover to NR Rel-16 in addition to DAPS?

R2-2001520 Interruption Time Reduction in Release 16 Samsung, KT, LG Uplus, Verizon Wireless, ZTE, KDDI discussion NR_Mob_enh-Core

R2-2001530 RAN4 requirements on Make-Before-Break Samsung discussion NR_Mob_enh-Core

R2-2001531 Stage-2 details (38.300/37.340) for Make-Before-Break Samsung, ZTE discussion NR_Mob_enh-Core

R2-2001540 Supporting Make-Before-Break in NR Samsung, ZTE draftCR Rel-15 38.331 15.8.0 B NR_Mob_enh-Core

R2-2001543 Supporting Make-Before-Break in NR Samsung, ZTE draftCR Rel-15 38.306 15.8.0 B NR_Mob_enh-Core

⇒ **All of the above contributions under NR_MBB are handled in email discussion 216**

✉ **[AT109e][216][NR MOB] Discussion on MBB handover for NR Rel-16 (Samsung)**
Scope:
- Discuss the proposals in contributions R2-2001520, R2-2001530, R2-2001531, R2-2001540 and R2-2001543 to see if anything can be agreed (partly already discussed in RAN2#108 without reaching consensus to introduce the feature, also discussed in RAN#86 with conclusion that WG needs to decide).

Intended outcome:
- Conclusion on what (if anything) can be agreed, with set of proposals that have consensus (aim to agree to those over email)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on rapporteur proposals: Monday March 2nd by 17:00 CET

Proposals from offline email discussion [216]:

Proposal 1: Do not enhance FR2 mobility interruption in Release 16
Proposal 2: FR2 mobility interruption enhancement in Release 17 is up to RAN plenary.
NOTE:Interested companies can discuss which WI is the best to handle this issue and whether WID scope needs update. The WID update, if deemed needed, will be discussed in the RAN plenary based on company input which is business as usual.

Agreements (3.3.2020)

⇒ **1 Do not enhance FR2 mobility interruption in Release 16**

⇒ **2 FR2 mobility interruption enhancement in Release 17 is up to RAN plenary.**

CR finalization

✉ **[AT109e][218][NR MOB] Stage-2 CR (Intel)**
Intended outcome: Agreed 38.300 CR for NR mobility (including T312, CPAC)
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CR can be provided in R2-2001748**

✉ **[AT109e][219][NR MOB] RRC CR (Intel)**
Intended outcome: Agreed 38.331 CR for NR mobility (including T312, CPAC)
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CR can be provided in R2-2001749**
=> Revised in R2-2001767

R2-2001767 Introduction of NR mobility enhancement Intel Corporation CR Rel-16 38.331 15.8.0 1478 2 B NR_Mob_enh-Core
=> Agreed

Withdrawn:

R2-2001092 UE Capability for Rel-16 NR mobility enhancement Intel Corporation draftCR Rel-16 38.306 15.8.0 NR_Mob_enh-Core Withdrawn

R2-2001093 UE Capability for Rel-16 LTE even further mobility enhancement Intel Corporation draftCR Rel-16 36.306 15.7.0 LTE_feMob-Core Withdrawn

R2-2001272 UE Capability for Rel-16 LTE even further mobility enhancement Intel Corporation CR Rel-16 38.331 15.8.0 1479 - B NR_Mob_enh-Core Withdrawn

R2-2000462 RRC running CR for introduction of NR mobility enhancement [108#34] Intel Corporation draftCR Rel-16 38.331 15.8.0 B NR_Mob_enh-Core Withdrawn

6.9.2 Reduction in user data interruption during DAPS handover

Contributions on DAPS handovers for LTE and NR are treated jointly in under 7.3.2. Do not use this AI for any item that can be discussed jointly - This AI only addresses NR-specific topics.
Including remaining details (if any) on SDAP handling during DAPS handover.

6.9.3 Conditional handover and fast handover failure recovery

Contributions on conditional handover for LTE and NR are treated jointly under 6.9.3 except where otherwise noted.
No documents should be submitted to 6.9.3. Please submit to 6.9.3.x

R2-2000591 Open issues on Mobility Enhancement Apple discussion Rel-16 NR_Mob_enh-Core

6.9.3.1 Conditional handover – configuration and execution details

This AI jointly addresses NR and LTE.
Including outcome of email discussion [108#34][NR Mob] Running RRC CR for CHO and DAPS (Intel)
Including RRC and ASN.1 details not handled in email discussions.
Including remaining open issues of CHO (as per email discussion [108#66]).

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.

By Email

R2-2000374 RRC remaining issues for conditional handover configuration vivo discussion Rel-16 NR_Mob_enh-Core

R2-2000375 Discussion on CHO release vivo discussion Rel-16 NR_Mob_enh-Core R2-1914698

R2-2000444 On CHO execution triggering with two joint events Futurewei discussion Rel-16 NR_Mob_enh-Core

R2-2000445 Resource limitation on number of CHO candidates Futurewei discussion Rel-16 NR_Mob_enh-Core

R2-2000464 Remaining issues on PDCP status report for CHO Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core Withdrawn

R2-2000468 "And" events for CHO Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

R2-2000592 Return CHO Configuration Apple discussion Rel-16 NR_Mob_enh-Core

R2-2000653 On the need of including CHO configuration in HO command OPPO discussion Rel-16 NR_Mob_enh-Core

R2-2000922 Further consideration on CHO compliance check failure CMCC discussion Rel-16

R2-2000923 Combination of CHO and DAPS HO CMCC discussion Rel-16

R2-2001002 On reconfigurations when CHO is prepared Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core R2-1913151

R2-2001257 Conventional HO overriding a CHO command ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

R2-2001258 CHO triggering configuration ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

R2-2001259 Applicable CHO configuration ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

R2-2001384 Discussion on configuration aspect for CHO Huawei, HiSilicon, China Telecom discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1915844

R2-2001385 Discussion on remaining issues for CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

R2-2001534 Consideration of HO Command including CHO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

R2-2001584 Further details of CHO configuration and execution China Telecom discussion Rel-16 NR_Mob_enh-Core

R2-2001637 Remaining issues for CHO execution Samsung R&D Institute UK discussion

R2-2001651 Autonomous release of conditional configuration Google Inc. discussion

R2-2001654 On the target to configure conditional handover Google Inc. discussion

R2-2001649 Discussion on the target to configure CHO Google Inc. discussion
(moved from 7.3.3)

R2-2001650 Autonomous release of CHO Google Inc. discussion
(moved from 7.3.3)

⇒ **All of the above documents in this AI are handled in email discussion [212]**

✉ **[AT109e][212][MOB] CHO configuration and execution details (Intel)**
Scope:
- Agreeing on the proposals as per R2-2002040.
- Discuss open items as per R2-2002040 to seek companies feedback on open issues of UP for DAPS.

Intended outcome:

- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:

- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

R2-2001743 R2-2001728 Report of [AT109e][212][MOB] CHO configuration and execution details (Intel) Intel

⇒ **Noted**

Agreements [AT109e][212][MOB]

⇒ **1:The UE shall autonomously remove measObject(s) only associated to CHO when CHO configuration is autonomously removed;**

⇒ **2: consider event satisfies entry condition during TTT as fulfilled and consider event satisfies leaving condition during TTT as not fulfilled. Only both events fulfilled starts CHO. Agree the text proposal shown as below:**

⇒ **5: The field cho-ExecutionCond is OPTIONAL, Need S.**

⇒ **6: The UE needs to have valid cho-ExecutionCond when CHO configuration is configured.**

⇒ **7: CHO (MCG) can work together with MR-DC, i.e. receive CHO when MR-DC is configured, and receive SCG addition when CHO condition is configured.**

⇒ **9: Do not introduce CHO candidate cell index for conventional handover;**

⇒ **10: Do not change the running CR unless there is clear majority on the new signalling structure (CHO execution condition shall be defined based on the existing measID+additional a3-Offset or a5-Threshold in CHO-ExecutionCond);**

⇒ **11: Do not introduce multiple CHO execution conditions (using "or") of a single candidate cell;**

⇒ **12: Do not introduce measurement results (including beam level results) in HO complete message;**

⇒ **13: RRCReject message in resonse to an RRCReconfigurationComplete message for CHO is not allowed;**

⇒ **14: Do not introduce serving radio link status information in measurement report;**

⇒ **15: Do not introduce return CHO;**

⇒ **16: Do not introduce CHO configuration in resume message;**

⇒ **18: T312 is not stopped upon the reception of RRC Reconfiguration with cho-Config; Do not need additional change.**

⇒ **19: T312 is stopped upon the execution of CHO; Do not need to change specification.**

⇒ **20: CHO based RLF failure handling is also applied for RLF caused by the expiry of T312; Do not need to change specification.**

⇒ **RAN2 assumes that the UE does not apply CHO configuration when a new execution condition is met during HO/CHO. FFS whether and how this can be captured in RRC CR (not done for the CRs submitted to RANP).**

⇒ **The resolution of following proposals are postponed to next meeting:**

Proposal 3: Only same measurement object is allowed for a candidate cell when 2 trigger events are configured for the execution condition for the candidate cell.

Proposal 8: CHO (MCG) configuration contains SCG configuration and clarify in the specification only PCell can be candidate cell.

The following issues are not explicitly agreed but are assumed to have been all resolved or are not aligned with agreements (can be only revisited if issues are found)

2.1 Issue 2: [1] raised for A3/A5 combination, whether original agreements "same RS type" for multiple trigger events is still valid or not

2.4 Issue 3 [21]: to reverse the agreements, the UE shall not autonomously remove CHO configuration upon successful HO;

2.7 [4] raised issue on UE context discard upon successful reestablishment or CHO

2.9 [10] UE reports the CHO reconfiguration failure related information to the network side, e.g. the failure indication, the failure target cell ID, the specific failure configuration..

2.11 [12] ask RAN2 to define a list of reconfigurations that require and do not require coordination with the target cell. A corresponding signalling is expected to be designed by RAN3

2.13 Issue 1: continue the measurement reporting after receiving cho-config [25]

2.13 Issue 2: Modification of the measurement configuration in cho-config [25]

2.13 Issue 3: Leaving condition based CHO reporting to allow the network to de-configure the CHO candidate(s) [25]

2.13 Issue 4: handling when multiple cells meet the execution condition [26]

UE should ignore the difference of the measurement results derived from different rsType when more than one candidate cells meet each execution condition

The UE should evaluate candidate cells based on the RSRP, when more than one candidate cells meet each CHO execution condition, independent of the trigger quantity configured for them

The UE should ignore the number difference between different rsType when evaluates the number of the beam above the threshold if multiple cells meet each CHO execution condition

2.3 Issue, whether the restriction on cho-RRCReconfig should be captured in the procedure or as field description

2.14 Issue 1: the UE should only derive/update the security keys when conditional handover is being executed;

2.15 issue 1: whether CHO is supported for NR-U, and if yes whether introduce a new event based on the channel occupancy;

6.9.3.2 Conditional handover – failure handling

This AI jointly addresses NR and LTE.
Including open issues and details on CHO failure handling not handled in email discussions
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.

By Email

R2-2000331	CHO and re-establishment procedure	Ericsson	discussion	NR_Mob_enh-Core
R2-2000376	Discussion on the CHO during failure handling	vivo	discussion	Rel-16 NR_Mob_enh-Core
R2-2001003	On T312 in Conditional PSCell change or handover	Nokia, Nokia Shanghai Bell	discussion	Rel-16 NR_Mob_enh-Core
R2-2001105	Avoid consecutive CHO failure	Beijing Xiaomi Software Tech	discussion	
R2-2001106	Discussion on the use case of CHO failure recovery	Beijing Xiaomi Software Tech	discussion	

R2-2001260 Discussion on fast RLF recovery when applying CHO and fast MCG recovery ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

⇒ **All of the above documents in this AI are handled in offline email discussion [213]**

✉ **[AT109e][213][MOB] CHO failure handling (Nokia)**
Scope:
- Agreeing on the proposals as per R2-2002016.
- Discuss open items as per R2-2002016 to see if there are any remaining open issues for CHO failure handling.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

R2-2001742 Report from [AT109e][213][MOB] CHO failure handling Nokia

⇒ **Noted**

Agreements [AT109e][213][MOB]

⇒ **1: Conditional handover procedure after RLF or HOF/CHOF relies on the legacy T304. No need to introduce a new timer.**

⇒ **2: Failure recovery via CHO in Rel-16 is applicable only to RLF, Intra-RAT Handover Failure or Intra-RAT Conditional Handover Failure. Procedure for attemptCHO in 5.3.7.3 of TS 38.331 is updated with a condition as shown below**

⇒ ***1> If the cell selection is triggered by detecting radio link failure of the MCG, re-configuration with sync failure of the MCG, and***

6.9.3.3 Conditional handover – other aspects

This AI jointly addresses NR and LTE.
Including remaining open issues for measurements for CHO.
Including discussion on UE capabilities for CHO.
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.

By Email

R2-2000332 Other aspects of CHO Ericsson discussion NR_Mob_enh-Core

R2-2000377 Discussion on simultaneous connectivity in CHO vivo discussion Rel-16 NR_Mob_enh-Core R2-1914701

R2-2000855 Measurement reporting while CHO is configured PANASONIC R&D Center Germany discussion R2-1915541

R2-2000899 Further Discussion on Cell Evaluation for CHO Cell Selection CATT discussion Rel-16 NR_Mob_enh-Core

R2-2000918 Discussion on CHO for DC scenarios CMCC discussion Rel-16 Revised

R2-2001004 On serving cell's radio link status reporting for CHO preparation Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core

R2-2001305 Timing of Key Derivation in Conditional Handover Futurewei discussion Rel-16 NR_Mob_enh-Core

R2-2001306 Draft LS on the Timing of AS Key Derivation in Conditional Handover Futurewei discussion Rel-16 NR_Mob_enh-Core

R2-2001386 Discussion on combination of simultaneous connectivity and CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1915846

R2-2001535 T304 Running Issue When CHO Execution LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

R2-2001537 Measurement ID Handling for CHO and CPC LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core R2-1916205

R2-2001545 CHO in NR-U LG Electronics Inc. discussion

R2-2001553 Discussion on CHO for DC scenarios CMCC discussion Rel-16 R2-2000918

⇒ **All of the above documents in this AI are handled in email discussions**

⇒ **UE capabilities for CHO are included in email discussion [211], other aspects of CHO are included in email discussion [209].**

6.9.3.4 Fast handover failure recovery

This AI only addresses NR.
Including outcome of email discussion [108#16][NR Mob] T312 for PCell and PSCell (Samsung) and any remaining Stage-3 details of T312 support.
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. No web conference is planned for this agenda item.

By Email

R2-2000652 Discussion on CHO impact on T312 OPPO discussion Rel-16 NR_Mob_enh-Core

R2-2000928 T312 handling in NR Sharp discussion

R2-2001609 Discussion on T312 support in CHO events Samsung discussion Rel-16 NR_Mob_enh-Core

R2-2001623 Introduction of T312 for NR PSCell in (NG)EN-DC Samsung CR Rel-16 36.331 15.8.0 4227 - B NR_Mob_enh-Core

⇒ **All of the above documents in this AI are handled in email discussion [214]**

✉ **[AT109e][214][NR MOB] Finalization of T312 for fast handover failure recovery (Samsung)**
Scope:
- Agreeing on the proposals as per R2-2002070.
- Discuss open items as per R2-2002070 to seek companies feedback on open issues NR T312.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals' wording, Monday March 2nd by 17:00 CET

R2-2002187 Offline discussion 214: Fast handover failure recovery Samsung

⇒ **Conclusion:**
Proposal#1: Proposals in [R2-2000928**] is agreeable to all companies.**
Proposal#2: Agree Alt 1 from [R2-2001623**]**

⇒ **Noted**

Agreements [AT109e][214][MOB]

⇒ **=>The CR in R2-2002188 is endorsed and will be captured in LTE RRC CR for NR mobility in email discussion [221].**

6.9.3.5 Conditional handover - beam specific aspects

This AI only addresses NR.
Including discussion on beam-related aspects for CHO. No new proposals should be provided, and any contributions should provide TPs illustrating the required Stage-3 specification changes.

6.9.3.6 Summary documents for conditional handover and fast handover failure recovery

Summary documents for Ais 6.9.3.1, 6.9.3.2, 6.9.3.3, 6.9.3.4 and 6.9.3.5 should be submitted under this AI.
Summary document of 6.9.3.1 to be provided by NN.
Summary document of 6.9.3.2 to be provided by NN.
Summary document of 6.9.3.3 to be provided by NN.
Summary document of 6.9.3.4 to be provided by NN.
Summary document of 6.9.3.5 to be provided by NN.

R2-2002040	Summary of CHO in AI 6.9.3.1 and 6.9.3.3	Intel	discussion	Rel-16	LTE_feMob-Core, NR_Mob_enh-Core

⇒ **Noted**

Proposals in summary document:
Agreements proposed to be agreed in this meeting (from all sub-topics)

Proposal S4_1::The UE shall autonomously remove measObject(s) only associated to CHO upon suspend/release, CHO/HO execution and re-establishment;

Open items proposed to be further discussed in this meeting (from all sub-topics)

DISC S1_1:For "and" condition, further discussion on which option should be selected, Option A, B, C, D or E.

DISC S1_2:Further discussion on whether different measurement object in A3+A5 combination is supported or not.

DISC S2_1:To discuss whether the UE shall stop the evaluating the execution condition during legacy HO/CHO. Or the UE shall not apply CHO configuration when a new execution condition is met during HO/CHO;

DISC S3_2: to discuss whether the cho-ExecutionCond is also OPTIONAL, Need S?

DISC S3_3: should we allow CHO configuration without cho-ExecutionCond?

DISC S5_1: to discuss whether CHO (MCG) can work together with MR-DC, i.e. receive CHO when MR-DC is configured, and receive SCG addition WHEN CHO condition is configured;

DISC S5_2:To discuss whether CHO (MCG) configuration can contain SCG configuration or not; If yes, we need to clarify only Pcell can be candidate cell.

Issues to be covered by other email discusions and should be treated based on email discussion report:

Proposal 2-1: CHO+legacy HO command should be discussed based on email discussion 108#66;

Proposal 4-1: Handling of measID/reportConfig when the CHO configurations are autonomously released by the UE should be discussed based on email discussion 108#66;

Proposal 5-1: CHO+CPC should be discussed based on email discussion 108#67;

Proposal 8-1: The maximum candidate cells should be discussed based on email discussion 108#66;

Proposal 10-1: The support of CHO+DAPS should be discussed based on email discussion 108#66;

Proposal 12-1: The support of CHO+T312 should be discussed based on email discussion 108#66;

Rel-16 Mob can work without these optimization, and proposed not be treated in this meeting:

Optimization S16_1:Discuss whether signalling optimization on legacy HO command is needed or not based on the solution if the network wants to trigger a conventional handover to one of the configured CHO candidate cells, one target cell indication (e.g. candidate cell index) can be included in the conventional HO command to trigger the CHO execution of the indicated candidate cell.

Optimization S16_2:Discuss whether CHO execution condition is defined based on the existing measID+additional a3-Offset or a5-Threshold in CHO-ExecutionCond, i.e. we do not need to introduce cho-trigger event in reportConfig.

Optimization S16_3:Discuss whether multiple CHO execution condition (using or) of a single candidate cell is allowed.

Optimization S16_4:Discuss whether introduce measurements results (including beam level results) in HO complete message.

Optimization S16_5:Discuss whether an RRCReject is allowed in response to an RRCReconfigurationComplete upon CHO execution.

Optimization S16_6:Discuss whether add serving radio link status information in measurement report.

Optimization S16_7:Discuss whether return CHO is supported or not;

Optimization S16_8:To discuss whether CHO can be configured in the resume message;

Open items proposed not be treated:

2.1 Issue 2: [1] raised for A3/A5 combination, whether original agreements "same RS type" for multiple trigger events is still valid or not

2.4 Issue 3 [21]: to reverse the agreements, the UE shall not autonomously remove CHO configuration upon successful HO;

2.7 [4] raised issue on UE context discard upon successful reestablishment or CHO

2.9 [10] UE reports the CHO reconfiguration failure related information to the network side, e.g. the failure indication, the failure target cell ID, the specific failure configuration..

2.11 [12] ask RAN2 to define a list of reconfigurations that require and do not require coordination with the target cell. A corresponding signalling is expected to be designed by RAN3

2.13 Issue 1: continue the measurement reporting after receiving cho-config [25]

2.13 Issue 2: Modification of the measurement configuration in cho-config [25]

2.13 Issue 3: Leaving condition based CHO reporting to allow the network to de-configure the CHO candidate(s) [25]

2.13 Issue 4: handling when multiple cells meet the execution condition [26]

UE should ignore the difference of the measurement results derived from different rsType when more than one candidate cells meet each execution condition

The UE should evaluate candidate cells based on the RSRP, when more than one candidate cells meet each CHO execution condition, independent of the trigger quantity configured for them

The UE should ignore the number difference between different rsType when evaluates the number of the beam above the threshold if multiple cells meet each CHO execution condition

2.3 Issue, whether the restriction on cho-RRCReconfig should be captured in the procedure or as field description

2.14 Issue 1: the UE should only derive/update the security keys when conditional handover is being executed;

2.15 issue 1: whether CHO is supported for NR-U, and if yes whether introduce a new event based on the channel occupancy;

R2-2002016 CHO failure handling Nokia discussion Rel-16 NR_Mob_enh-Core

⇒ **Noted**

Proposals in summary document:
Agreements proposed to be agreed in this meeting (from all sub-topics)

Proposal S2_1: Do not introduce a new timer to control the conditional handover procedure after RLF or HOF/CHOF.

Proposal S4_1: Ensure DataInactivityTimer is stopped when CHO execution is triggered. Check whether the existing RRC CR needs to be updated accordingly.

Proposal S5_1: Do not consider in Rel-16 additional scenarios where failure recovery via CHO can be applied.

Open items proposed to be further discussed in this meeting (from all sub-topics)

DISC S6_1: Discuss further which solution shall be chosen in case of PCell's failure when both recovery via CHO and fast MCG recovery are configured.

R2-2002070 Summary of AI 6.9.3.4 (Fast handover failure recovery) Samsung discussion Rel-16 NR_Mob_enh-Core

⇒ **Noted**

Proposals in summary document:
Recommended Proposal#1: RAN2 is requested to agree the proposals in [R2-2000928] and adopt in running CR the proposed TP.

Recommended Proposal#2: RAN2 is requested to quickly check the two alternatives proposed in [R2-2001623] and agree one of them.

Recommended Proposal#3: RAN2 is requested to discuss the two proposals in [R2-2001609].

Open items proposed to be further discussed in this meeting

DISC S1_1: Whether configuration of T312 in the CHO event configuration is allowed? If allowed, then the trigger condition to start T312.

6.9.4 Conditional PSCell addition/change

No documents should be submitted to 6.9.4. Please submit to 6.9.4.x

6.9.4.1 Conditional PSCell change for intra-SN

Including outcome of email discussion [108#67][NR Mob] Resolving open issues in CPAC and creating TP (CATT).
Including remaining details of SN-initiated procedures (other cases are not considered in Rel-16).
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. No web conference is planned for this agenda item.

By Web Conf

R2-2000900 Report on email discussion [108#67][NR Mob] Resolving open issues in CPAC and creating TP (CATT) CATT discussion Rel-16 NR_Mob_enh-Core
=> Revised in R2-2002089

R2-2002089 Report on email discussion [108#67][NR Mob] Resolving open issues in CPAC and creating TP (CATT) CATT discussion Rel-16 NR_Mob_enh-Core

Discussion

P5:

- Nokia has concerns on this as MN should know. CATT clarifies that in offline discussion this has been discussed and there are still comments so it could be also considered later.

P4:

- Futurewei has some concenrs on this. Could also fall back to source. CATT clarifies that this follows the legacy procedures. LGE and Nokia also agree. Nokia thinks the open issue is in the content of SCG failure message. Futurewei thinks procedures should still allow trying for new target.

P7

- LGE thinks CPC cannot use all the same IEs, such as triggering time.

Agreements (3.3.2020)

1) Similar to CHO, the following applies to CPC-intra-SN configuration
   - Reuse the RRCReconfiguration/RRCConnectionReconfiguration procedure to signal CPC-intra-SN configuration to UE.
   - The MN is not allowed to alter any content of the configuration from the SN which is carried in an RRC container.
   - Multiple candidate PSCells can be sent in either one or multiple RRC messages.
   - Use add/mod list + release list to configure multiple candidate PSCells.
   - CPC-intra-SN execution condition and/or candidate PSCell configuration can be updated by the SN (i.e. by modifying the existing CPC-intra-SN configuration).

2) Once the CPC-intra-SN procedure is executed successfully, the UE releases all CPC-intra-SN configurations stored on the UE side.
3) Upon the successful completion of conventional PSCell change procedure, the UE releases all CPC-intra –SN configurations.
4) The SCG failure information procedure can be used for CPC-intra-SN procedure failure (due to RLF, T304-like timer expiry or compliance check failure).

6) If SRB3 is not configured, the UE first informs the MN that the message has been received. Then the UE needs to provide the CPC complete message to the SN via the MN upon CPC execution.

7) CPC reuses the IE defined for CHO. The field name of the IE could be changed to reflect that the IE is used for both CHO and CPC.

⇨ P4: FFS on SCG failure reporting contents. Discuss CPC failure separately.
⇨ P7: The details of the signalling can be discussed and there can be some differences.

FFS: 5) In case of SRB3, the MN is not informed of CPC-intra-SN execution by the UE.

B). Need further discussions

1) RLF on PCell: In case of RLF on PCell during the execution of CPC-intra-SN, same operation applies as for conventional PSCell change, i.e. The UE stops the ongoing CPC-intra-SN procedure even if the UE supports fast MCG recovery and the UE performs RRC reestablishment procedure.

2). Reception of RRC messages from the MN: to discuss on how to handle RRC message reception from the MN while CPC-intra-SN is executed:

Option 1: While executing CPC procedure, the UE continues to receive and process RRC reconfiguration from the MN. If received during the CPC execution, the UE stops the ongoing CPC procedure if the UE receives

- *1). PCell change*
- *2). Conventional PSCell change*
- *3). SCG release*

Option 2: While executing CPC procedure, the UE continues to receive RRC reconfiguration from the MN. However, the UE should finalise the ongoing CPC execution before processing the RRC message received from the MN.

Option 3: The same UE behaviour as in the conventional PSCell change i.e. no specific UE requirement.

3). Simultaneous support of CHO and CPC: support of CHO and CPC-intra-SN configuration simultaneously is not considered in Rel-16 due to limited time.

4). FFS on message formatting on how to provide the CPC complete message to the SN via the MN upon CPC execution (when SRB1 is used for CPC configuration).

Option 1: In both cases (at the reception of CPC configuration and upon the execution of CPC procedure) the complete message to MN includes an embedded complete message to the SN.

Option 2: only the complete message exchanged via SRB1 at CPC execution includes an embedded message to the SN.

By Email

R2-2000446	Failure and validation handling on intra-SN CPC	Futurewei	discussion	Rel-16 NR_Mob_enh-Core
R2-2000447	Fast Pcell RLF recovery during intra-SN CPC	Futurewei	discussion	Rel-16 NR_Mob_enh-Core
R2-2000554	Remaining Issues and TP on Simultaneous CHO and CPC Configurations	InterDigital	discussion	Rel-16 NR_Mob_enh-Core
R2-2000560	Failure Recovery for Conditional Pscell change	Nokia, Nokia Shanghai Bell	discussion	Rel-16
R2-2000606	Discussion on open issues in PSCell change	Apple	discussion	Rel-16 NR_Mob_enh-Core
R2-2001005	On MN-initiated reconfigurations during conditional PSCell change	Nokia, Nokia Shanghai Bell	discussion	Rel-16 NR_Mob_enh-Core
R2-2001006	On informing the MN about CPC execution	Nokia, Nokia Shanghai Bell	discussion	Rel-16 NR_Mob_enh-Core
R2-2001007	On avoiding simultaneous CHO and CPC	Nokia, Nokia Shanghai Bell	discussion	Rel-16 NR_Mob_enh-Core
R2-2001008	Draft LS on avoiding simultaneous CHO and CPC	Nokia, Nokia Shanghai Bell	LS out	Rel-16 NR_Mob_enh-Core To:RAN WG3
R2-2001103	Remaining issues for CPC-intra-SN in NR	Potevio Company Limited	discussion	Rel-16 NR_Mob_enh-Core
R2-2001150	Remaining issues on failure handling for conditional PSCell change	Qualcomm Incorporated	discussion	
R2-2001151	Remaining issues on RRC message handling for conditional PSCell change	Qualcomm Incorporated	discussion	

R2-2001163 Remaining issues concerning conditional change (mostly PSCell) Samsung Telecommunications discussion Rel-16 NR_Mob_enh-Core

R2-2001387 Discussion on leftovers for CPAC Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core

R2-2001388 Discussion on failure handling for MR-DC for CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core

R2-2001536 Transaction ID Issue in CPC LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

R2-2001538 Consideration of SCG failure with CPC LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1916207

R2-2000333 Remaining open issues for conditional PSCell change Ericsson discussion Rel-16 NR_Mob_enh-Core

(moved from 6.9.4)

⇒ **All of the above documents in this AI are handled in email discussion [215]**

✉ **[AT109e][215][NR MOB] Finalization of CPC and discussing remaining open issues (CATT)**

Scope:

- Agreeing on the proposals as per R2-2000901 (as much as possible).
- Discuss open items as per R2-2000901 to seek companies feedback on open issues for CPC.

Intended outcome:

- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments:

- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals' wording, Monday March 2nd by 17:00 CET

R2-2001747 Report of [AT109e][212][MOB] CHO configuration and execution details (Intel) CATT

⇒ **Most proposals treated online (3.3.2020)**

Proposals from offline email discussion [215]:

Agreements proposed to be agreed in this meeting (easy agreements)
Proposals from 108#67[2]:

1) Similar to CHO, the following applies to CPC-intra-SN configuration
- Reuse the RRCReconfiguration/RRCConnectionReconfiguration procedure to signal CPC-intra-SN configuration to UE.
- The MN is not allowed to alter any content of the configuration from the SN which is carried in an RRC container.
- Multiple candidate PSCells can be sent in either one or multiple RRC messages.
- Use add/mod list + release list to configure multiple candidate PSCells.
- CPC-intra-SN execution condition and/or candidate PSCell configuration can be updated by the SN (i.e. by modifying the existing CPC-intra-SN configuration).

2) Once the CPC-intra-SN procedure is executed successfully, the UE releases all CPC-intra-SN configurations stored on the UE side.
3) Upon the successful completion of conventional PSCell change procedure, the UE releases all CPC-intra –SN configurations.
4) The SCG failure information procedure can be used for CPC-intra-SN procedure failure (due to RLF, T304-like timer expiry or compliance check failure).

5) In case of SRB3, the MN is not informed of CPC-intra-SN execution by the UE.

6) If SRB3 is not configured, the UE first informs the MN that the message has been received. Then the UE needs to provide the CPC complete message to the SN via the MN upon CPC execution.

7) CPC reuses the IE defined for CHO. The field name of the IE could be changed to reflect that the IE is used for both CHO and CPC.

Agreements (3.3.2020)

Proposals from offline discussion [AT1092] [215]:
S1_1: While executing CPC procedure, the UE continues to receive RRC reconfiguration from the MN. However, the UE should finalise the ongoing CPC execution before processing the RRC message received from the MN (same as in the conventional PSCell change). i.e. legacy behaviour and no specific UE requirement.
S1_2: As in legacy PSCell change, the UE sends RRCReconfigurationComplete to the MN at execution of CPC when no SRB3 is configured and the MN informs the SN. i.e the complete message to MN includes an embedded complete message to the SN.
S1_3: The UE sends RRCReconfigurationComplete to the MN at configuration of CPC when no SRB3 is configured and the MN informs the SN. i.e. the complete message to the MN includes an embedded complete message to the SN.

S1_5:
- Nokia wonders if we should inform RAN3 about this decision since they are not working on CPC anymore. Intel agrees.
- Ericsson thinks this LS is not needed. RAN3 can read our agreements. Nokia thinks we don't normally assume this but send an LS.
- Samsung thinks having UE requirement is not needed.

Agreements (3.3.2020)
S1_4. Upon RLF on PCell during the execution of Conditional PSCell change for intra-SN change without MN involvement, the UE supports the Rel-16 MR-DC procedures, i.e. performs connection re-establishment procedure without any fast MCG link recovery.
S1_5: Support of CHO and CPC-intra-SN configuration simultaneously is not considered in Rel-16. Leave it up to the network solution to ensure there is no simultaneous CHO and CPC configuration.
S2_6: Reconfirm the use of SCG failure information upon declaring SCG failure in the procedure of the conditional PSCell change.

⇒ **S1_5: UE may treat this as an error case (and trigger re-establishment). We do not specify UE behaviour but will specify that if CHO is configured, network should not configure CPC.**

⇒ **Up to RAN3 if/how to ensure no simultaneous CHO+CPC (e.g. OAM, etc.).**

⇒ **RAN2 assumes this issue can be raised by companies in RAN3.**

⇒ **Chair will ask RAN3 chair if this would require LS (assumption is no).**

⇒ **[200]: An email discussion will be attempted to send LS to RAN3 informing them of RAN2 decision (without explicit actions).**

✉ **[Post109e][NR MOB] LS to RAN3 on prohibition of CPC + CHO (Nokia)**
Intended outcome: Agreed LS to RAN3 to inform them of RAN2 decision to disallow simultaneous usage of CPC and CHO for the same UE.
Deadline: Short (1-week)

⇒ **Final LS can be provided in R2-2001764**

R2-2001764 LS on avoiding simultaneous CHO and CPC RAN2l LS out Rel-16 NR_Mob_enh-Core
To:RAN3

=> Approved

S3_11/12:

- OPPO wonders if we have the same agreement for CHO that UE checks the validity immedaitely. CATT thinks both of the proposals go together.
- Samsung thinks that if we send Complete-message, we also check the compliance of both parts. So embedded message is only sent if the compliance is checked. Nokia agrees but could align with CHO. Intel thinks there is no real problem as re-establishment will occur if the SN configuration is invalid. Ericsson agrees and thinks the compliance is for the source part.

Agreements (3.3.2020)

S2_7. When the conditional PSCell configuration received over SRB3 is invalid, UE initiates SCG failure information procedure to report to the MN about the SN change failure due to invalid configuration (legacy procedure).
S2_9. Like CHO, UE shall follow the below procedures for handling the T310 and T304 timers during conditional PSCell addition/change procedure for EN-DC, NGEN-DC, NR-DC cases:
- UE shall not stop MN T310 or SN T310 and shall not start T304 when it receives configuration of a CPC-intra-SN
- The timer T310 (SN only in case of SN Change) is stopped and timer T304-like is started when the UE begins execution of a CPC-intra-SN.

S3_11. UE checks the validity of conditional PSCell change execution criteria configuration immediately on receiving the conditional PSCell change RRC Reconfiguration message, either embedded in the MN RRC message over SRB1 or received over SRB3 (same as CHO).

S3_12. Introduce no specification changes regarding compliance checking of embedded Reconfiguration message containing configuration of conditional PSCell candidate (same as for CHO).

⇒ **S3_11: Change execution criteria refers to the measID used for triggering CPC.**

Discussion

S2_8

- FW prefers option 2 since PCell connection may still be good so re-establishment is not needed. That would cause service interruption. vivo thinks MCG+SCG configuration exceeds UE capabilities, so error could be from MN or SN so it's better to use option 1.
- Intel thinks we consider this as network error so don't need to optimize for such rare cases. It also aligns with MR-DC error handling. Nokia, Samsung and QC agree.

Open items proposed to be further discussed in this meeting from offline discussion[AT1092][215]:

S2_8). Discuss the UE behaviour when the conditional PSCell configuration received over SRB1 is invalid, i.e. UE cannot comply with the embedded PSCell configuration for intra-SN Change,

Option 1: UE performs connection re-establishment procedure or actions upon going to RRC_IDLE (legacy procedure).

Option 2: UE performs SCG failure information, like in SRB3 case

⇒ **Agree to the option 1**

Agreements (3.3.2020)

S2_8. If UE cannot comply with the embedded PSCell configuration for intra-SN Change, UE performs connection re-establishment procedure or actions upon going to RRC_IDLE (legacy procedure).

⇒ **The following open issues are postponed to next meeting:**

S3_14: discuss whether the UE should stop evaluating the measId associated with the CPC, after sending SCG failure information.

S3_10: The UE shall inform the MN when CPC execution condition is fulfilled and the UE starts executing CPC, irrespective whether SRB3 is configured or not.

S3_15: When CPC-intra-SN is configured, if the UE is failed to access a candidate PSCell, the UE need not suspend SCG transmission for all SRBs and DRB, and reset SCG MAC.

S3_16: During the CPC-intra-SN execution on a candidate PSCell, the UE continues the measurement configured for CPC-intra-SN target selection and execution.

S3_18: For CPAC failure report, the SCG failure information message including the ID(s) of CPC execution failed cell(s).

S3_19: If there is no SRB3, the UE sends an RRC message via SRB1 to inform the SN of CPC execution, and the RRC message doesn't need to set transaction Id for responding to MN e.g. ULInformationTransferMRDC.

⇒ **The following issues are not going to be discussed during Rel-16 work.**

S3_13: postpone discussion to future release on whether a threshold parameter should be added to determine PCell quality and CPC is performed only when the Pcell quality is above the configured threshold.

S3_17: postpone discussion to future release on whether the UE need not report the failure information of the first failed target PSCell, if access to one target PSCell failed and there is another qualified target PSCell for the UE to perform CPC right way.

⇒ **The agreements wil be incorporated into baseline CRs in offline email discussion [217]**

✉ **[AT109e][217][NR MOB] Finalization of CPC and discussion on CRs (CATT)**

Scope:

- Agreeing to baseline CR(s) for CPC functionality based on latest agreements
- Capture the agreements from discussion 215 to CR

Intended outcome:

- Baseline CPC CR(s)
- Agreeable CR(s) capturing the Rel-16 CPC feature

Deadline for providing comments:

- Companies input: Thursday, Feb. 27th 8:00 CET
- Revised CR: Friday, Feb. 28th 12:00 CET
- Incorporating agreements from the email discussion 215: Tuesday March 3rd by 17:00 CET

⇒ **The agreements will be incorporated into RRC CRs in offline email discussion [219] and [221]**

Draft CRs:

R2-2001043 Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR
Rel-16 38.331 15.8.0 1470 - B NR_Mob_enh-Core
(moved from 6.9.4.1)

⇒ **Revised in R2-2002248**

R2-2002248 Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR
Rel-16 38.331 15.8.0 1470 1 B NR_Mob_enh-Core R2-2001043
(moved from 6.9.4.1)

⇒ **Revised in R2-2001757**

R2-2001757 Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR
Rel-16 38.331 15.8.0 1470 2 B NR_Mob_enh-Core R2-2002248
(moved from 6.9.4.1)

⇒ **Endorsed as outcome of offline email discussion [217]**

R2-2001044 Stage-2 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR Rel-16 37.340 16.0.0 0181 - B NR_Mob_enh-Core
(moved from 6.9.4.1)

⇒ **Revised in R2-2002237**

R2-2002237 Stage-2 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR Rel-16 37.340 16.0.0 0181 1 B NR_Mob_enh-Core R2-2001044

⇒ **Revised in R2-2002237 -> R2-2001756 (CR#0181 rev2)**

R2-2001756 Stage-2 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR Rel-16 37.340 16.0.0 0181 2 B NR_Mob_enh-Core
(moved from 6.9.4.1)

⇒ **Endorsed as outcome of offline email discussion [217]**

R2-2001045 Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR Rel-16 36.331 15.8.0 4203 - B NR_Mob_enh-Core
(moved from 6.9.4.1)

⇒ **Revised in R2-2001758**

R2-2001758 Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement CATT CR Rel-16 36.331 15.8.0 4203 1 B NR_Mob_enh-Core

⇒ **Endorsed as outcome of offline email discussion [217]**

6.9.4.2 Summary documents for conditional handover and fast handover failure recovery

The summary document for AI 6.9.4.1 should be submitted under this AI.
Summary document of 6.9.4.2 to be provided by NN.

R2-2000901 Summary document for conditional PSCell change for Intra-SN CATT discussion Rel-16 NR_Mob_enh-Core Late

⇒ **Noted**

Proposals in summary document:
Agreements proposed to be agreed in this meeting (easy agreements)

S1_1: While executing CPC procedure, the UE continues to receive RRC reconfiguration from the MN. However, the UE should finalise the ongoing CPC execution before processing the RRC message received from the MN (same as in the conventional PSCell change). i.e. legacy behaviour and no specific UE requirement.

S1_2: As in legacy PSCell change, the UE sends RRCReconfigurationComplete to the MN at execution of CPC when no SRB3 is configured and the MN informs the SN. i.e the complete message to MN includes an embedded complete message to the SN.

S1_4. Upon RLF on PCell during the execution of Conditional PScell change for intra-SN change without MN involvement, the UE supports the Rel-16 MR-DC procedures, i.e. performs connection re-establishment procedure without any fast MCG link recovery,

S3_11. UE checks the validity of conditional PSCell change execution criteria configuration immediately on receiving the conditional PSCell change RRC Reconfiguration message, either embedded in the MN RRC message over SRB1 or received over SRB3 (same as CHO).

S3_12. Introduce no specification changes regarding compliance checking of embedded Reconfiguration message containing configuration of conditional PSCell candidate (same as for CHO).

Open items proposed to be further discussed in this meeting

S1_3: Discuss message formatting for RRCReconfigurationComplete to the MN at configuration of CPC when no SRB3 is configured.

- *Option 1: the complete message to MN includes an embedded complete message to the SN .*
- *Option 2: the complete message to MN does not include an embedded complete message to the SN.*

S1_5: Discuss how to handle the simultaneous CHO and CPC configurations.

Option 1: Leave it up to the network implementation (OAM) to ensure there is no simultaneous CHO and CPC configurations (majority opinion from the email discussion 108#67).

Option 2: Let RAN3 to consider a simple per UE based solution to ensure there is no simultaneous CHO and CPC configurations.

Option 3: Specify UE behaviour such that the UE should prioritise CHO over CPC configuration at the UE.

S2_6: Reconfirm the use of SCG failure information upon declaring SCG failure in the procedure of the conditional PSCell change.

S2_7. When the conditional PSCell configuration received over SRB3 is invalid, UE initiates SCG failure information procedure to report to the MN about the SN change failure due to invalid configuration (legacy procedure).

S2_8). When the conditional PSCell configuration received over SRB1 is invalid, i.e. UE cannot comply with the embedded PSCell configuration for intra-SN Change, UE performs connection re-establishment procedure or actions upon going to RRC_IDLE (legacy procedure).

S2_9. Like CHO, UE shall follow the below procedures for handling the T310 and T304 timers during conditional PSCell addition/change procedure for EN-DC, NGEN-DC, NR-DC cases:

11 UE shall not stop MN T310 or SN T310 and shall not start T304 when it receives configuration of a CPC-intra-SN
12 The timer T310 (SN only in case of SN Change) is stopped and timer T304-like is started when the UE begins execution of a CPC-intra-SN.

Open items can be discussed later

S3_10: The UE shall inform the MN when CPC execution condition is fulfilled and the UE starts executing CPC, irrespective whether SRB3 is configured or not.

S3_13: a threshold parameter is added to determine PCell quality and CPC is performed only when the PCell quality is above the configured threshold.

S3_14: After sending SCG failure information, the UE stop evaluating the measId associated with the CPC.

S3_15: When CPC-intra-SN is configured, if the UE is failed to access a candidate PSCell, the UE need not suspend SCG transmission for all SRBs and DRB, and reset SCG MAC.

S3_16: During the CPC-intra-SN execution on a candidate PSCell, the UE continues the measurement configured for CPC-intra-SN target selection and execution.

S3_17: If access to one target PSCell failed and there is another qualified target PSCell for the UE to perform CPAC right way, the UE need not report the failure information of the first failed target PSCell.

S3_18: For CPAC failure report, the SCG failure information message including the ID(s) of CPAC execution failed cell(s).

S3_19: If there is no SRB3, the UE sends an RRC message via SRB1 to inform the SN of CPC execution, and the RRC message doesn't need to set transaction Id for responding to MN e.g. ULInformationTransferMRDC.

Related to capturing in RRC

S4_20: To reflect that SPCell change is the only supported use case, adopt the name CondSPCellChange and also reflect in field names that configuration concerns a list of SPCell candidates:

S4_21: Clarify that network includes reconfigurationWithSync/ mobilityControlInfo in the container comprising the conditional SPCell configuration

S4_22: On the radio interface, do not distinguish whether candidate concerns PCell or PSCell. Distinguish PCell or PSCell candidates within the variables in order to simplify the procedural specification.

6.10 DC and CA enhancements

(LTE_NR_DC_CA_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-192336, see also guidance in RP 192326)
Time budget: 2 TU
Tdoc Limitation: 8 tdocs

6.10.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc
Including outcome of the email discussion [108#48][DCCA] DCCA R2 feature list (Huawei)
Including outcome of the email discussion [108#33][DCCA] RRC running CRs 36.331, 38.331 (Ericsson)
Summary DCCA Org (Ericsson) if needed

By email

General

R2-2002042 Feature summary for DC and CA enhancements: organizational aspects Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core Late

Incoming LS

R2-2000026 Reply LS on Fast MCG Link Recovery using SRB3 (R3-197606; contact: ZTE) RAN3 LS in Rel-16 LTE_NR_DC_CA_enh-Core To:RAN2

⇒ **Noted**

R2-2000039 Reply LS on direct SCell activation in RRC resume message (R4-1915844; contact: ZTE) RAN4 LS in Rel-16 LTE_NR_DC_CA_enh-Core To:RAN2

⇒ **Noted**

✉ **[AT109e][038][DCCA] DCCA General (Ericsson)**
Scope: WI Rapporteur email thread,
NOT USED

Feature List and UE capabilities

R2-2001189 Summary of [108#48][DCCA] DCCA R2 feature list Huawei discussion Rel-16 LTE_NR_DC_CA_enh-Core Late

⇒ **Noted**

R2-2001190 TP for 38.331 on introducing UE capability for eDDCA Huawei draftCR Rel-16 38.331 15.8.0 LTE_NR_DC_CA_enh-Core Late

⇒ **[AT109e][039][DCCA] Endorsed**

R2-2001191 TP for 36.331 on introducing UE capability for eDCCA Huawei draftCR Rel-16 36.331 15.8.0 LTE_NR_DC_CA_enh-Core Late

⇒ **[AT109e][039][DCCA] Endorsed**

R2-2001192 Running CR for 38.306 on introducing UE capability for eDCCA Huawei CR Rel-16
38.306 15.8.0 0247 - B LTE_NR_DC_CA_enh-Core Late

⇒ **[AT109e][039][DCCA] Endorsed (not for approval RP)**

R2-2002335 Running CR for 36.306 on introducing UE capability for eDCCA Huawei CR Rel-16
36.306 15.7.0 1744 - B LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][039][DCCA] Endorsed (not for approval RP)**

✉ **[AT109e][039][DCCA] UE capabilities (Huawei)**
Scope: Progress Feature List and UE capabilities, way forward.
Intended outcome: Treat email discussion [108#47] and other papers above, endorsed
CLOSED

R2-2002334 [AT109e][039][DCCA] UE capabilities (Huawei) Huawei discussion Rel-16
LTE_NR_DC_CA_enh-Core

Stage-2 37340 CRs
Input Status – endorsed R2#108

R2-2000292 Running CR to 37.340 for CA_DC enhancements vivo, Ericsson draftCR Rel-16 37.340
16.0.0 LTE_NR_DC_CA_enh-Core
- Ericsson think no more updates are needed to stage-2 CRs.

R2-2002368 Running CR to 37.340 for CA_DC enhancements vivo, Ericsson CR Rel-16 37.340
16.0.0 xxxx - B LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][040][DCCA] Agreed**
=> Revised in R2-2002395 (transform draftCR into CR)

R2-2002395 Running CR to 37.340 for CA_DC enhancements vivo, Ericsson CR Rel-16 37.340
16.0.0 0188 - B LTE_NR_DC_CA_enh-Core
=> Agreed

✉ **[AT109e][040][DCCA] CR Stage-2 37340 (Vivo)**
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

Stage-2 36300 38300 CRs
Input Status – endorsed R2#108

R2-2001246 Running CR for 36.300 on CA/DC Enhancements Ericsson CR Rel-16 36.300
16.0.0 1268 - B LTE_NR_DC_CA_enh-Core

R2-2002371 CR for 36.300 on CA/DC enh Ericsson CR Rel-16 36.300 16.0.0 1268 1
B LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][041][DCCA] Agreed**
=> Coversheet update by MCC: Wrong specifcation version number
=> Revised in R2-2002411

R2-2002411 CR for 36.300 on CA/DC enh Ericsson CR Rel-16 36.300 16.0.0 1268 2
B LTE_NR_DC_CA_enh-Core
=> Agreed

R2-2001247 Running CR for 38.300 for CA/DC Enhancements Ericsson CR Rel-16 38.300
16.0.0 0198 - B LTE_NR_DC_CA_enh-Core
- Ericsson think no more updates are needed to stage-2 CRs.

R2-2002372 CR for 38.300 for CA/DC Enhancements Ericsson CR Rel-16 38.300 16.0.0 0198
1 B LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][041][DCCA] Agreed**
=> Coversheet update by MCC: Wrong specifcation version number
=> Revised in R2-2002412

R2-2002412 CR for 38.300 for CA/DC Enhancements Ericsson CR Rel-16 38.300 16.0.0 0198 2 B LTE_NR_DC_CA_enh-Core
=> Agreed

✉ **[AT109e][041][DCCA] CR Stage-2 38300 36300 (Ericsson)**
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

RRC CRs - Email [108#33]
Input Status – to be endorsed

R2-2001248 Running CR for 36.331 for CA/DC Enhancements Ericsson CR Rel-16 36.331 15.8.0 4216 - B LTE_NR_DC_CA_enh-Core Late
=> Revised in R2-2002287

R2-2002287 Running CR for 36.331 for CA/DC Enhancements Ericsson CR Rel-16 36.331 15.8.0 4216 1 B LTE_NR_DC_CA_enh-Core
=> Revised in R2-2002373

R2-2002373 Running CR for 36.331 for CA/DC Enhancements Ericsson CR Rel-16 36.331 15.8.0 4216 2 B LTE_NR_DC_CA_enh-Core
=> Revised in R2-2002391

R2-2002391 CR for 36.331 for CA&DC enh Ericsson CR Rel-16 36.331 15.8.0 4216 3 B LTE_NR_DC_CA_enh-Core
=> Agreed

R2-2001249 Running CR for 38.331 on CA/DC Enhancements Ericsson CR Rel-16 38.331 15.8.0 1476 - B LTE_NR_DC_CA_enh-Core Late
=> Revised in R2-2002288

R2-2002288 Running CR for 38.331 on CA/DC Enhancements Ericsson CR Rel-16 38.331 15.8.0 1476 1 B LTE_NR_DC_CA_enh-Core
=> Revised in R2-2002374

R2-2002374 Running CR for 38.331 on CA/DC Enhancements Ericsson CR Rel-16 38.331 15.8.0 1476 2 B LTE_NR_DC_CA_enh-Core
=> Revised in R2-2002392

R2-2002392 CR for 38.331 for CA&DC enh Ericsson CR Rel-16 38.331 15.8.0 1476 3 B LTE_NR_DC_CA_enh-Core
=> Agreed

- Part 1 of the email discussion to endorse the CRs is done.

⇒ **[AT109e][042][DCCA] The running CRs in R2-2001248 and R2-2001249 are hereby endorsed as baseline CRs.**

✉ **[AT109e][042][DCCA] CR RRC 38331 36331 (Ericsson)**
Scope: Progress CRs
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
EXTENDED

⇒ **This email discussion is extended to MAR 10**

R2-2002132 Open issues regarding DCCA stage 3 running CRs Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

MAC CRs

✉ **[AT109e][043][DCCA] CR MAC (Oppo)**

Intended outcome: Capture agreements, also from this meeting, as they become available. Only impact due to dormancy is expected. Produce final agreed CRs.
CLOSED

R2-2002382 Introduction of dormant BWP operation and Async CA Oppo CR Rel-16 38.321 15.8.0 0685 2 B LTE_NR_DC_CA_enh-Core
- [AT109e][043][DCCA] Chair: I realize we may need updates next meeting. Anyway I hope the current CR is agreeable.

⇒ **[AT109e][043][DCCA] Agreed**

Missing in previous version

R2-2002082 Feature summary for miscellaneous topics in CA&DC Ericsson

⇒ **Noted, take into account relevant parts in other email discussion.**

6.10.2 NR-NR Dual Connectivity

Seems finished, no open issue
Summary DCCA NRNRDC (Ericsson) if needed

By Email

R2-2000293 Report of email discussion power control for NR-DC vivo discussion

R2-2000137 Remaining issues of power control in NR-DC Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000294 Draft LS on NR-DC power control vivo LS out To:RAN4 Cc:RAN1

R2-2000674 NR DC power control Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000872 Remaining issues for NR-DC power control Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001391 NR-DC power control Huawei, HiSilicon discussion Rel-16 NR_newRAT-Core

✉ **[AT109e][044][DCCA] Power Control NR DC (vivo)**
Scope: Treat Email discussion + additional issues from the other papers to this Agenda item
Intended outcome: Last Round: Approved LS to RAN3
CLOSED

✉ **[Post109e][DCCA] LS on Power Control NR DC (vivo)**
Scope: LS to RAN3, see discussion and decisions
Intended outcome: Approved LS
Deadline: 1 week

R2-2002256 Summary of power Control NR DC vivo discussion Rel-16 F LTE_NR_DC_CA_enh-Core

R2-2002257 Text proposal of power control NR-DC vivo draftCR Rel-16 38.331 LTE_NR_DC_CA_enh-Core

R2-2002109 Report of email discussion power control for NR-DC vivo discussion

R2-2002256 Summary of power Control NR DC vivo discussion
P3
- Ericsson think the pattern might is needed and it should be in Xn for ENDC
- QC didn't find this in Xn, but think it should be in Xn as it is semi-static
- Nokia think the pattern should be shared.
- Vivo would be ok to send LS to R3. Oppo think we need to ask if it is already there.
- ZTE think that for NR DC the pattern is already there by R3.

⇒ **For NR-DC power control, need an IE to indicate the semi-static TDD pattern of MCG to SN when semi-static power control Alt 1-2 is set by MN (may already be present)**

⇒ **Send an LS to check and ask for this to RAN3 (vivo) Draft LS, email approval**

⇒ **Send the LS to RAN4 to inform two new parameters introduced in RAN2 for NR-DC power control. A proposed LS is provided in R2-2000294.**

⇒ **For NR-DC power control, the *NR-DC-PC-mode* configured by MN is indicated to SN**

R2-2000294 LS on power control for NR-DC LSout to:R4 cc:R1 Ran2

⇒ **Approved (this is the final version)**

6.10.3 Early measurement reporting

Early measurement reporting for MR-DC, NR-DC, and CA in IDLE, INACTIVE.
Including outcome of the email discussion [108#54][DCCA] Early measurements (Ericsson)
Summary DCCA Early Measurement Reporting (Ericsson)

By Email and Web Conf

R2-2001252 Report on Email Discussion [108#54][DCCA] Early measurements (Ericsson) Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **Noted**

R2-2002043 Feature summary for early measurements Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **Noted**

R2-2002131 Report on offline discussion [AT109e][045][DCCA] Early measurement reporting – Phase 1 Ericsson
DISCUSSION
P6, 7, 8
- QC think these are related to R4 requirements, and some numbers may need to be changed, and we should ask R4.
- Ericsson propose those to be discussed further.
- Samsung think 8 is in the easy agreements section
- Chair: also P8 for further discussion

P9

⇒ **The UE starts to perform early measurements only when it is configured with measIdleDuration in RRC(Connection)Release (i.e. early measurement cannot be started only based on SIB signalling).**

⇒ **RAN2 to confirm that the different ways of configuring early measurements are: *All configuration received in dedicated signalling (i.e. RRC(Connection)Release; or All configuration received in broadcast (except for the measIdleDuration); or The dedicated signalling contains measIdleDuration and the list of the EUTRA/NR carriers:***
- For E-UTRA carriers, the measurement configuration is contained via the dedicated signaling
- For each of the NR carriers, the SSB configuration can be configured either via dedicated signalling or via SIB.

⇒ **RAN2 to confirm that the NR/EUTRA carrier list can not be split into SIB and dedicated signalling (i.e. either both in SIB or both in dedicated).**

⇒ **The measIdleDuration range in LTE euCA to be adopted in NR (i.e. ENUMERATED {sec10, sec30, sec60, sec120, sec180, sec240, sec300, spare})**

⇒ **As in LTE euCA, the RSRQ-Range-r13 IE (i.e. -30..46) will be used for specifying the thresholds for early measurement reporting of E-UTRA carriers in NR.**

⇒ **The SCS IE to be on the top level of the MeasIdleCarrierNR (i.e. not within the ssb-MeasConfig IE).**

⇒ **Capture the "available" aspect in procedure text.**

⇒ **Clarification to be added in 36.331 that the UE will be configured with only one validity area (either the rel-15 or rel-16 version).**

⇒ **In LTE/NR rel-16, the UE performs measurement on a carrier only if it is capable of CA or DC between the concerned carrier and the serving carrier.**

⇒ **No special handling will be specified for the case of 2-step resume without context fetch (i.e. can be handled via network implementation).**

⇒ **RNA update is not triggered due to going out of the validity area.**

⇒ **For early measurements while camping in LTE, the UE is required to measure E-UTRA if idleModeMeasurements-r15 is included. The UE is required to measure NR carriers, if idleModeMeasurements-r16 is included IEs, in SIB2 respectively.**

⇒ **In NR rel-16, the idleModeMeasurements can be used to specify whether the UE is required to perform early measurements on EUTRA, NR or both carriers. FFS if one IE (i.e. ENUMERATED {eutra, nr, both} or separate IEs (i.e. one for EUTRA, one for NR) is to be used.**

⇒ **The frequencyBandList to be on the top level of MeasIdleCarrierNR. FFS regarding nrofSS-BlocksToAverage-r16 and absThreshSS-BlocksConsolidation-r16 IEs.**

⇒ **No additional information elements regarding dedicated SSB configuration validity will be specified.**

⇒ **In rel-16, SFTD measurements cannot be configured as part of early measurement configuration.**

⇒ **No special handling of early measurement results during inter-RAT cell reselection will be specified.**

⇒ **The early measurement configuration will not be enhanced to support per (serving)-frequency early measurement target frequency list.**

⇒ **A NOTE to be added in 36/38.331 that UE is not required to perform early measurements on a given frequency if it finds mismatch between dedicated and SIB SSB configuration.**

✉ **[AT109e][045][DCCA] Early Measurements Reporting (Ericsson)**
Scope: Treat Email discussion + Summary
CLOSED

R2-2002289 Summary of [AT109e][045][DCCA] Early Measurements Reporting – Part 2 (Ericsson)
Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
DISCUSSION
P3
- Samsung think this is not needed.
- Huawei think this is controversial, and the network can anyway just request
- Chair: we don't continue P3 (at this meeting).

P4/P5
- Oppo think this is not needed. Only one flag is needed. Intel agrees. Nokia also agrees this is not needed.
- Chair: not so much support we don't contiunue (at this meeting).

⇒ **For early measurement configuration and reporting, ASN.1 signalling to allow the configuration of**
-up to 8 E-UTRA and 8 NR carries to be measured

-up to 8 E-UTRA and 8 NR carriers to be reported

-up to 32 beams to be included in the NR results

⇒ LS to be sent to RAN4 (Ericsson), with the purpose of:
- informing RAN2 decision (proposal 1)

- asking for input:

- clarification on the UE requirement aspects of early measurement performance and reporting

R2-2002376 Clarification of UE requirements for early measurement performance and reporting RAN2 LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN4
=> Approved

R2-2000252 Remaining issues for SSB measurement configuration CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000295 Priority for early measurement frequency vivo discussion

R2-2000322 Open issues for early measurement OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000323 Draft LS on early measurement configuration during 2 step resume procedure without UE context relocation OPPO LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN3

R2-2000675 LTE early measurement legacy text changes Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000676 On early measurements related to SCG CA Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000889 Early measurement performing for SCG CA case CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001124 Early measurement indication in NR SIB1 ZTE Corporation, Sanechips, Ericsson, MediaTek Inc discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001162 Remaining eDCCA issues (early measurements, fast MCG recovery) Samsung Telecommunications discussion Rel-16 LTE_NR_DC_CA_enh-Core Late

R2-2001193 Discussion on UE behaviour of checking MR-DC band combination when performing early measurement Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001194 Discussion on editor’s notes in the running CR for early measurement Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001195 Considerations on SFTD measurement in idle/inactive state Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001250 Early measurement configuration in UE context retrieval Ericsson, Qualcomm Incorporated, LG Electronics Inc., CATT, OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001251 Granular reporting of early measurement results Ericsson, MediaTek Inc., ZTE Corporation, LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001262 Remaining Issues on Early Measurements ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001403 Early measurement results handling upon inter-RAT cell reselection LG Electronics discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001404 Validity area enhancement in NR LG Electronics discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001574 Early measurement configuration mismatch in 2-step resume Samsung Electronics Co., Ltd discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.10.4 Efficient and low latency configuration signalling

Minimizing signalling overhead and latency needed for initial cell setup, additional cell setup and additional cell activation for data transmission. Contributions related to early measurement reporting should not be submitted in this AI.
Please submit to 6.10.4.x

6.10.4.1 Direct SCell activation

Further details related to direct SCell activation by RRC upon SCell addition or after a handover. Support of MCG SCell and SCG Configuration with RRC Resume (AI 6.10.4.3) should be concluded before discussing whether direct SCell activation by RRC is applicable to RRC Resume.

6.10.4.2 Fast SCell activation

Solutions for fast SCell activation including 'dormancy' like behaviour, provision of temporary RS resources at SCell activation, etc. This topic will be discussed again by RAN2 after receiving input from RAN1/4 on the feasibility and benefit of the potential solutions in response to LS R2-1908483 sent from RAN2#106.
Including outcome of the email discussion [108#56][DCCA] Scell Dormancy Open Issues (Oppo)
Summary Fast SCell activation (OPPO)

By Email and Web Conf

R2-2000314 Email report [108#56][DCCA] Scell Dormancy Open Issues OPPO report Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **Noted**

R2-2001511 Summary of fast SCell activation OPPO report Rel-16 LTE_NR_DC_CA_enh-Core Late

⇒ **Noted**

R2-2002110 Summary of fast SCell activation (OPPO) OPPO report Rel-16 LTE_NR_DC_CA_enh-Core Late

DISCUSSION

P1

- Nokia wonder how this is related to first active bandwidth part.
- intel think that the intention is to say ”similar to”

P2

- Intel think this restriction is not needed. Could be up to the network. Intel think this means that dormant Scells cannot be kept in dormancy at mobility. Apple also think this is not needed. IDT agrees as well. MTK would be ok to not have the restriction. Vivo think we can just leave this to network. Samsung agrees as well.
- LG support this proposal. QC as well. QC think this is not the intention of first active BWP, and think if we don’t have the restriction we need to consider more cases.
- Nokia think there is no case to have a recently activated Scell to be immediately dormant.
- Oppo indicate that there is majority support to have the restriction.
- Chair: there seems to be support to not have this limitation, we don’t take on additional work to specify UE behaviours by this.

P3

- Intel think we leave this to network implementation. ZTE agrees.
- QC think this (and 2) can be discussed more.
- Ericsson propose to skip P3 and agree to P2.

P7

- Nokia wonders if this is needed.
- Intel think this just says it is not applicable.
- QC think this is per Scell so we need it.

P19

- Mediatek think it is strange to have different model for UL and DL, and think it is related to SRS transmission.
- FW think UL dormant BWP is not needed, and think we need to agree the behaviour first.
- Ericsson just want to define UL behaviour rather than tieing this to UL BWP.
- ZTE also want to wait for discussion on SRS.

- QC think we can decide modelling independent of
- Chair: it seems most companies want to first discuss the behaviour and then the model.

⇒ **The network will explicitly configure the dormant BWP associated with one BWP id by RRC in downlinkBWP-ToAddModList and explicitly indicate the dormant BWP in ServingCellConfig (similar to first active downlink BWP and default downlink BWP).**

⇒ **Chair: Can discuss P2/P3 further and can introduce such restrictions if benefits can be found in having them (and if consensus is achieved).**

⇒ **Legacy SCell A/D MAC CE can be used to transit a SCell from activated state to deactivated state, no matter whether the SCell is in dormant BWP or not.**

⇒ **Legacy SCell A/D MAC CE can be used to transit a SCell from deactivated state to activated state, the BWP with firstActiveDownlinkBWP-Id is activated like legacy**

⇒ **No impact on the behaviour of sCellDeactivationTimer due to dormancy behaviour.**

⇒ **bwp-InactivityTimer should stop if running when UE enters dormant BWP.**

⇒ **Timer-based transition between non-dormancy and dormancy is NOT supported (i.e. no new timer or timer behaivour is introduced).**

⇒ **Rel-15 legacy behaviour of TA maintenance will be applied for dormancy Scell (i.e. no spec impact)**

Agreements P10-P16 [AT109e][046][DCCA]

⇒ **L1 based mechanism agreed in RAN1 can only apply to activated state cell. The UE should ignore the dormancy indication in DCI for deactivated SCell.**

⇒ **Network will configure the BWP id via RRC to be activated BWP upon transition from dormancy behavior to non-dormancy behavior (does not reuse the firstActiveDownlinkBWP-Id in RRC).**

⇒ **UE will not monitor the PDCCH for the SCell when enter dormant BWP for the SCell.**

⇒ **The pdcch-Config IE, pdcch-ConfigCommon and sps-Config IE are not configured for the dormant BWP. And CSI-RS configuration can be configured for the dormant BWP.**

⇒ **To support beam management in dormancy SCell:**
- The tci-StatesToAddModList in pdsch-Config IE can be configured for the dormant BWP.
- BFR is supported and radioLinkMonitoringConfig IE and BeamFailureRecoverySCellConfig can be configured for dormant BWP for beam failure detection purpose.
- An LS needs to be sent to RAN1 to check any issues.

⇒ **performing periodic or semi-persistent CSI measurements on dormancy SCell with the corresponding report transmitted on other cell (i.e., sPCell or non-dormancy SCell) is supported".**

⇒ **At most 2 set of SCell group configuration are supported in RRC signalling, i.e. Scell-groups-for-dormancy-outside-active-time and Scell-groups-for-dormancy-within-active-time as defined in RAN1.**

⇒ **In one SCell group configuration set, SCell can be configured only in one dormancy SCell group and the only the SCell configured with dormant BWP can be configured in the dormancy SCell group.**

R2-2002156 **Proposed discussion order for dormant BWP OPPO**
DISCUSSION
20.2

- FW think this doesn't work, SRS is needed in dormant mode. IF SRS is not supported then UL quality cannot be estimated, and latency is important. Huawei agrees with FW, and think the latency is a main argument. LG agrees as well. ZTE agrees as well, and think if this is the case then all Scell can be dormant.

- Intel support this, and don't think SRS is important, there is anyway UL on Pcell etc, and CSI can be used. If SRS is there, the improvement is only for the very first symbols. FW think CSI is not so applicable to UL, esp for higher freq, even TDD.
- QC support these proposals. SRS helps for UL estimation, but think they are not essential, and think there can be QCL relation between UL and DL CSI-RS for high freq, and think it is important to be able to turn off UE tx. Apple agrees. Vivo support as well, and think that for UL network can trigger RACH etc. Samsung support this due to power consumption. Oppo support as well. Nokia agree, a) due to power consumption, b) due to impact to continued work,
- Nokia think that R1 didn't estimate Power consumption due to UL activity. Nokia think we can go with this proposal for this release and can continue further enhancements next release.
- Ericsson also think power consumption is a main aspect, and skipping SRS would be simple.
- Intel think BWP modelling is complex.
- Vivo think we go this way for at least R16.
- ZTE think we should allow one Scell in a TAG to transmit SRS.
- FW think SRS is a L1 signal and think R2 cannot make decision.
- Verizon think the power saving aspect is much more important than the SRS.

20.1
- FW think R1 need to be consulted for this.
- Nokia wonder if we really would ask for R1 Confirm. QC agrees, R1 can check issues but should not open the full discussion in R1.

⇒ **SRS transmission (including aperiodic SRS, semi-periodic SRS and periodic SRS) is not supported in case the the DL BWP is switched to dormant BWP. This point will be included in the RAN1 LS to allow issues checking.**

⇒ **The UE should stop all the UL behavior in case the DL BWP is switched to dormant BWP, i.e. stop any UL transmission, suspend any configured uplink grant Type 1, clear any configured uplink grant of configured grant Type 2 in the dormancy SCell. This point will be included in the RAN1 LS to allow issues checking.**

⇒ **No UL dormant BWP is defined, and the UL behaviour is specified in TS38.321 in case the DL BWP is switched to dormant BWP.**

✉ **[AT109e][046][DCCA] Fast SCell Activation (Oppo)**
Scope: Treat Email discussion + Summary + LS
Intended outcome: Report, Agreed Issues resolutions
CLOSED

R2-2002224 Email discussion [AT109e#46][DCCA] Scell Dormancy Open Issues OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

P5
- MTK think R1 should make the desicion, and suggest to add to R1 LS. Nokia think this is also about overhead of signalling. QC agree with Nokia.

P9:
- FW are ok.
- Nokia think this was discussed in R1, and they have agreed.
- QC agrees this was agreed in R1 but there are Q: Will the UE receive two indications? Nokia think this can be an issue. Ericsson think this shold be addressed by R1, could include question in an LS. QC would be ok with LS question.
- Chair: R2 don;t need to agree etc if this has been agreed already in R1.We just take R1 agreement into account.

P11
- QC are ok.
- LG wonder what is the use case for first BWP, it seems not needed. LG can be ok with majority view. Intel thikn that if network expects data for a UE, the network may use dormancy, and e.g. HO doesn't change Data avialability / expectation. Apple agrees.
- Intel think we already discussed this. A limitation doesn;t seem needed. Nokia would also be ok.

P12

- Nokia think we don't need to limit. MTK agrees. Samsung agrees as well. Apple as well.
- QC also don't agree to not have no limitation and think this is redundant.
- Oppo support the original proposal think we could ask R1.
- Chair wonders why we need to change R1 agreement.
- MTK think we can just ask R1 what they have agreed

⇒ **On P12 can ask R1 what they have agreed.**

⇒ **No limitation for relationship between first active BWP and dormant BWP for BWP configuration, i.e. no spec impact.**

⇒ **Include in LS to R1 question what is the scenario for and whether the UE will receive two indications as a consequence of <Two separate first active non-dormant BWPs will be configured in RRC for the cases within active time and outside active time respectively when leaving dormant BWP>**

⇒ **FFS: the implicit BFD-RS configuration for dormant BWP is supported or not.**

Agreements [AT109e][046][DCCA]

⇒ **Performing periodic or semi-persistent CSI measurements on dormancy SCell with the corresponding report transmitted on other cell (i.e., sPCell or non-dormancy SCell) is supported". Aperiodic CSI reporting (no matter it is triggered via self-carrier scheduling or cross-carrier scheduling, no matter it is transmitted on dormant SCell or on other non-dormant SCell) is not supported.**

⇒ **The pdcch-ConfigCommon IE, sps-Config IE are not configured for dormant BWP and CSI-RS configuration can be configured for dormant BWP**

⇒ **To support beam management in dormancy SCell:**
- **The tci-StatesToAddModList in pdsch-Config IE can be configured for the dormant BWP.**
- **if PDSCH-Config is configured in dormant BWP, the UE only applies the TCI state, and doesn't apply other configurations.**
- **pdsch-ConfigCommon IE are not configured for dormant BWP;**

⇒ **The BFR is supported for the dormant BWP and BFR procedure follow the R16 eMIMO agreements. Both radioLinkMonitoringConfig IE and BeamFailureRecoverySCellConfig can be configured for dormant BWP for beam failure detection purpose.**

⇒ **UE will not monitor the PDCCH for the Scell (i.e. for cross-carrier scheduling) when the scheduled SCell is in dormancy.**

⇒ **L1 based mechanism agreed in RAN1 can only apply to activated SCell. The UE should ignore the dormancy indication in DCI for deactivated SCell.**

⇒ **Network will configure the BWP id via RRC to be activated BWP upon transition from dormancy to non-dormancy (does not reuse the firstActiveDownlinkBWP-Id in RRC).**

⇒ **To support SCell group configuration in RRC:**
- **At most 2 sets of Scell group configuration are supported in RRC signalling, i.e. Scell-groups-for-dormancy-outside-active-time and Scell-groups-for-dormancy-within-active-time as defined in RAN1.**
- **One Scell could be configured only in one Scell group of the outside active time Scell Groups. One Scell could be configured only in one Scell group of the inside active time Scell Groups**
- **Only Scell configured with dormant BWP can be configured in the dormancy Scell group.**

Draft LS

R2-2000319 Draft LS on dormant BWP configuration and related operation OPPO LS out Rel-16
LTE_NR_DC_CA_enh-Core To:RAN1
=> Revised in R2-2002222

R2-2002222 Draft LS on dormant BWP configuration and related operation OPPO LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN1

R2-2002381 Draft LS on dormant BWP configuration and related operation OPPO LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN1

⇒ **[AT109e][046][DCCA] Approved**

Discussion

R2-2000136 Finalize NR SCell dormancy Qualcomm Incorporated discussion LTE_NR_DC_CA_enh-Core

R2-2000296 Remaining issue of SCell dormancy vivo discussion

R2-2000321 Fast Scell activation in sTAG OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000448 Discussion on Scell domancy Futurewei discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000678 BFD on Dormant Scell Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000679 BFR on Dormant Scell Nokia, Nokia Shanghai Bell discussion Rel-15 LTE_NR_DC_CA_enh-Core

R2-2001225 Remaining issues for SCell dormancy Ericsson discussion

R2-2001226 Short CSI reporting for NR CA Ericsson discussion

R2-2001263 On SRS transmission on SCell in dormancy ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001264 On transmission from dormancy behavior ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001265 On UL dormant BWP ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001302 SRS transmission on dormancy SCell LG Electronics Inc. discussion LTE_NR_DC_CA_enh-Core

R2-2001303 Consideration on dormant uplink BWP LG Electronics Inc. discussion LTE_NR_DC_CA_enh-Core

R2-2001344 Discussion on some open items of SCell dormancy operation Intel Corporation discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001389 SCell dormancy behaviour Huawei, HiSilicon discussion Rel-16 NR_newRAT-Core

R2-2001453 Temporary RS utilization for SCell and SpCell CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1914530

R2-2001513 the ASN.1 design for SCell group configuration OPPO discussion LTE_NR_DC_CA_enh-Core

⇒ **The 17 tdocs above are noted**

Not Treated

R2-2000315 Text Proposal of dormant BWP introduction-38300 OPPO draftCR Rel-16 38.300 16.0.0 LTE_NR_DC_CA_enh-Core

R2-2000316 text proposal of dormant BWP introduction-38331 OPPO draftCR Rel-16 38.331 15.8.0 LTE_NR_DC_CA_enh-Core

R2-2000317 text proposal of SCell Group configuration for dormancy indication-38331-Alt 1 OPPO draftCR Rel-16 38.331 15.8.0 LTE_NR_DC_CA_enh-Core

R2-2000318 text proposal of SCell Group configuration for dormancy indication-38331-Alt2 OPPO draftCR Rel-16 38.331 15.8.0 LTE_NR_DC_CA_enh-Core

R2-2000320 38321CR introductin of dormant BWP B OPPO CR Rel-15 38.321 15.8.0 0685 - LTE_NR_DC_CA_enh-Core
=> Revised in R2-2002223

R2-2002223 38321CR introductin of dormant BWP B OPPO CR Rel-15 38.321 15.8.0 0685 1 LTE_NR_DC_CA_enh-Core

6.10.4.3 MCG SCell and SCG Configuration with RRC Resume

Support of CA/DC configuration with RRC resume.
Including outcome of the email discussion [108#55][DCCA] MCG SCell and SCG Configuration with RRC Resume (ZTE)
Summary MCG SCell and SCG Configuration with RRC Resume (ZTE)

R2-2000249 [108#55] Report of MCG SCell and SCG configuration with RRC Resume discussion Rel-16 LTE_NR_DC_CA_enh-Core — ZTE Corporation

⇒ **Noted**

R2-2002026 Summary of MCG SCell and SCG Configuration with RRC Resume discussion Rel-16 LTE_NR_DC_CA_enh-Core — ZTE Corporation

R2-2002135 Summary of MCG SCell and SCG Configuration with RRC Resume discussion Rel-16 LTE_NR_DC_CA_enh-Core — ZTE Corporation

⇒ **Noted**

DISCUSSION
P2
- IDT think there is concerns with TS impact, and think we can avoid failure with small impact, there would be no issue. Ericsson agrees, and think the additional condition is a RSRP radion condition.
- Nokia wonder what would happen if we do the blind resume, is there really a problem with such failure. Huawei also think the failure is ok.
- MTK think the problem is that there are two options and it may take time to converge, and the check is not important. CATT agrees, Apple agrees as well. Samsung as well.
- Vivo think we can decide by majority, and think the optimization is not needed.
- LG think that the P2 is not just optimization and there may be latencies.
- Chair: It seems there is some interest to do check towards RSRP threshold a condition for the resume, but the majority think this is not needed / not important. Will be treated with lower priority.

P3
- Ericsson think this has already been agreed

P4
- Nokia are ok with both option A and B. Intel has a slight preference for B, A brings some more discussion on reconfig complete,
- LG think CBRA should not be used.
- MTK prefer option B, which is simpler. Apple prefer option B and with this option dedicated RACH is possible. QC too. ZTE agrees as well. Huawei also think B is simpler.
- Ericsson agrees Option B seems simpler, but think it also means that EN-DC is not supported, which is the main concern. MTK don't understand why. Ericsson think this relates to MSG4 not being encrypted. Ericsson think this might be being fixed for LTE. Nokia confirms that this is indeed fixed for Rel-16.
- Vivo think Option A is more flexible. ZTE think with or without dedicated RACH resource the option B can be used.

B-1/B-2
- Huawei are ok. IDT as well. MTK support.
- Samsung think the main issue are which fields the network is mandated to signal.
- QC support these, and some of these are mandatory in the network config.
- Ericsson wonder why these are needed. Nokia agrees. Samsung agrees as well.
- LG wonder if MCG whether the same principle shall be applied. MTK think MCG is covered by R15 procedure.
- Vivo think that as long as we stick to existing procedures we don't need to change anything.

⇒ **If "*SecondaryCellGroup*" is included in *RRC(Connection)Resume* without "*restoreSCG*", UE shall release the stored SCG configuration and apply SCG configuration in "*SecondaryCellGroup*".**

⇒ **Confirm that we Support SCG delta configuration in *RRCResume* message (by including *restoreSCG* and *secondaryCellGroup*).**

⇒ **For *restoreSCG* upon RRC resume, Network shall always include *secondaryCellGroup* (with at least reconfigurationWithSync) together with *restoreSCG*.**

✉ **[AT109e][047][DCCA] MCG SCell and SCG Configuration with RRC Resume (ZTE)**
Status: CANCELED

R2-2000297 Some remaining issues on SCG resume vivo discussion
R2-2000298 Granularity of early measurement and reporting vivo discussion
R2-2000553 Handling the SCG Configuration in RRC Resume InterDigital, Ericsson, LG, OPPO, KT Corp discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2000588 Optimization of RRC Resume with SCG Configuration Procedure Apple discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2000589 RRC Resume with SCG Configuration Procedure Apple discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001253 Synchronization and random access to the PSCell during resume Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001390 Remaining issues on SCG configuration with RRC Resume Huawei, HiSilicon discussion Rel-16 NR_newRAT-Core
R2-2001607 Remaining issue on SCG delta configuration LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001610 Remaining issue on SN notificaiton LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001611 Remaining issue on stored SCG configuration LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **The 10 tdocs above are Noted**

Not Treated:

R2-2000551 Draft 36.331 CR for Handling SCG Configuration in Resume InterDigital, Ericsson, LG, OPPO draftCR Rel-16 36.331 15.8.0 LTE_NR_DC_CA_enh-Core
R2-2000552 Draft 38.331 CR for Handling SCG Configuration in Resume InterDigital, Ericsson, LG, OPPO draftCR Rel-16 38.331 15.8.0 LTE_NR_DC_CA_enh-Core

6.10.4.4 Other

Other enhancements not addressed in the AIs above

6.10.5 Fast MCG link Recovery

Further details of fast recovery of MCG link by utilizing the SCG link for recovery during MCG failure while operating under MR-DC.
Summary Fast MCG link Recovery (Ericsson)

By Email and Web Conf

R2-2001669 Feature summary for fast MCG recovery Ericsson (Rapporteur) discussion Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **Noted**

R2-2002137 Fast MCG recovery Ericsson
DISCUSSION
P3
- Nokia wonder what fast recovery RRC reconfiguration message means.
- MTK wonder why we need this. Ericsson think this is related to SON/MDT and we don't really need an agreement. QC also think this is not needed.
- Apple think that if we have it we need to refer to MCG configuration.

- [Chair] OK so lets skip this, can come back if a need is found.

P4
- Ericsson think this is also realted to SON MDT and should be skipped. QC agrees
- [Chair] OK so lets skip this, can come back if a need is found.

P5
- LG wonder if conditional PScell change is considered as well. Nokia think we need to progress CPC further before discussing here. CATT think we should not mix. Chair: we wait

P10
- Nokia think Proposal is ok, but should we send a LS to R3?
- Huawei think we never discussed inter-RAT for recovery.
- CATT agrees that the table describes the cases we support. CATT would like to confirm that also IRAT could be a possible option, but think there is no additional work in R3. Nokia think we have a dedicated message.
- Vivo think we can postpone this.
- QC think interRAT is not supported.
- Ericsson think we should not add cases to the ones listed.
- Samsung think that the table is mainly about handover and think it is confusing to refer to it for MCG recovery

P6
- ZTE think this shall be left open.
- Ericsson think we have already agreed that.

P13
- Oppo think radio link failure should be the cause used.
- Ericsson and Nokia think other failure is ok. MTK as well, and think there is no Radio Link Failure

⇒ **The values for T316 are: ms50, ms100, ms200, ms300, ms400, ms500, m600, ms1000, ms1500, ms2000**

⇒ **RAN2 to confirm that in case of MCG failure during the execution of PSCell change or addition, the UE shall trigger RRC re-establishment procedure (as currently implemented in the RRC Running CR).**

⇒ **FFS if The MR-DC scenarios illustrated in Table B-1 of TS 37.340 are supported for the fast MCG recovery procedure (i.e., the intention is to not support additional cases than the one illustrated in Table B-1 of TS 37.340).**

⇒ **RAN2 to confirm that, in case of SRB3, the *MCGFailureInformation* and the response to it are sent encapsulated within the *ULInformationTransferMRDC* and the *DLInformationTransferMRDC*.**

⇒ **RAN2 confirms that the option can be adopted to handle the pending SCG RLC failure report upon the triggering of MCG fast recovery is left to UE implementation.**

⇒ **RAN2 to confirm that, upon triggering RRC re-establishment due to the T316 expiry, the UE shall set the *reestablishmentCause* to *otherFailure*.**

✉ **[AT109e][048][DCCA] Fast MCG Recovery (Ericsson)**
Scope: Treat summary Fast MCG Recovery, remaining aspects
CLOSED

R2-2002226 Fast MCG recovery Phase 2 Ericsson discussion Rel-16
LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][048][DCCA] Noted**

Agreements [T109e][048][DCCA]

⇒ **RAN2 assumes to not specify any network behaviour regarding the setting of the timer T316 in relation to the value of the inactivity timer.**

⇒ **It is confirmed that the UE expects the network to explicitly reconfigure the primaryPath back to MCG after sending the MCGFailureInformation. If some clarification (i.e., a note) is needed this is discussed in the RRC running CR.**

✉ **[Post109e][DCCA] Fast MCG recovery (Ericsson)**
Scope: Referring to R2-2002226, a) SN change during the fast MCG recovery in an email discussion to the next meeting, b) the supported MR-DC handover scenarios for the fast MCG recovery.
Intended outcome: Report, pave the way for agreements
Deadline: Next Meeting

R2-2000301 Fast recovery failure indication vivo discussion
R2-2000541 Discussion on RRC reestablishment initiated by failure of MCG failure recovery sharp discussion LTE_NR_DC_CA_enh-Core R2-1914893 Late
R2-2000677 Remaining details of MCG failure recovery Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2000873 SN change during fast MCG recovery procedure Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2000874 Value range for T316 Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001266 Further issues on MCG fast recovery ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001454 Discussion on MCG Failure Information Report CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core
=> Revised in R2-2002039
R2-2002039 Discussion on MCG Failure Information Report CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001618 Remaining issue on gurard timer setup LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core Withdrawn
R2-2001620 Remaining issue on gurard timer setup LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-2001655 Further Correction on fast MCG link recovery Google Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **The 10 tdoc above are Noted**

6.10.6 Cross-Carrier scheduling with different numerologies

RAN2 aspects related to cross-carrier scheduling, to be discussed after RAN1 has made some progress.

Not to be Treated

R2-2000590 Clarification on DRX Timers for Cross-carrier Scheduling with Different Numerologies Apple draftCR Rel-16 38.331 15.8.0 LTE_NR_DC_CA_enh-Core

6.10.7 Other

Including any RAN2 aspects related to the objectives 6, 7 and 8 (for which the WID did not identify RAN2 impact)
Including outcome of the email discussion [108#57][DCCA] Async CA (QC)

By Email

R2-2000109 [108#57] Async CA (QC) - Report on Email Discussion Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][049][DCCA] Noted**

✉ **[AT109e][049][DCCA] Async CA (Qualcomm)**
Scope: Treat 108#57 (in case needed for discussion, can treat also additional papers).
CLOSED

R2-2002230 Summary report: [AT109e][049][DCCA] - Remaining issues of Async CA discussion Qualcomm Rel-16 LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][049][DCCA] Noted**

Agreements [AT109e][049][DCCA]

⇒ **In all MR-DC with async CA involving FR2 carrier(s), NW always explicitly indicate which serving cell as FR2 gap timing via RRC.**

⇒ **In (NG)EN-DC and NR SA with async CA involving FR2 carrier(s), NW indicates which FR2 serving cell as FR2 gap timing reference via a newly introduced RRC IE *refFR2ServCellAsyncCA.* Same as NR rel-15, SpCell in FR1 can't be used as FR2 gap timing reference.**

⇒ **Introduce separate field descriptions on *tdm-PatternConfig-r15* and *tdm-PatternConfig-r16* with clarifications on their different use cases and UE behaviours:**
- *tdm-PatternConfig-r15:* it is used when power control or IMD issues require single UL transmission in EN-DC with LTE FDD PCell
- *tdm-PatternConfig-r16:* it is used when power control or IMD issues require single UL transmission in EN-DC with LTE FDD/TDD PCell, and when DL de-sensing issue from harmonic require dual UL transmission in EN-DC with LTE FDD PCell.

⇒ **In NE-DC and NR-DC with async CA involving FR2 carrier(s), NW indicates which FR2 serving cell as FR2 gap timing reference via the new RRC IE *refFR2ServCellAsyncCA* when IE *refServCellIndicator* is set to *mcg-FR2.***

⇒ **Revert the RAN2#108 agreements on CG/SPS in Async CA as:**
- Under async CA, the UE uses SFN of concerned serving cell for the calculation of HARQ Process ID in SPS/CG (no change of rel-15 legacy UE behaviour).
- Under async CA, the UE uses SFN of concerned serving cell for the calculation of downlink/uplink assignment occurrences of SPS/CG (no change of rel-15 legacy UE behaviour).

⇒ **Capture the clarifications on DRX, CG and SPS in Async CA in TS 38.321.**

R2-2000122 [108#57] Async CA (QC) - CR to 38.331 on support of async CA Qualcomm Incorporated CR Rel-16 38.331 15.8.0 1466 - F LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][049][DCCA] CR contents is endorsed, merged with main 38331 DCCA CR**

R2-2002231 CR to 38.331 on FR2 gap timing under Async CA Qualcomm CR Rel-16 38.331 15.8.0 1503 - F LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][049][DCCA] CR contents is endorsed, merged with main 38331 DCCA CR**

R2-2002232 CR to 36.331 on rel-16 TDM pattern for dual UL and single UL operations in EN-DC Qualcomm CR Rel-16 36.331 15.8.0 4231 - F LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][049][DCCA] Revised in R2-2002325 to take wangruis comment March4 into account**

R2-2002325 CR to 36.331 on rel-16 TDM pattern for dual UL and single UL operations in EN-DC Qualcomm CR Rel-16 36.331 15.8.0 4231 1 F LTE_NR_DC_CA_enh-Core

- Chair: It seems that the revision is an small update to be consistent with recent R1 agreements, and at least one person has checked that it seems correct.

⇒ **[AT109e][049][DCCA] The revision is endorsed unseen and merged with main 36331 DCCA CR (can still have the revision checked in the email discussion)**

R2-2002233 CR to 38.321 on clarifications of Async CA Qualcomm CR Rel-16 38.321 15.8.0 0702 - F LTE_NR_DC_CA_enh-Core

⇒ **[AT109e][049][DCCA] CR contents is endorsed, merged with main 38321 DCCA CR**

R2-2000135 UE capability of Rel-16 DCCA enhancement Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2000177 FDD and TDD Timing Alignment for Dual Connectivity VODAFONE discussion

R2-2000691 Further discussion on NR CA with unaligned frame boundary MediaTek Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-2001350 RAN2 impact to support enhancements for dual UL and single UL operations in EN-DC Huawei, HiSilicon discussion Rel-16 NR_newRAT-Core

R2-2001392 UE capability for eDCCA RAN1 features Huawei, HiSilicon discussion Rel-16 NR_newRAT-Core

R2-2001400 Discussion on FR2 gap timing in async CA ZTE Corporation, Sanechips discussion LTE_NR_DC_CA_enh-Core Late

6.11 UE Power Saving in NR

(NR_UE_pow_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191607, See also guidence in RP-192326). Documents in this agenda item will be handled in a break out session. NOTE: "SCell dormancy" like behaviour will be discussed in MR-DC WI.

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

6.11.1 Organisational

Including incoming LSs, running TS, rapporteur inputs, etc

NOTE: any stage 3 identified issues with MIMO configurations should be provided to 38.331 rapporteur (Mediatek)

Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

38.306 can be submitted for informational purpose by rapporteur (Intel), but it will not be treated this meeting

Including outcome of the email discussion [108#39][Power Saving] Running 38.331 (Mediatek)

Including outcome of the email discussion [108#78][Power Saving] Running 38.321 (Huawei)

Including outcome of the email discussion [108#79][Power Saving] Running 38.304 (Vivo)

Including outcome of the email discussion [108#80][Power Saving] Running 38.300 (CATT)

Including outcome of the email discussion [108#81][Power Saving] Running 37.340 (Oppo)

LS to be treated only if the contact company flags it for presentation. Otherwise, it is directly Noted

R2-2000017 LS reply to RAN2 on WUS for short DRX cycle (R1-1913583; contact: CATT) RAN1 LS in Rel-16 NR_UE_pow_sav-Core To:RAN2

=> Noted

R2-2000098 LS reply on CSI/SRS reporting (R1-1913480; contact: Vivo) RAN1 LS in Rel-16 NR_UE_pow_sav-Core To:RAN2 Cc:RAN4

=> Noted

The following CRs should be endorsed as baseline from email discussion and used to capture the additional agreements from the e-meeting

R2-2000364 Running 38.304 CR on UE Power saving in NR vivo (rapporteur) CR Rel-16 38.304 15.6.0 0145 - B NR_UE_pow_sav-Core

=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion

=> The CR is revised in R2-2002195

R2-2002195 Running 38.304 CR on UE Power saving in NR vivo (rapporteur) CR Rel-16 38.304 15.6.0 0145 1 B NR_UE_pow_sav-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from week2 RAN2#109e, and continued as phase2 in email discussion
[offline discussion 515]
=> Revised in R2-2002302

R2-2002302 Running 38.304 CR on UE Power saving in NR vivo (rapporteur) CR Rel-16 38.304 15.6.0 0145 2 B NR_UE_pow_sav-Core
=> Revised in R2-2002386

R2-2002386 Introduction of UE Power Saving in NR vivo (rapporteur) CR Rel-16 38.304 15.6.0 0145 3 B NR_UE_pow_sav-Core
=> Coversheet update by MCC: Revision = 4
=> Revised in R2-2002414

R2-2002414 Introduction of UE Power Saving in NR vivo (rapporteur) CR Rel-16 38.304 15.6.0 0145 4 B NR_UE_pow_sav-Core
=> Agreed

R2-2000411 Running CR to 37.340 for power saving OPPO CR Rel-16 37.340 16.0.0 0184 - B NR_UE_pow_sav-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion
= Revised in R2-2002303

R2-2002303 Running CR to 37.340 for power saving OPPO CR Rel-16 37.340 16.0.0 0184 1 B NR_UE_pow_sav-Core
= Revised in R2-2002387

R2-2002387 CR for supporting UE Power Saving in TS 37.340 OPPO CR Rel-16 37.340 16.0.0 0184 2 B NR_UE_pow_sav-Core
=> Agreed

R2-2000843 Running CR for 38.331 for Power Savings MediaTek Inc. CR Rel-16 38.331 15.8.0 1469 - B FS_NR_UE_pow_sav R2-1915548 Late
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion
=> The CR is revised in R2-2002194

R2-2002194 Running CR for 38.331 for Power Savings MediaTek Inc. CR Rel-16 38.331 15.8.0 1469 1 B FS_NR_UE_pow_sav
=> The CR will be used as a baseline, will be revised to include all new agreements from week2 RAN2#109e, and continued as phase2 in email discussion
[Offline discussion 516]
=> Revised in R2-2002384

R2-2002384 Running CR for 38.331 for Power Savings MediaTek Inc. CR Rel-16 38.331 15.8.0 1469 2 B FS_NR_UE_pow_sav
=> Revised in R2-2002389

R2-2002389 Running CR for 38.331 for Power Savings MediaTek Inc. CR Rel-16 38.331 15.8.0 1469 3 B FS_NR_UE_pow_sav
=> Agreed

R2-2000888 Introduction of UE Power Saving in NR CATT CR Rel-16 38.300 16.0.0 0193 - B NR_UE_pow_sav-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion
=> Revised in R2-2002369

R2-2002369 Introduction of UE Power Saving in NR CATT CR Rel-16 38.300 16.0.0 0193 1 B NR_UE_pow_sav-Core
=> Coversheet update by MCC: Wrong specifcation version number
=> Revised in R2-2002410

R2-2002410 Introduction of UE Power Saving in NR CATT CR Rel-16 38.300 16.0.0 0193 2 B NR_UE_pow_sav-Core
=> Agreed

R2-2001615 Running CR for Introduction of Rel-16 NR UE power saving in TS 38.321 Huawei CR Rel-16 38.321 15.8.0 0699 - B NR_UE_pow_sav-Core Late
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion
=> Revised in R2-2002304

R2-2002304 Running CR for Introduction of Rel-16 NR UE power saving in TS 38.321 Huawei CR Rel-16 38.321 15.8.0 0699 1 B NR_UE_pow_sav-Core Late
=> Revised in R2-2002388

R2-2002388 Introduction of Rel-16 NR UE power saving in 38.321 Huawei, Nokia, Nokia Shanghai Bell CR Rel-16 38.321 15.8.0 0699 2 B NR_UE_pow_sav-Core Late
=> Agreed

From RAN2 point of view, the CR will be submitted for approval in plenary meeting. Stage 3 corrections and the FFS can be addressed in the April e-meeting. Further enhancements past the agreed FFS are not encouraged

The following email discussions will be treated during the first slot of e-meetings

R2-2000844 Email discussion summary on running 38.331 CR for Power Saving discussion Rel-16 FS_NR_UE_pow_sav Late MediaTek Inc.
=> Revised in R2-2001912

R2-2001912 Email discussion summary on running 38.331 CR for Power Saving discussion Rel-16 FS_NR_UE_pow_sav Late MediaTek Inc.
=> Noted

Agreements

1. The UE assistance IE to transition out of connected mode is named ‘releasePreference’
2. The UE assistance configuration for power savings is released during the RRC resume procedure.
3. A UE can report a preference of 0MHz aggregated bandwidth for power savings.
4. The reported long DRX-cycle preference is a multiple of the reported short DRX-cycle preference.
5. The search space for DCP can be configured independent of search spaces for Rel-15 DCIs.
6. The search space for DCP can be configured such that it is also used to monitor other Rel-15 DCIs. FFS the details of ASN.1
7. The prohibit timer for UE assistance on DRX, aggregated bandwidth, number of cell, number of MIMO layers, releasePreference and minimum scheduling offset for power savings can be configured up to 30s.
8. All fields in the DRX-Preference IE in the UE assistance information message are optional fields. FFS what it means when the UE omits the value and what it means
9. All fields in the MinSchedulingOffsetPreference IE in the UE assistance information message are optional fields. FFS what it means when the UE omits the values and what it means
10. If a UE wants to cancel an earlier indicated preference to leave connected mode, the UE can transmit a release preference IE with a connected mode state preference, when not prevented by a prohibit timer
11. A UE can report a preference of one layer as the minimum number of preferred DL MIMO layers for the downlink.
12. The reported values of UE assistance on reduced bandwidth, cells and MIMO layers for power savings can range up to at least the corresponding value in the current active configuration. FFS if it can be up to UE capability
13. A UE can report a preferred aggregated bandwidth for a frequency range on the configured serving cell. FFS if it is allowed even if it is not configured with serving cells on that frequency range

Discussion:

Proposal 3: If a UE wants to cancel an earlier indicated preference to leave connected mode, the UE can transmit a release preference IE with a connected mode state preference, when not prevented by a prohibit timer

- Ericsson would like to keep simple and make it work. Ericsson doesn't understand how this works and if the NW implements it would immidietally release and the UE wouldn't have a chance to change an update. ZTE has the same opinion.
- LG thinks this it would be good to avoid unnecessary transmission.
- CATT thinks that the timer set to infinity would allow the network to configure the UE such that it doesn't report again.

Proposal 4: The reported values of UE assistance on reduced bandwidth, cells and MIMO layers for power savings can range up to the corresponding value in the UE's capability, and is independent of the current active configuration.

- Ericsson doesn't think more than current configuration is justifiable and are very reluctant to allow this. Nokia, Xiaomi, agrees with Ericsson. Xiaomi is not sure how the UE can tell which method is better for power consumption.

R2-2001616 Report of email discussion [108#78][Power Saving] 38.321 open issues Huawei report Rel-16 NR_UE_pow_sav-Core
=> Noted

Agreements

1. RAN2 to confirm the MAC-PHY modelling in the MAC running CR for DCP
   Send LS to RAN1 to inform the RAN2 understanding
2. RAN2 does not expect to discuss partial overlapping for DCP monitoring and will following RAN1 CR on this issue
3. No special handling for DCP monitoring in case DCP is overlapped with HARQ-RTT-timer, i.e. DCP needs to be monitored
4. ps-TransmitPeriodicCSI-r16 and ps-TransmitPeriodicL1-RSRP-r16 can be configured independently
5. FFS ps-TransmitPeriodicCSI-r16 covers periodic CSI reporting apart from L1-RSRP related CSI (i.e. cri-RSRP and ssb-Index-RSRP) - ask RAN1 what the intention in the LS R2-2001617

Proposal 4: [FFS]: DCP is not monitored in case DCP is overlapped with RAR window. onDuration timer for the next DRX cycle is started (i.e. apply existing monitoring rules).

- Mediatek considers that the DRX and RAR is independent and we should keep things the same.
- Nokia asks can the UE decode both the RA-RNTI and PS-RNTI when RAR window is on. Lenovo has the same concerns and ask if the UE would monitor the same search space.
- Qualcomm thinks that if it is configured the UE can monitor both search spaces and if not configured it can monitor only RA-RNTI. Qualcomm is concerned that the NW doesn't know whether the UE is doing RACH. Vivo thinks that for beam failure recovery we should treat it similar to WUS in active time.

=> Move to offline discussion (Pierre)

R2-2001617 [Draft] LS on MAC-PHY modelling for DCPHuawei LS out Rel-16 NR_UE_pow_sav-Core To:RAN WG1 Late
=> The LS is moved to email discussion
=> The LS is revised in R2-2002192

R2-2002192 [Draft] LS on MAC-PHY modelling for DCPHuawei LS out Rel-16 NR_UE_pow_sav-Core To:RAN WG1
=> The LS is revised in R2-2002193

R2-2002193 [Draft] LS on MAC-PHY modelling for DCPHuawei LS out Rel-16 NR_UE_pow_sav-Core To:RAN WG1
=> The LS is revised in R2-2002197

R2-2002197 [Draft] LS on MAC-PHY modelling for DCPHuawei LS out Rel-16 NR_UE_pow_sav-Core
To:RAN WG1
=> Fix the typo
=> The LS is approved in R2-2002201

R2-2000365 Report of EmailDisc-79 on open issues for RRM measurement relaxation vivo (rapporteur)
discussion Rel-16 FS_NR_UE_pow_sav
=> Revised in R2-2002100

R2-2002100 Report of EmailDisc-79 on open issues for RRM measurement relaxation vivo (rapporteur)
discussion Rel-16 FS_NR_UE_pow_sav
=> Noted

Agreements

1. The network broadcasts corresponding parameters of relaxation triggering criteria to enable RRM measurement relaxation feature.
2. When network configures the parameters of both low mobility and not-at-cell-edge criteria. UE can perform measurement relaxation according one of the following options, which is indicated by the network:
   - Option a: UE uses both low mobility criterion and not-at-cell-edge criteria, i.e. UE can perform relaxation only when both criteria are fulfilled. And detailed relaxation behaviour is up to RAN4 discussion and decision;
   - Option b: UE uses either low mobility criterion or not-at cell-edge criterion, i.e. UE can perform relaxation when either low mobility or not-at-cell-edge criterion is fulfilled. And detailed relaxation behaviours are same as case that network only configures low mobility or not-at-cell-edge criterion;
3. The values of parameter SSearchDeltaP are 3, 6, 9, 12, 15 dB.
4. The infinity value for parameter SSearchDeltaP is not needed.
5. When network configures both RSRP and RSRQ thresholds for not-at-cell-edge criterion, UE can perform relaxation only when both RSRP and RSRQ based criteria are met.
6. Srxlev/Squal (Cell selection RX level value (dB)) is used to compare with threshold SsearchThresholdP/ SsearchThresholdQ. The corresponding text has been updated in running 38.304 CR.
7. The threshold SsearchThresholdP/ SsearchThresholdQ reuse the value range of ReselectionThreshold/ReselectionThresholdQ or RSRP-Range/RSRQ-Range
8. An LS is sent to RAN4 on RAN2 conclusions for the RRM measurement relaxation and ask RAN4 to discuss the measurement relaxation approach(es).
9. The parameter SrxlevRef is set according to the LTE mechanism as captured in current running 38.304 CR for power saving
10. FFS on RAN4 - if and what parameters we need (e.g. time interval for measurement relaxation since last measurement for cell reselection and the value range for the time interval)

RRC rapporteur should be able to use this as a baseline and companies can provide further views over email

Proposal 1: The terminology of relaxed measurement (i.e. option 2) is used for RRM measurement relaxation in NR.
Proposal 4: The IE highPriorityMeasRelax is defined as an optional fieldIE with the value of "ENUMERATED {true}" to configure higher priority frequencies can be relaxed.
Proposal 17: The parameter SSearchDeltaP is optional and default value can be 6dB.
Proposal 7: If the indication highPriorityMeasRelax is optional and when it is not present, the legacy behaviour should be followed, i.e. no measurement relaxation is performed on the high priority frequency.
Proposal 9: If proposal 8 is agreeable, this "and/or" indication is mandatory if network configures the parameters of both low mobility and not-at-cell-edge.
Proposal 12: The parameter TSearchDeltaP is optional, and the default value can be 1 minute or 60s.

Proposal 20: Whether the parameter SsearchThresholdP/SsearchThresholdQ is optional or mandatory if RRM measurement relaxation is supported can be discussed during the meeting after the decision on Proposal 2.
Proposal 11: RAN2 have a short discussion on the detailed values and the granularity for parameter TSearchDeltaP:
- Option 2: Values in number of seconds, e.g. 5s, 10s, 20s, 30s, 60s, 120s, 180s, 240s, and 300s.

Discussion
Proposal 3: Per-frequency configurationindication should be is supported for RRM measurement relaxation. FFS on per-FR or per-frequency.
- Huawei asks what is the use case and wouldn't the absolute priorities deal with it. Ericsson doesn't see the need for see. LG thinks that it is not that difficult.
- Sony, Samsung, agrees with Huawei and Ericsson

This is postponed to wait for RAN4
Proposal 5: RAN2 to discuss whether the measurement relaxation for high priority frequency indicated by highPriorityMeasRelax is controlled by the triggering criteria for measurement relaxation and check with RAN4 how RAN4 will make use of it:

Baseline for option 2 for now - This indication is associated with the triggering criteria
If highPriorityMeasRelax is present (or =true)
• If (low mobility and/or not-at-cell-edge) criterion is met, the UE can perform relaxed measurement for higher priority frequency; How to relax measurement for higher priority frequency is up to RAN4 decision.
Otherwise:
• The UE will not perform relaxed measurement for higher priority frequency regardless whether the trigger criterion is met. The measurement requirement for higher priority frequency should follow the legacy defined in 38.133.

R2-2001926 LS to RAN4 on RAN2 agreements on RRM Vivo
=> The LS is revised in R2-2002198

R2-2002198 LS to RAN4 on RAN2 agreements on RRM Vivo
[Offline discussion 524]
=> The LS is approved
=> Revised by MCC to update the WI code (FS_NR_UE_pow-sav -> NR_UE_pow_saw-Core)
=> Approved in R2-2002394

Response LSs should be agreed by email discussion if we decided they are needed

R2-2000366 Draft LS to RAN4 on RRM measurement relaxation in power saving vivo LS out Rel-16 FS_NR_UE_pow_sav To:RAN4

R2-2001617 [Draft] LS on MAC-PHY modelling for DCPHuawei LS out Rel-16 NR_UE_pow_sav-Core To:RAN WG1 Late

R2-2000452 UE capabilities for Rel-16 UE power saving WI Intel Corporation discussion Rel-16 NR_UE_pow_sav

R2-2000453 UE capabilities for Rel-16 UE power saving WI Intel Corporation CR Rel-16 38.306 15.8.0 0231 - B NR_UE_pow_sav

6.11.2 PDCCH-based power saving signals/channel Additional stage-3 RAN2 aspects

NOTE: 3. As per plenary guidance (RP-192289), RAN2 is not expected to discuss any aspects related to whether additional UE behavior is needed when UE is also configured for receiving PDCCH based power saving signal/channel outside active time. No contributions on this topic should be submitted under power savings.

ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should not discuss open issues in the email discussion.

To be discussed over email officially kicked off during e-meeting week (as offline email discussion) and treated the second slot, Week of March 2nd:

R2-2001913 Summary of open issues for PDCCH CATT
=> Noted
[Offline discussion 504]

Agreements

1. The issue of capturing CSI reporting when the *drx-onDurationTimer* is not started due to DCP indication, but the MAC entity is in Active Time during on-duration due to other reasons will be addressed in MAC specification.
2. The TP in R2-2000254 is used to capture the solution to agreement 1 in MAC.
3. No ambiguity period is needed when considering DCP for on-duration determination.
4. The below TP is used to capture agreement 3 in MAC.

> 1> if DCP is configured for the active DL BWP:
> 2> in current symbol n, if the symbol occurs within *drx-onDurationTimer* duration and *drx-onDurationTimer* would not be running considering DCP occurrence(s) associated with the curr DRX cycle ~~until [x] ms prior to symbol n~~ as specified in this clause:
> 3> not transmit periodic SRS and semi-persistent SRS defined in TS 38.214 [7];
> 3> not report semi-persistent CSI;
> 3> if *ps-Periodic_CSI_Transmit* is not configured with value *true*:
>
> 4> not report periodic CSI on PUCCH.

5. Since DCP is only monitored outside Active Time, there is a 4-ms ambiguity period associated with the DCP monitoring, to be captured in MAC specification. Further agreements from RAN1 will be taken into account in the next meeting.
6. The TP in R2-2001037 is used as a baseline to capture Proposal 12 in MAC.
7. If DCP only applies when UE is in Long DRX, no change is needed to the current 38.321 CR to capture this behaviour. FFS whether DCP applies to short DRX
8. The UE behavior when it receives DCP regarding the monitoring of following DCP occasions is not addressed in RAN2. No change is needed to the current 38.321 CR for this issue, if any.
9. No change to the current specification is required to support notification of SI/PWS change when DCP is configured.
10. No mechanism for periodical wake up and/or always wake up in poor radio condition is specified to address DCP miss-detection
11. Given the split views in this session, the discussion on ASN.1 options for capturing the search space for the DCP is moved to the RRC/ASN.1 review.
12. No change to the specifications is required to address any potential DCP miss during handover.
13. The issue of network not being able to perform beam management actions when WUS has not indicated UE to wake-up but UE has transmitted CSI/SRS requires no change to current specifications.
14. The issue of the coexistence of DRX groups and Power Saving features will be addressed together with the main discussion on DRX groups support, following RAN1 reply LS.
15. Configuring the UE to report CSI/SRS in sparse mode, i.e. report once per N DRX cycles is not supported in the specifications.
16. FFS what the UE actually monitors if it misses DCP when configured with SCell dormancy

17. FFS UE behavior when a DCP occasion occurs during RAR window will be decided at the next meeting

Flagged for discussion:

Proposal 6 (9/12): Configuring the UE to report CSI/SRS in sparse mode, i.e. report once per N DRX cycles is not supported in the specifications.

- Qualcomm is concerned because L1 RSRP reporting is different when there is traffic and when there is not. If traffic stops it is very power consuming to still do this L1 RSRP reporting.

=> FFS whether DCP applies to short DRX

This will not be treated

R2-2000253 Contributions summary on further impacts of DCP CATT discussion Rel-16 NR_UE_pow_sav-Core Late

R2-2000254 New issue on CSI reporting with DCP CATT discussion Rel-16 NR_UE_pow_sav-Core

R2-2000349 Open issues DCP Ericsson discussion Rel-16 NR_newRAT-Core

R2-2000367 PDCCH-WUS not applicable for short DRX cycle vivo discussion Rel-16 FS_NR_UE_pow_sav

R2-2000368 WUS impact on CSI reporting vivo discussion Rel-16 FS_NR_UE_pow_sav

R2-2000412 Remaining issues on DCP OPPO discussion Rel-16 NR_UE_pow_sav-Core

R2-2000413 Impacts of power saivng signalling on CSI reporting OPPO discussion Rel-16 NR_UE_pow_sav-Core

R2-2000450 Open issues of DCP feature Intel Corporation discussion Rel-16 NR_UE_pow_sav

R2-2000584 PDCCH-WUS Mechanism Apple discussion Rel-16 NR_UE_pow_sav-Core R2-1915924

R2-2000599 PDCCH-WUS and Short DRX Cycle Apple discussion Rel-16 NR_UE_pow_sav-Core

R2-2000665 Discussion on introduction of search space for the DCP ZTE Corporation, Sanechips discussion Rel-16 NR_UE_pow_sav-Core

R2-2000666 Introduction of search space for the DCP in TS38.331 ZTE Corporation, Sanechips CR Rel-16 38.331 15.8.0 B NR_UE_pow_sav-Core

R2-2000811 Discussion on PDCCH-WUS missing problems during handover Xiaomi Communications discussion

R2-2001037 On DRX ambiguous period Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-2001038 On DCP monitoring and CSI/SRS transmission Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-2001040 On short DRX cycle applicability for DCP Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-2001300 Consideration on Short DRX cycle on DCP LG Electronics Inc. discussion NR_UE_pow_sav-Core

R2-2001463 Remaining issues on WUS signal for Power Saving ZTE Corporation, Sanechips discussion Rel-16 NR_UE_pow_sav-Core

R2-2001482 Wakeup signaling with DRX groups Qualcomm Inc, Samsung discussion Rel-16

6.11.3 UE assistance

Stage 3 details of reportings mechanisms for a UE to 1) indicate its preference of transitioning out of RRC_CONNECTED state 2) c-DRX and 3) SCell

ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should not discuss open issues in the email discussion

To be discussed over email officially kicked off during e-meeting week (as offline email discussion) and treated the second slot, Week of March 2nd:

R2-2001914 Summary of open issues for UE assistance Qualcomm
=> Noted
[Offline discussion 505]

Agreements
1. In MR-DC with NR SN, support SCG specific UAI for power saving, which includes drx-Preference, maxBW-Preference, maxCC-Preference, maxMIMO-LayerPreference, and minSchedulingOffsetPreference.
2. UE transmits SCG specific UAI for power saving in a transparent container to the MN and the MN then forwards the received container to the NR SN. FFS if UAI can also be reported for power saving directly via SRB3 if configured. FFS on the signalling details.
3. UE implicitly can indicate a preference for NR SCG release by indicating zero number of carriers or zero aggregated maximum bandwidth in both FR1 and FR2.
4. UE assistance for NR SCG setup is not supported in Rel-16.
5. Indication of "Connected" for cancelling a previous release preference is subject to prohibit timer.
6. Preferred carrier grouping for SCell dormancy is not supported in Rel-16

Discussion

Proposal 10. For a configured cell group, UE can indicate preferred maximum aggregated bandwidth for a frequency range not configured with SCells. (10 vs 3)
- Chair asks if there is a compromise to have a possibility to revert to "no preference" or to previous configuration.

Proposal 5. FFS if absence of an optional parameter in power saving preferences indicates no preference or no change by UE. (6 vs 7)
Proposal 8. FFS if UE can indicate its preferred numbers of carriers in each FR or not. (5 vs 8)
Proposal 11. FFS if release request and preferred state are indicated by a single IE, or they can be independently indicated in two separate IEs. (8 vs 5)

This will not be treated

R2-2000255 Reporting UE Assistance Info to NR SN CATT discussion Rel-16 NR_UE_pow_sav-Core
R2-2000350 Open issues for UE assistance Ericsson discussion Rel-16 NR_newRAT-Core
R2-2000351 Open issues for MR-DC scenarios Ericsson discussion Rel-16 NR_newRAT-Core
R2-2000369 UE assistance information for power saving vivo discussion Rel-16 FS_NR_UE_pow_sav
R2-2000451 Open issues of new UE assistance information for PWS Intel Corporation discussion Rel-16 NR_UE_pow_sav
R2-2000585 UE Assistance Information for MR-DC Apple discussion Rel-16 NR_UE_pow_sav-Core
R2-2000596 UE Assistance Information for Scell Apple discussion Rel-16 NR_UE_pow_sav-Core R2-1915926
R2-2000649 Remaining open issues on UE assistance information OPPO discussion Rel-16 NR_UE_pow_sav-Core

R2-2000826	Power Saving UE assistance information	Sony	discussion	Rel-16	NR_UE_pow_sav-Core R2-1915232 Withdrawn
R2-2000869	Power Saving UE assistance information	Sony Europe B.V.	discussion	Rel-16	NR_UE_pow_sav-Core
R2-2001301	Remaining issue on UE assistance	LG Electronics Inc.	discussion		NR_UE_pow_sav-Core
R2-2001330	Remaining issues on UE assistance information	Huawei, HiSilicon	discussion	Rel-16	NR_UE_pow_sav-Core
R2-2001483	Remaining issues on UE Assistancec Information	Qualcomm Inc	discussion	Rel-16	
R2-2002025	Summary of open issues on UE assistance	Qualcomm	discussion	Rel-16	NR_UE_pow_sav-Core

6.11.6 RRM measurement relaxation

Contributions should focus on additional enhancements to LTE relaxed monitoring criteria that are specific to NR and whether neighbour cell RSRP should also be considered in cell-edge criterial.

Discuss type of RRM measurement relaxation by allowing measurements with longer intervals, and/or by reducing the number of cells/carriers to be measured. NOTE: this topic should be considered together with RAN4.

ONLY NEW CRITICAL OPEN Issues that are not identified in email discussions. Contributions should not discuss open issues in the email discussion

To be discussed over email officially kicked off during e-meeting week (as offline email discussion) and treated the second slot, Week of March 2nd:

R2-2001915	Summary of RRM measurement relaxation open issues	Huawei
	=> Revised in R2-2002199	
R2-2002199	Summary of RRM measurement relaxation open issues	Huawei
	=> Noted	

Agreements:

1. Relaxed RRM measurement is applied in the same way irrespective of whether the priorities are provided by dedicated signalling or broadcast signalling.
2. Ask RAN4 (In the same LS to RAN4 listing the RAN2 agreements) about the behaviour of relaxation of higher priority carriers:
   I. For the case where Srxlev > SnonIntraSearchP and Squal > SnonIntraSearchQ, does RAN4 envision to relax higher priority carriers measurements further than Thigher_priority_search if RAN2-defined relaxation criterion(s) is/are met?
   II. For the case where Srxlev < SnonIntraSearchP or Squal < SnonIntraSearchQ, does it make sense / is there a performance benefit to only relax equal/lower priority carriers but not higher priority carriers measurements if RAN2-defined relaxation criterion(s) is/are met?
3. The UE shall perform intra-frequency and inter-frequency neighbour cell measurement during TsearchDeltaP after cell selection/re-selection.
4. No indication to the network that UE has performed measurement relaxation is introduced.
5. From RAN2 perspective, there is no consensus on a method for reducing the carriers to measure in Rel-16. We can come back to this if RAN4 agrees otherwise.
6. A method for reducing the cells to measure on a carrier is not supported in Rel-16
7. FFS on the UE behaviour if T330 is running

Needs short discussion online:

Proposal S3-2 (8/12): Timer T330 does not impact relaxed RRM measurement.

- Ericsson is concerned that the UE may not be able to properly report and the MDT feature wouldn't really work.

- Huawei clarifies that if the T330 is running it does impact the power saving.
- vivo thinks that it is up to the network configuration

This will not be treated

R2-2000256 Way forward on measurement relaxation with high priority frequencies CATT discussion Rel-16 NR_UE_pow_sav-Core

R2-2000312 Configurations for RRM Measurement Relaxation in NR MediaTek Inc. discussion

R2-2000352 Open issues RRM measurement relaxation Ericsson discussion Rel-16 NR_newRAT-Core

R2-2000370 UE Power Consumption Reduction in RRM Measurement vivo discussion Rel-16 FS_NR_UE_pow_sav R2-1914694

R2-2000595 Open Issues of RRM Measurement Relaxation Apple discussion Rel-16 NR_UE_pow_sav

R2-2000827 UE power saving for inter frequency measurements Sony discussion Rel-16 NR_UE_pow_sav-Core R2-1915233

R2-2000913 Discussion on power saving for inter-frequency measurements CMCC discussion NR_UE_pow_sav-Core R2-1915210

R2-2001039 On RRM measurement relaxation Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-2001063 On SrxlevRef adaptation in relaxed monitoring Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core R2-1915529

R2-2001064 Reducing the number of neighbour cells/carriers to measure Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core R2-1915530

R2-2001401 Coexistence issues of measurement relaxation and early measurements LG Electronics, Ericsson, MediaTek discussion Rel-16 NR_UE_pow_sav-Core

R2-2001402 Per-frequency measurement relaxation based on neighbour cell quality LG Electronics discussion Rel-16 NR_UE_pow_sav-Core

R2-2001577 RRM measurement relaxation Samsung discussion NR_UE_pow_sav-Core

R2-2001643 On the frequency selection for RRM relaxation Samsung R&D Institute UK discussion

6.12 SON/MDT support for NR

(NR_SON_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; target; Mar 20; WID: RP-191776). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 10 tdocs

6.12.1 General

Including LSs, work plan, rapporteur inputs, running TS

Including outcome of the email discussion [108#91][NR/L2M] running 38.314 CR (CMCC)

Including outcome of the email discussion [108#42][NR/MDT] running 38.331 CR to support SON/MDT (Huawei and Ericsson)

Including outcome of the email discussion [108#43][NR/MDT] Running 36.331CR for MDT (Huawei)

Including outcome of the email discussion [108#92][NR/MDT] Running 37.320 CR for MDT (CMCC, Nokia)

Including outcome of the email discussion [108#93][NR/MDT] running 38.321 CR (Ericsson)

Including outcome of the email discussion [108#49][NR MDT] running 38.306 CR (vivo)

R2-2000012 Reply LS on PRACH configuration conflict detection (R1-1913578; contact: CATT) RAN1 LS in Rel-16 NR_SON_MDT To:RAN3 Cc:RAN2

R2-2000028 LS on information needed for MRO in UE RLF Report (R3-197668; contact: CATT) RAN3 LS in Rel-16 NR_SON_MDT-Core To:RAN2

R2-2001364 CR for introducing MDT and SON Huawei, Ericsson, HiSilicon CR Rel-16 38.331 15.8.0 1488 - B NR_SON_MDT-Core Late
=> Endorsed as baseline. If the content of CR is conflict with agreements from this meeting, the content should be changed accordingly.

R2-2001365 CR on enhancements on LTE MDT and SON Huawei, CMCC, HiSilicon CR Rel-16 36.331 15.8.0 4218 - B NR_SON_MDT-Core
=> Endorsed as baseline. If the content of CR is conflict with agreements from this meeting, the content should be changed accordingly.

R2-2000908 Running TS 38.314 CMCC draft TSRel-16 38.314 0.0.4 NR_SON_MDT-Core
=> Endorsed as baseline. If the content of CR is conflict with agreements from this meeting, the content should be changed accordingly.

R2-2000925 Running TS 37.320 CR CMCC,Nokia draftCR Rel-16 37.320 15.0.0 B NR_SON_MDT-Core
=> Endorsed as baseline. If the content of CR is conflict with agreements from this meeting, the content should be changed accordingly.

R2-2000299 Running CR to 38.306 for NR_SON_MDT vivo, CMCC draftCR Rel-15 38.306 15.8.0 NR_SON_MDT-Core
=> Endorsed as baseline. If the content of CR is conflict with agreements from this meeting, the content should be changed accordingly.

R2-2001363 Report of email discussion [108#42] Huawei other Rel-16 NR_SON_MDT-Core Late

Agreements:
1. RAN2 confirms the inclusion of cellID in the RAReport.
2. RAN2 confirms the naming requestForOtherSI as an option for raPurpose.

4. RAN2 to confirm the inclusion of VarRAReport as a UE variable.
5. RAN2 to discuss renaming the logged MDT events using L1, L2 nomenclature.
6. RAN2 confirms that SINR cannot be used as a trigger quantity for A2 event configuration of logged MDT.

R2-2000924 Leftovers for TS 37.320 to support NR MDT CMCC discussion Rel-16

R2-2001123 Report of email discussion [108#93] running 38.331 CR to support RACH report discussion Ericsson

R2-2000907 Summary of open points in [108#91][NR/L2M] running 38.314 CR (CMCC) CMCC discussion Rel-16 NR_SON_MDT-Core

R2-2001994 SON/MDT agreements from email discussions Session chair (CMCC)

Agreements:

MDT:
1 The maximum number of cellIndentity to be configured as part of AreaConfigForNeighbour is 32.
2 Include ‘infinity’,’640ms’ and ‘320ms’ as options for loggingInterval value range.
3 ul-DelayValueConfig is configured per CG, i.e.,
- to configure at most one measurement identity per CG using a reporting configuration with the ul-DelayValueConfig;
4 For logged MDT, UE does not log the SSB index of the neighbour cells.
5 The actual process of logging within the UE, takes place in RRC IDLE state could continue in RRC INACTIVE state.
6 For RLF Report, add the TrackingAreaCode IE into CGI info for the failed cell and source cell.

7 Send a LS to RAN3, SA5, and SA2. The LS includes RAN2-109-e agreements and the targeted WGs can finalize their work.

SON:

9 The UE shall reset the entire RA Report when the UE performs a successful random access procedure to a cell belonging to a new PLMN which is not part of the current RPLMN list.

10 RAN2 confirms the inclusion of the following frequency location related information of the RA resources used by the UE in the RAReport:
   a. absoluteFrequencyPointA (e.g., in FrequencyInfoUL)
   b. locationAndBandwidth (e.g., in UL BWP)
   c. subcarrierSpacing (e.g., in UL BWP)

L2:

11 Number of active UE is measured per DRB per cell by network.

12 Capture a clarification in 38.314 that all the per DRB per cell measurements and per DRB per UE measurements can be aggregated into per QoS level per cell by network implementation.

13 '*drbid'* is used in the equation for each per DRB per UE measurement in 38.314, e.g. for average D1 delay: $M(T, \boldsymbol{drbid}) = \left\lfloor \frac{\sum_{\forall i} tDeliv(i, \boldsymbol{drbid}) - tArrival(i, \boldsymbol{drbid})}{I(T)} \right\rfloor$

14 The equation for mean number of active UE is $M(T, drbid, p) = \frac{\left\lfloor \frac{\sum_{\forall i} N(i, drbid)}{I(T,p)} * 10 \right\rfloor}{10}$, FFS the definition for *drbid* in the description table of mean number of active UE.

15 Capture in TS 38.314 that the counting unit for PRB usage measurement is 1 Resource Block x 1 symbol. (1 Resource Block = 12 sub-carrier)

16 For the CA duplication bearer, the UE and gNB measure the UL/DL delay assuming the packets of multi-paths are different. No spec impact.

=> Treated through email and we achieve the following agreements:

Agreements

1 Introduce a capability in 38.306 for cross-RAT RLF report delivery.

2 The UE shall include the TAC of the source cell (previousPCellId-r16) in the RLF report.

3 Re-connection attempt cell is not included in the RLF report.

4 For per DRB per UE measurement (e.g. UL delay meas), add the following description inside the table, *drbid*: The identity of the measured DRB.

5 For number of active UE, add the following description inside the table, *drbid* : the DRBs mapped with the same 5QI for NR SA or mapped with the same QCI for EN-DC.

6 UL F1-U delay is measured using the same matrix as DL F1-U delay defined in TS 28.552.

Note1: corresponding technical discussion can be found in email [803][804[805]

Two more email discussions are arranged:

- ✉ **[109e][866][SON/MDT]Introduce SON in 38.300 (Nokia)**
  Intended outcome: endorsable CR in R2-2001996
  Deadline: 20200305 06:30 CET
- ✉ **[109e][899][SON/MDT]Running 37.320 (CMCC, Nokia)**
  Intended outcome: endorsable CR in R2-2001997
  Deadline: 20200305 06:30 CET

R2-2001995 SON/MDT agreements from email discussions part2 Session chair (CMCC)

Agreements

1 UE shall include absoluteFrequencyPointA-r16, locationAndBandwidth, subcarrierSpacing, msg1-FrequencyStart, msg1-FDMInfo and msg1-SubcarrierSpacing in the RLF report when the rlf-Cause is set to beamFailureRecoveryFailure or randomAccessProblem.

2 Include the following frequency location related information of the RA resources used by the UE in the RAReport:
   a. msg1-FDM (e.g., in RACH-ConfigGeneric)
   b. msg1-FrequencyStart (e.g., in RACH-ConfigGeneric)
   c. msg1-SubcarrierSpacing (e.g., in RACH-ConfigCommon)
3 Agree the following option is to be adopted for RAReport retaining at the UE:
UE will stop logging RA info if all 8 entries is filled in RA report, and starts to count the duration. If not fetched within 48 hours, then the whole RA report will be deleted.

4 The issue that whether to add a new UE capability indication or not regarding the ability to include the locationInformation in SCGFailureInformationNR and SCGFailureInformation messages should be addressed in running stage3 CR email discussion.
5 0.1ms is applied for UL delay measurement D1 and D2.
6: The following proposals are recommended to be postponed:
- 1: min/max value for delay measurement.
- 2: excess delay measurement.

=> UL delay measurement is not supported for split bearer(s) for EN-DC case in R16. It should be discussed in R17.

R2-2001999 Running 38.331 on introduce SON/MDT

=> Change TS36.355 to TS37.355 in RRC.

✉ **[109e][801][SON/MDT]Running 38.331 to introduce SON/MDT (Huawei, Ericsson)**
Intended outcome: agreed CR
Check at 2020-03-06 23:00. If no consensus is achieved for cross RAT RLF report case. We use the current structure in the running CR in R2-2002003.
Deadline: 2020-03-10 CET
=> Agreed in R2-2002003

R2-2001998 CR on enhancements on LTE MDT and SON 16 36.331 15.8.0 4218 - B Huawei, HiSilicon, CMCC NR_SON_MDT-Core CR Rel-

✉ **[109e][801][SON/MDT]Running 36.331 to introduce SON/MDT (Huawei)**
Intended outcome: agreed CR in R2-2002001
Deadline: 2020-03-06 CET
=> Agreed in R2-2002001

R2-2002001 CR on enhancements on LTE MDT and SON 16 36.331 15.8.0 4218 1 B Huawei, HiSilicon, CMCC NR_SON_MDT-Core CR Rel-
=> Coversheet update by MCC: Revision = 2
=> Revised in R2-2002005

R2-2002005 CR on enhancements on LTE MDT and SON 16 36.331 15.8.0 4218 2 B Huawei, HiSilicon, CMCC NR_SON_MDT-Core CR Rel-
=> Agreed

R2-2001997 Running 37.320 to introduce NR MDT CMCC, Nokia, Nokia Shanghai Bell (Rapporteur)

✉ **[109e][899][SON/MDT]Running 37.320 to introduce MDT (CMCC)**
Intended outcome: agreed CR in R2-2002002
Deadline: 2020-03-10 CET
=> Agreed in R2-2002002

✉ **[109e][814][SON/MDT]Running 38.314 (CMCC)**
Intended outcome: agreed CR/TS in in R2-2002000

Deadline: 2020-03-10 CET

✉ **[109e][855][SON/MDT]LS to RAN3 (CATT)**
Intended outcome: approved LS in R2-2002004
Indicate that RLF report for MRO should be handled in RAN3
Send LS to RAN3 cc SA5 to inform our progress
Agreed CRs should be attached
Deadline: 2020-03-11 CET

=> The LS is approved in R2-2002004
=> Revised by MCC (mention attachments in LS coverheet)
=> Approved in R2-2002393

R2-2000927 Feature list for R16 SON MDT WI CMCC discussion Rel-16 NR_SON_MDT-Core

6.12.2 MDT

The procedure, signaling and corresponding measurement quantities for MDT
ONLY CRITICAL OPEN Issues that makes MDT cannot work will be discussed. No new feature/function will be discussed this meeting.
Summary on MDT (Huawei)

R2-2002076 Summary on MDT Huawei discussion Rel-16 NR_SON_MDT-Core

Agreements:
1 Add “No suitable cell found” flag in the NR RLF report when T311 expires.

2 The potential values (ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, ms20480, ms40960, min1,min6, min12, min30)of the existing ReportInterval can be reused for the field reportInterval in ul-DelayRatioConfig and ul-DelayValueConfig. reportInterval should not be used for UE measurement performing.
3 After successful deliver of the UEInformationResponse carrying the CEF report, UE will discard the CEF report stored in VarConnEstFailReport.
4 A Threshold defining measurement trigger quantity for event triggered Logged MDT is MDT specific.
5 UE configured for the event-triggerd logged MDT logs the cell ID, location information if available and time stamp information on
- first serving cell after leaving the OOC
It is the leaving condition.

All the following points should be pursued via email discussion:

All the issues in 2.3 will be included in the email discussion. Also the following issues will be included in the email discussion.
Proposal 2: ul-DelayRatioConfig and ul-DelayValueConfig are configured per CG, i.e.,
- to configure at most one measurement identity per CG using a reporting configuration with the ul-DelayRatioConfig;
- to configure at most one measurement identity per CG using a reporting configuration with the ul-DelayValueConfig;

Proposal 7: plmn Identity identifies the PLMN of the cell for the reported cellIdentity.
Proposal 8: The IE CGI-InfoNR is not used to indicate a NR cell. (P1, [18], Samsung)
- Note: During email discusison 108#42 on 38.331 CR, lots of companies also preferred to not use CGI-InfoNR. So the next step is to go to section 2.3.4 to discuss CGI info details.

Proposal 12 (Based on comments from Nokia in this email discussion) – (specification clarification related) - RAN2 to discuss the way in which the ssbRLMConfigBitmap and csi-rsRLMConfigBitmap are encoded in the latest RRC specification:
a. To use the format used in the current NR RRC specification.
b. To use a 1-bit field per beam (SSB or CSI-RS) level measurements included in the RLF report.
P3 RAN2 confirms the inclusion of msg1-FrequencyStart and msg1-SubcarrierSpacing in the RAReport
Proposal 1: RAN2 is kindly to discuss whether it is an extra burden for UE to obtain the SSB index of neighbouring cells.
Proposal 2: UE does not log the SSB index of the neighbour cells if additional burden is introduced.
Proposal 3: UE reports the latest number of consecutive connection failures per cell the UE has experienced within the last 48 hours.
Proposal 4: The actual process of logging within the UE, takes place in RRC IDLE state could continue in RRC INACTIVE state.

✉ **[AT 109e][803][MDT]MDT open issues (Huawei)**
Intended outcome: email discussion report in R2-2001991
Deadline: CET 23:00, 2020/02/28

R2-2001991 Email discussion report on MDT open issues Huawei

Agreements:

1 For multiple CEF reports, it is proposed:
(1) UE only records one entry of the detail parameters about the last CEF, while for the other previously experienced CEFs, only the per cell “Number of connection failures” field could be recorded.
(2) If a new CEF occurs, the old CEF records except the per cell *numberOfConnFail* in UE variable should be replaced by the new CEF records and the counter of the newest cell where the UE experiences CEF should be added with 1.
(3) UE reports the latest number of consecutive connection failures per cell the UE has experienced within the last 48 hours.
2a For the out of coverage event (i.e. related to EventType-r16 with the value outOfCoverage), it is proposed:
(1) the entering condition is that UE enters Any Cell Selection.
(2) the leaving condition is that UE enters Camped Normally state.
2b Remove “last serving cell UE camped on before OOC happens” from the RAN2 minutes, as it is agreed online that it is only the leaving condition.
3 CGI info of a NR cell includes: plmn-identity and cellIdentity.

Plmn-identity is defined:
identifies the PLMN of the cell for the reported cellIdentity: the first PLMN-Identity in plmn-IdentityList
CellIdentity belongs the first PLMN-IdentityInfo IE of PLMN-IdentityInfoList.

4 The ssbRLMConfigBitmap and csi-rsRLMConfigBitmap are encoded with using the format used in the current NR RRC specification.

=> Include location info in SCGFailureInformationEUTRA in NR spec and in SCGFailureInformationNR in LTE spec, and the related configuration parts. Details (e.g. which node to configure this) should be addressed through email.

=> Postpone the following issue to R17:
Whether to have an indicator of controlling the beam level measurements in the logged MDT report.
logged MDT in DC scenario

=> Postpone the following issue to R17:
Whether to introduce RAT-Type as part of areaConfigForNeighbour along with frequency and cell list.

R2-2000001	Remaining issues of UE Location Information	Qualcomm Incorporated	discussion	Rel-16	NR_SON_MDT-Core
R2-2000100	Discussion on logged MDT	CATT	discussion	Rel-16	NR_SON_MDT-Core
R2-2000101	Corrections for CEF and RLF Report	CATT	discussion	Rel-16	NR_SON_MDT-Core
R2-2000102	Failure Indication about SCG	CATT	discussion	Rel-16	NR_SON_MDT-Core
R2-2000300	Remaining issues on MDT	vivo	discussion		
R2-2000807	Remaining issues on MDT	ZTE Corporation, Sanechips	discussion	Rel-16	NR_SON_MDT-Core
R2-2001100	Clarification on CEF report	ZTE Corporation, Sanechips	discussion	Rel-16	
R2-2001111	[DRAFT] LS on MDT configurations	Ericsson	LS out	Rel-16	NR_SON_MDT-Core To:TSG SA5, TSG RAN3
R2-2001114	Measurement configuration options for immediate and logged MDT in NR	Ericsson	discussion		
R2-2001115	Neighbor frequency coverage hole indication in logged MDT	Ericsson	discussion		
R2-2001117	Open issues related to current logged MDT contents in running CR	Ericsson	discussion		
R2-2001143	A2-like measurement results in Logged MDT	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_SON_MDT
R2-2001144	CGI in MDT reports	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_SON_MDT
R2-2001145	Location information encoding in NR MDT	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_SON_MDT
R2-2001146	Principle on Rareport entry logging	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_SON_MDT
R2-2001366	Enhancements on logged MDT and accessibility measurements	Huawei, HiSilicon	discussion	Rel-16	NR_SON_MDT-Core R2-1915855
R2-2001367	Discusison on sensor measurement reporting	Huawei, HiSilicon	discussion	Rel-16	NR_SON_MDT-Core
R2-2001436	Clarification on Cell ID Applied to NR MDT	Samsung	discussion	NR_SON_MDT-Core	
R2-2001438	Introducing Further Information Useful for NR MDT	Samsung	discussion		NR_SON_MDT-Core
R2-2001439	On supporting Event-triggered Logged MDT	Samsung	discussion		NR_SON_MDT-Core
R2-2001441	RLF Report Enhancement	Samsung	discussion	NR_SON_MDT-Core	
R2-2001443	Stage-3 Miscellaneous for NR MDT	Samsung	discussion	NR_SON_MDT-Core	

6.12.3 L2 measurements

Definition of L2 measurements in TS 38.314.
No new measureemnts will be introduced to TS38.314 this meeting. Discussion only focus on current running 38.314.
Summary on L2 measurmeents (China Mobile)

R2-2000909	Summary on L2 measurement	CMCC	discussion	Rel-16	NR_SON_MDT-Core

Agreements:

1 Granularity for per UE measurement performed by UE (i.e. D1 queueing delay) is per DRB per UE for non-split case.
2 Granularity for per UE measurement performed by network (i.e D2 delay, loss rate) is per DRB per UE.
4 Capture in TS 38.314 that for PRB usage measurements that have been defined in TS 28.552, i.e. DL/UL Total PRB Usage, Distribution of DL/UL Total PRB Usage, M(T), M1(T), P(T) are measured per cell level. P(T) is the total available PRBs for this cell. M1(T) is the PRBs used for traffic transmission in this cell.
5 For EN-DC UL D1 delay measurement configuration for non-split bearer,
- D1 measurement of MN terminated bearer(including non-split bearer) can be configured by MN,
- D1 measurement of SN terminated bearer(including non-split bearer) can be configured by SN via RRC message (SRB3 or SRB1).
- For the SN terminated bearers, it is the SN to configure and calculate the UL/DL delay.

6 Capture a general definition of DL measurement in TS 38.314:
Packet delay includes RAN part of delay and CN part of delay. For RAN part, the DL delay comprises:
- D1 (the DL delay in gNB-DU), referring to 5.1.1.1.1 Average delay DL air-interface in TS 28.552
- D2 (the DL delay on F1-U), referring to 5.1.3.3.2 Average delay on F1-U in TS 28.552
- D3 (the DL delay in CU-UP), referring to 5.1.3.3.1 Average delay DL in CU-UP in TS 28.552

7 The flooring operation associated to the definition of mean number of active UEs is removed.

All the following points should be pursued via email discussion:

Proposal 7(Cat b): RAN2 is kindly asked to make decision among following options:
Option 1:
- For the UL PDCP packet average queuing delay measurement for split bearer, UE reports a single D1 value to the node where it receives the measurement configuration.

Option 2:
- MN and SN can independently configure the UE with D1 measurements in the split bearer configurations.
- The UE shall perform two independent D1 delay measurements in the split bearer configuration, one for MN associated D1 delay measurement and the other for SN associated D1 delay measurement.
- The UE shall report the MN configured D1 delay measurement to the MN and the SN configured D1 delay measurement to the SN.

Option 3:
- the UE should report two D1s in MR-DC to the RAN node where it receives the measurement configuration.

Proposal 8(Cat b): For the split bearer, the node hosting the PDCP entity derives the delay of the split bearers based on the delay of two paths.
- For split bearer with PDCP duplication, the final delay is the min value of measured results of two paths
- For split bearer without PDCP duplication, the final delay is the average value of measured results of two paths

Proposal 13(Cat b): It is proposed to introduce min and max value for delay measurement in addition to the average delay.

P3 Granularity for per cell measurement performed by network is per DRB per cell. And add a clarification in 38.314 that the per DRB per cell measurement can be aggregated into per QoS level per cell by network implementation

Proposal 5(Cat b): Capture in TS 38.314 that the counting unit for PRB usage measurement is 1 RB x 1 symbol. (1 RB=12 sub-carrier)

Proposal 10(Cat b): Confirm the unit of the UL PDCP queuing delay reported by UE is “ms” and add a section of “UL F1 delay” in TS38.314 with “ms” unit.

Proposal 11(Cat b): RAN2 to confirm the unit of UL PDCP queueing delay is 0.1ms (Current 38.331CR) or 1ms (last agreement).
Proposal 12(Cat b): Set the value range of the reportInterval field for UL delay measurement to:
- For PDCP queuing excess delay measurement, use “ms1024, ms2048, ms5120 or ms10240” (if the measurement is maintained in NR);
- For average PDCP queuing delay measurement, use “ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120 or ms10240”.

Proposal 16(Cat b): M6 measurement in NR in TS 37.320 should cover at least delay ratio and average delay measurements.
Proposal 21(Cat b): The mean number of active UEs is represented using BIT STRING (SIZE(X)) format and RAN3 can further discuss the value of ‘X’ and if BIT STRING (SIZE(X)) format is best suited to represent mean number of active UEs whose granularity of reporting will be 0.1.

✉ **[AT109e][805][SON/MDT]L2 open issues (CMCC)**
Intended outcome: email discussion report in R2-2001993
Deadline: CET 23:00, 2020/02/28

R2-2001993 Email discussion report on L2 open issues CMCC

=> treated by email[800]

R2-2000000 Remaining Issues of UL PDCP Packet Average Queuing Delay Measurement Qualcomm Incorporated discussion Rel-16 38.314 NR_SON_MDT-Core
R2-2000103 Correction and Open Issues of UL Delay Measurement CATT discussion Rel-16 NR_SON_MDT-Core
R2-2000806 Further consideration on INACTIVE UE counting ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-2000909 Summary of L2M open points and proposals CMCC discussion NR_SON_MDT-Core Late
R2-2000910 Clarification for per cell PRB usage CMCC, Ericsson, Huawei discussion NR_SON_MDT-Core Revised
R2-2001110 [DRAFT] LS on throughput measurement in DC based PDCP duplication scenario Ericsson LS out Rel-16 NR_SON_MDT-Core To:TSG RAN3, SA5
R2-2001112 Definition of number of active UEs Ericsson, CMCC discussion
R2-2001113 Handling PDCP queueing delay measurements in split bearer scenario Ericsson discussion
R2-2001119 Throughput measurement in duplication scenario Ericsson discussion
R2-2001147 Per DRB measurements in TS38.314 Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT Late
R2-2001368 Discussion on per DRB and excess delay measurement for L2M Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-2001369 TP on per DRB measurements for L2M Huawei, HiSilicon pCR Rel-16 38.314 0.0.3 NR_SON_MDT-Core
R2-2001370 Discussion on min and max value for delay measurements for L2M Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-2001371 Discussion on UL delay measurements in non MR-DC Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-2001372 Discussion on DL delay measurements Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-2001373 Discussion on delay measurements for MR-DC and CA Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core R2-1915856
R2-2001419 Clarification on PRB usage ZTE Corporation, Sanechips discussion Rel-16 R2-1915418 Withdrawn

R2-2001440	On Mapping 5QI to DRB	Mediatek Inc	discussion
R2-2001603	Clarification for per cell PRB usage NR_SON_MDT-Core R2-2000910	CMCC, Ericsson, Huawei, ZTE	discussion

6.12.4 SON

UE reporting necessary to enhance the network configuration for MRO, MLB and RACH optimization
ONLY CRITICAL OPEN Issues that makes SON cannot work will be discussed. No new feature/function will be discussed this meeting.
Summary on SON (Ericsson)

R2-2002025	Summary on SON	Ericsson discussion	Rel-16	NR_SON_MDT-Core

Agreements:

1 The UE shall include the LTE RLF report in the UEInformationResponse message to NR node.
2 The UE shall include the TAC of the failed cell (failedPCellId-r16) in the RLF report.

3 The UE shall include the information of RA attempts over different SSBs/CSI-RSs in the chronological order of RA attempts in the RLF report when the cause for RLF is beam failure recovery.
4 The UE shall include TAC of the cell in which the UE performs the RA procedure as part of the RA report.

All the following points should be pursued via email discussion:

Proposal for Discussion 1 RAN2 to agree on one of the following:
a. RAN2 confirms that reporting LTE RLF Report to NR is supported, and reporting NR RLF report to LTE is not supported.
b. The UE shall include nr-RlfInfoAvailable flag (in RRCConnectionReconfigurationComplete, RRCConnectionReestablishmentComplete, RRCConnectionResumeComplete or RRCConnectionSetupComplete message) when the UE has NR RLF report and the UE is connected to an LTE node.
c. The UE can report the RLF report associated to an NR cell to an ng-eNB.
d. The UE can report NR RLF report related contents to LTE.

Proposal for Discussion 2 RAN2 to agree on one of the following formats for encoding the LTE RLF report to be reported to an NR node.
a. The UE shall use LTE RRC format and report the contents of RLF report as an LTE RRC encoded OCTET STRING to the NR node.
b. The UE shall use NR RRC format.
c. The UE shall include the failedPCellId using the NR RRC format and include the RLF report as an LTE RRC encoded OCTET STRING to the NR node.

Proposal for Discussion 3 RAN2 to agree on one of the following.
a. RAN2 does not support NR RLF reporting to LTE.
b. The UE shall include the failedPCellId using the LTE RRC format and include the RLF report as an NR RRC encoded OCTET STRING to the LTE node.

Proposal for Discussion 4 RAN2 to agree on one of the following.
a. Introduce a capability in 38.306 for cross-RAT RLF report delivery.
b. No new capability is introduced in 38.306 for cross-RAT RLF report delivery.

Proposal for Discussion 5 RAN2 to agree on one of the following;
a. The UE shall include the TAC of the source cell (previousPCellId-r16) in the RLF report.
b. The UE shall not include the TAC of the source cell (previousPCellId-r16) in the RLF report.

Proposal for Discussion 6 RAN2 to agree on one of the following RLF report content.
a. The UE shall include the re-connection attempt cell CGI when the re-connection attempt cell is a EUTRA cell.
b. The UE shall include the re-connection attempt cell CGI when the re-connection attempt cell is a NR cell.
c. The UE shall include the re-connection attempt cell CGI when the re-connection attempt cell is either a EUTRA cell or a NR cell.
d. Do not include re-connection attempt cell in the RLF report.

Proposal for Discussion 7 RAN2 to discuss on whether the UE shall include absoluteFrequencyPointA-r16, locationAndBandwidth, subcarrierSpacing, msg1-FrequencyStart, msg1-FDMInfo and msg1-SubcarrierSpacing in the RLF report when the rlf-Cause is set to beamFailureRecoveryFailure or randomAccessProblem.

Proposal for Discussion 8 RAN2 to discuss which of the following option is to be adopted for RAReport retaining at the UE:
a. UE will stop logging RA info if all 8 entries is filled in RA report, and starts to count the duration. If not fetched within 48 hours, then the whole RA report will be deleted.
b. (Related to the phrasing used in the current running RRC spec) The oldest RA entry will be continuously replaced by new RA entry if the RA report is not fetched and if the UE already has 8 entries in its RA report. If the RA report has not been fetched and if the UE has not executed a new successful RA procedure in the last 48 hours, then the RA report will be deleted.
c. The oldest RA entry will be replaced by new RA entry if the corresponding RA report is full (i.e., all entries are filled) and has not been fetched. A RA entry within a RA report will be deleted if it is already been stored for 48 hours.

Agreeable Proposal 4 The UE shall include msg1-FDM associated to the used RA resources in the RA report.?

Proposal 5 The UE shall reset the entire RA Report when the UE performs cell reselection to a cell belonging to a new PLMN which is not part of the current RPLMN list.

Agreeable Proposal 7 RAN2 confirms that no new capability is introduced for the locationInformation inclusion in SCGFailureInformationNR and SCGFailureInformation messages.

✉ **[AT109e][804][SON/MDT]SON open issues (Ericsson)**
Intended outcome: email discussion report in R2-2001992
Deadline: CET 23:00, 2020/02/28

R2-2001992 Email discussion report on SON open issues Ericsson

Agreements:
1 Postpone the issue of NR RLF reporting to LTE to R17.
2 The UE shall include the failedPCellId using the NR RRC format and include the RLF report as an LTE RRC encoded OCTET STRING to the NR node. Details can be addressed in running CR.

R2-2001996 Running 38.300 to introduce SON
=> Wait for RAN3 input.
=> RLF report should be captured in 37.320.

R2-2000002 Cross-system RLF report Qualcomm Incorporated discussion Rel-16 NR_SON_MDT-Core R2-1915049
R2-2000104 Analysis about MRO Issues Request by RAN3 CATT discussion Rel-16 NR_SON_MDT-Core
R2-2000105 Corrections for RACH Records Structure CATT discussion Rel-16 NR_SON_MDT-Core
R2-2000106 Corrections for the Content of RACH Records CATT discussion Rel-16 NR_SON_MDT-Core
R2-2000107 Draft Reply LS on Information Needed for MRO in UE RLF Report CATT LS out Rel-16 NR_SON_MDT-Core To:RAN3
R2-2000801 Remaining issues on RLF report ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-2000802 CR to 38300 on Introducing RLF report in NR ZTE Corporation, Sanechips CR Rel-16 38.300 16.0.0 0192 - B NR_SON_MDT-Core
R2-2000803 Draft Reply LS to RAN3 on RLF report ZTE Corporation, Sanechips LS out Rel-16 NR_SON_MDT-Core To:RAN3
R2-2000804 Remaining issues on RACH report procedure ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-2000805 Further considerations on RACH optimization ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core
R2-2001116 Open issues associated to RA report Ericsson discussion
R2-2001118 SCGFailureInformation message content alignment with RLFReport Ericsson discussion
R2-2001148 TP to 38.300 on SON support Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT
R2-2001374 Discussion on remaining aspects on SON Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-2001444 Inter-RAT RLF reporting for MRO Samsung discussion NR_SON_MDT-Core
R2-2001446 Remaining Aspects on UE History Information Mediatek Inc discussion
R2-2001479 Discussion on UE capability for location reporting in SCG failure NTT DOCOMO INC. discussion Rel-16 NR_SON_MDT-Core

6.12.5 Others

R2-2001166 Review of UE information in NR, alignment and harmonisation Samsung Telecommunications discussion Rel-16 TEI16 Late
R2-2001375 Discussion on UE history information in RRC reestablishment Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core

6.13 2-step RACH for NR

(NR_2step_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: RP-192330). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

6.13.1 General

Running CRs, Incoming LSs, Contributions in this AI are restricted for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

Including outcome of the email discussion [108#40][2-step RA] Running 38.331 (Ericsson)

Including outcome of the email discussion [108#82][2-step RA] Running 38.321 (ZTE)

Including outcome of the email discussion [108#83][2-step RA] Running 38.300 (Nokia)

The following CRs should be endorsed as baseline from the email discussion and used to capture the additional agreements from the e-meeting

R2-2000942 Stage-2 running CR for 2-step RACH Nokia (rapporteur), Nokia Shanghai Bell CR Rel-16 38.300 16.0.0 0197 - B NR_2step_RACH-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion
=> Revised in R2-2002348

R2-2002348 Stage-2 running CR for 2-step RACH Nokia (rapporteur), Nokia Shanghai Bell CR Rel-16 38.300 16.0.0 0197 - B NR_2step_RACH-Core
=> Agreed

R2-2000997 Running MAC CR for 2-step RACH ZTE Corporation (email discussion rapporteur) CR Rel-16 38.321 15.8.0 0692 - B NR_2step_RACH-Core, NR_unlic-Core, TEI16
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion
=> The CR is revised in R2-2002202

R2-2002202 Running MAC CR for 2-step RACH ZTE Corporation (email discussion rapporteur) CR Rel-16 38.321 15.8.0 0692 1 B NR_2step_RACH-Core, NR_unlic-Core, TEI16
=> The CR is agreed to be used as a baseline and will be revised to include all new agreements from week2
=> The revised CR will go for final approval in phase 2 of email discussion [AT109e][522]
=> Revised in R2-2002379

R2-2002379 Introduction of 2-step RACH in 38.321 ZTE Corporation, Sanechips CR Rel-16 38.321 15.8.0 0692 2 B NR_2step_RACH-Core, NR_unlic-Core, TEI16
=> Coversheet update by MCC: Clauses affected -field was empty.
=> Revised in R2-2002413

R2-2002413 Introduction of 2-step RACH in 38.321 ZTE Corporation, Sanechips CR Rel-16 38.321 15.8.0 0692 3 B NR_2step_RACH-Core, NR_unlic-Core, TEI16
=> Agreed

R2-2001217 Draft CR 2-step RA 38.331 Running CR Ericsson (Email disc rapporteur) draftCR Rel-16 38.331 15.8.0 B NR_2step_RACH-Core
=> Not treated and revised into a real CR in R2-2002031

R2-2002031 Running CR on 38.331 for 2-step RA Ericsson (Email disc rapporteur) CR Rel-16 38.331 15.8.0 1499 - B NR_2step_RACH-Core
=> The CR will be used as a baseline, will be revised to include all new agreements from RAN2#109e, and moved for email discussion
=> Revised in R2-2002380

R2-2002380 Introduction of 2-step RA Ericsson CR Rel-16 38.331 15.8.0 1499 1 B NR_2step_RACH-Core
=> Agreed

Agreement
From RAN2 point of view, the 2-step RACH WI CRs will be submitted for plenary approval. Corrections for stage3 and CFRA completion will be discussed in April. Other optimization will not be discussed.

The following email discussions will be treated during the first slot of e-meetings

R2-2000995 Summary of open issues in MAC running CR - Updated ZTE Corporation (email discussion rapporteur) discussion Rel-16 Late
=> Noted

Agreements
1. Send an LS to RAN1 to check if there is any issue/concern from RAN1 perspective to support CSI-RS for 2-step RACH to support CFRA

2. Define separate configuration parameters for rsrp-ThresholdSSB and rsrp-ThresholdCSI-RS parameters for 2-step RA.
   Note: This is already done in RRC and MAC. So, no change needed (but explicit agreement is useful)
3 Similar procedure as 4-step RACH applies if BWP switching indication is received whilst the 2-step RA procedure is ongoing (no changes needed in section 5.15, apart from adding a reference to subclause 5.1.4a)
4 Prioritisation between overlapping dynamic grant and MSGA PUSCH is left to UE implementation
5 Similar to legacy, if a configured UL grant is a retransmission in a bundle and it overlaps with MSGA PUSCH, then UE shall prioritise MSGA PUSCH
6 In some cases, we keep the same names in RRC for 2-step and 4-step variables but in MAC spec (at least for these variables), we then need to refer to specific RRC IE which configures the variable when initializing the value
   Note: this means that in the MAC spec we have to remove some variables (such as: msgA-ScalingFactorBI and msgA-PreamblePowerRampingStepHighPriority, and instead initialize these with the correct values from the corresponding 2-step RACH RRC IEs)
7 When CFRA is configured; if the UE needs to select a preamble group (e.g. upon switching to CBRA), the UE selects the preamble group based only on the payload size of CFRA and the payload sizes (s) of 2-step CBRA preamble groups (i.e. pathloss criterion is not evaluated). Also applies when switching from 2-step to 4-step.
8 There is no relation between ra-MsgASizeGroupA and the payload size of MSGA PUSCH associated with preamble group A.
9 For msgA (i.e. preamble and PUSCH), during the resource selection, the UE may take into account possible occurrence of measurement gap.

For discussion
Proposal 3:
Discussion
- Nokia agrees that pathloss cannot be used as a criteria. Ericsson doesn't think there would be any extra signalling for option 2.

Proposal 4:
Option 2: There is no relation between ra-MsgASizeGroupA and the payload size of MSGA PUSCH associated with preamble group A.

Note: if this is agreed, then it means the network can use this as an additional threshold to direct some UEs that has data above a threshold to use group B (regardless of the TB size of PUSCH payload associated with group A). Then no restriction is needed in RRC to be specified for this.

Option 3: Specify without ra-MsgASizeGroupA (i.e. we refer to the TB size of MSGA PUSCH associated with group A as in the previous version of the running CR)

Discussion
- Nokia explains that there is no relation and there hasn't been any relation since Rel-8 and would like to keep the same principle. LG, Intel supports Nokia's view and option 3 is different legacy. Vivo thinks there is a relation and TBS is configured in advanced and option 3 is

On measurement gap
- Vivo and Oppo would like to discuss the measurement gap. Samsung explains that msg1 and msgA (i.e. preamble and PUSCH) should be prioritized over measurement gap. Qualcomm explain that 213 has this behaviour, once you transmit preamble you always transmit PUSCH and maybe we can clarify this in the MAC.
- Nokia agrees with ZTE that the MAC CR looks good
  msgA (i.e. preamble and PUSCH) may be prioritized over measurement gap, similar to legacy msg1. can select RACH occasions such that the UE can avoid the overlap with measurement gap.

- LG thinks that we need more time to check but thinks that the UE may be able to take measurement gap into account for resource selection.

R2-2001927 LS to RAN1 on Support of CFRA ZTE
Include agreements of CFRA and ask if RAN1 sees any impacts [offline 525]
=> update agreement 1 “Support dedicated msgA PUSCH resources …”
=> The LS is approved R2-2001929

R2-2001218 Open issues for RRC Ericsson (Email disc rapporteur) discussion Rel-16 NR_2step_RACH-Core
=> Revised in R2-2002125
R2-2002125 Open issues for RRC updated (this was updated based on our discussion last friday)
=> Noted

Agreements
For 2-step CFRA
1 Support dedicated msgA PUSCH resources, i.e non-shared msgA PUSCH resources between CFRA and CBRA.
2 For dedicated msgA PUSCH resources, the full msgA PUSCH configuration is signaled in RACH-ConfigDedicated
3 Dedicated msgA PRACH occasions are optionally configured for 2-step CFRA. If not configured, msgA PRACH occasions for 2-step CBRA are used.

General
4 Send an LS to RAN1 asking whether NR-U PRACH root sequences are applicable for 2-step RA.
5 Conditionally mandatory need codes and field descriptions for RACH-related parameters reflecting the table in the appendix.
6 Preamble grouping for different states are configured implicitly by means of BWP configurations (i.e. nothing new is introduced).
7 On discarding/releasing the 2-step CFRA resources, agree to use same behaviour as for rel-15 for releasing 4-step CFRA (i.e. all configured resources should be released)

Proposal 1 Preamble grouping for different states are configured implicitly by means of BWP configurations. For the limitation on connected mode-specific preamble grouping on initial uplink BWP shall be FFS.
- CATT explains that RAN1 agreement is aligned with this proposal. From UE point of view there is always up to two groups, and network can configure different than initial BWP. Nokia agrees and we don’t need any FFS.
- Qualcomm thinks that RAN1 asked us to support mode-specific preamble grouping. Nokia doesn’t understand why RAN1 went into state specific discussion. Vivo explains that the intention from RAN1 is not to introduce the state specific configuration.
- Nokia thinks that preamble group is a RAN2 issue. Ericsson thinks that PUSCH configuration is a RAN1 issue. ZTE explains that there is no conflict with the specification if we go this way as RAN1 only defines the mapping.
- LG thinks that Qualcomm’s concern can be resolved by configuring two BWPs and they are ok with no further optimization.

On discarding/releasing the 2-step CFRA resources, agree and select between the options:

Option 1: *Use same behaviour as for rel-15 for releasing 2-step CFRA.*
Option 2: *Introduce a new message for releasing the PUSCH resources or carry a PUSCH resource release indication in msgB.*
- APT asks if this also includes release the “dedicated MSGA PUSCH resource” or only CFRA resource? it should be discussed since the dedicated PUSCH resource should not be reserved for a longer time than necessary, which is very costly.
- Ericsson thinks that the current mechanisms can be used to ensure that resources are kept for a long time. ZTE thinks that we typically release them at the same time.

R2-2002126 Draft LS to RAN1 on NR-U PRACH root sequence for 2-step RA (coming from the proposal from the open issue document)
=> update WI code NR_unlic-Core
=> add the lengths (571, 1151)
=> Update RAN2 respectfully ask RAN1 to confirm whether the two new root sequences above are applicable to 2-step RA for NR-U
=> Update " Since RAN2 has introduced the option of configuring a BWP with only 2-step RA, if 2-step RA shall support the newly introduced NR-U PRACH root sequences as for the current 4-step RRC configuration[3], then it needs to be explicitly configurable for 2-step RA."
=> The LS is revised in R2-2001928 with the changes above

R2-2001928 Draft LS to RAN1 on NR-U PRACH root sequence for 2-step RA
=> The LS is approved in R2-2002138

Not treated

R2-2000994 Summary of open issues in MAC running CR ZTE Corporation (email discussion rapporteur) discussion Rel-16

R2-2001219 Phase 2 and phase 1 issue list Ericsson (Email disc rapporteur) discussion Rel-16 NR_2step_RACH-Core

R2-2000992 Summary of running MAC CR review issue list - phase 1 ZTE Corporation (email discussion rapporteur) report Rel-16

R2-2000993 Summary of running MAC CR review issue list - phase 2 ZTE Corporation (email discussion rapporteur) report Rel-16

R2-2000996 Draft-Running MAC CR for 2-step RACH ZTE Corporation (email discussion rapporteur) draftCR Rel-16 38.321 15.8.0 B NR_2step_RACH-Core, NR_unlic-Core, TEI16

R2-2000995 Summary of open issues in MAC running CR - Updated ZTE Corporation (email discussion rapporteur) discussion Rel-16 Late

6.13.2 Other user plane stage-3 aspects

RA-RNTI design and open aspects of contention resolution.

To be discussed over email officially kicked off during e-meeting week (as offline email discussion) and treated the second slot, Week of March 2nd:

R2-2001916 Summary of UP open issues ZTE
=> Noted

Agreements
1. MDT/SON work can discuss the UE reporting of 2-step RA failure - e.g. as part of the objectives in the MDT/SON WID - RP-193255 (i.e. no further work is pursued for this under 2-step RACH WID) – no changes to current running CR.
2. For the issue regarding the start of the msgB window for invalid PUSCH resource, we send an LS to RAN1 asking them: "if the starting point of the msgB window is clear from RAN1 specs for the case when the PUSCH resource is invalid and fix it in RAN1 specs if this is unclear and if needed". Updates to MAC spec can be discussed during the Running CR phase.
3. In case of 2-step CFRA, if MSGA payload is lost, then the network will send fallbackRAR. For new transmission (i.e. MSGA payload is successfully received), C-RNTI based scheduling can be used (i.e. no changes to the current running CR)

R2-2002200 LS to RAN1 on the starting point of msgB window ZTE

=> the LS is revised in R2-2002205

R2-2002205 LS to RAN1 on the starting point of msgB window ZTE
- Samsung thinks that we still have a problem in the MAC to fix. ZTE confirms that if this is need we may need to update.
- Nokia is not sure why we have to send this LS as RAN1 should fix it themselves.

=> Update the action to RAN1 from “unclear” to “needed”
- Qualcomm thinks we should ask what the starting point it.

=> The LS is approved in R2-2002298

This will not be treated

R2-2000141 Simultaneous BWP Switching and Contention Resolution in 2-step RACH vivo discussion
R2-2000142 Resource Selection for 2-step RACH Considering Measurment Gap vivo discussion R2-1914377
R2-2000143 Handling of the Collision Between MsgA Grant and Another UL Grant vivo discussion
R2-2000144 Discuession on the MsgB Response Window for 2-step CFRA vivo discussion
R2-2000220 Handling PDCCH Order Initiated CFRA Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
R2-2000221 NDI Toggling Aspects Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
R2-2000222 Preamble Group Selection upon switching from 2 step CFRA to 2 step CBRA Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
R2-2000223 Preamble Group Selection upon switching from 2 step to 4 step RASamsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
R2-2000225 Handling Preambles not associated with PRUs Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
R2-2000388 Preamble group selection and 2-step failure reporting Ericsson discussion Rel-16 NR_2step_RACH-Core
R2-2000389 Combined Back-off and 4-step switch Ericsson discussion Rel-16 NR_2step_RACH-Core
R2-2000391 Use of 2-step resources on different BWPs Ericsson discussion Rel-16 NR_2step_RACH-Core
R2-2000408 Issues on preamble group selection for 2-step RACH OPPO discussion Rel-16 NR_2step_RACH-Core
R2-2000409 Measurement gap impacts on MSGA transmission OPPO discussion Rel-16 NR_2step_RACH-Core
R2-2000777 Discussion on preamble group selection for 2step RACH initiated by HO Fujitsu discussion Rel-16 NR_2step_RACH
R2-2000812 Views on Remaining MAC Issues for 2-Step RACH CATT discussion NR_2step_RACH-Core
R2-2000831 Differentiating between MsgB carrying RRC and other messages Sony discussion Rel-16 NR_2step_RACH-Core R2-1915240
R2-2000833 msgB-RNTI ambiguity for CFRA and CBRA of 2-Step RACH Sony discussion Rel-16 NR_2step_RACH-Core
R2-2000852 2-step CBRA preamble group selection Nokia, Nokia Shanghai Bell discussion Rel-16 NR_2step_RACH-Core
R2-2000853 Need for ra-MsgASizeGroupA parameter Nokia, Nokia Shanghai Bell discussion Rel-16 NR_2step_RACH-Core
R2-2000951 Remaining issues on the msgA transmission Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core
R2-2000952 Remaining issues on MsgB reception Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core
R2-2000953 Draft LS to RAN1 on LSBs of SFN Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core

R2-2000954 Open issues on MAC spec for 2-stepRACH Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core

R2-2000955 MAC handling of MsgA with invalid PUSCH Huawei, HiSilicon discussion Rel-16 NR_2step_RACH-Core

R2-2001017 Remaining issues on 2-step CBRA Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core

R2-2001125 Preamble grouping for 2-step RA NEC Telecom MODUS Ltd. discussion

R2-2001510 Further discussion on preamble group selection LG Electronics discussion NR_2step_RACH-Core

R2-2001512 Draft 38.321 CR on preamble group selection for 2-step RA type LG Electronics draftCR Rel-16 38.321 15.8.0 C NR_2step_RACH-Core

R2-2001529 Remaining issue on user plane aspects LG Electronics discussion NR_2step_RACH-Core

6.13.3 RRC stage-3 related aspects

To be discussed over email officially kicked off during e-meeting week (as offline email discussion) and treated the second slot, Week of March 2nd:

R2-2001917 Summary of CP open issues Ericsson
=> Noted
[Offline discussion 508]

Agreements
1. Fallback RAR shall be supported for BWP(s) where 2-step RA resources are configured (no changes to the current running CR). 2. Include ra-ContentionResolutionTimer in RACH-ConfigCommonTwoStepRA-r16 for fallback RAR, which is only configurable for 2-step RA only BWP. 3. Msg3-DeltaPreamble can be present in PUSCH-ConfigCommon for fallback RAR when a 2-step only BWP is configured. 4. RAN2 send an LS to RAN1 on the identified options for preamble-to-PRU mapping for 2-step CFRA. Explain the options that has been discussed and indicate that option 1 has majority in RAN2 and ask RAN1 whether there is any feasibility concerns and inform us on which option will be implemented.

UE capability
- Nokia doesn't know what we will discuss, we only have one UE capability 2-step RACH
- Intel thinks we can make an agreement to have a singe UE cability
- Qualcomm doesn't think this is acceptable and we should wait for RAN1. ZTE explains that even for 4-step we don't have a separate CFRA and CBRA capability, only for CSI-RS and CFRA
- Huawei also doesn't think we can make the conclusion here but we should wait for RAN1.
- LG thinks that separate CFRA and CBRA are needed

=> Resume this discussion in April

R2-2002204 LS to RAN1 on the identified options for preamble-to-PRU mapping for 2-step CFRA
Ericsson
[offline 525]
=> The LS is Approved.

This will not be treated

R2-2000224 PUSCH Resource Configuration for CFRA Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core

R2-2000410	Remaining issues on configuration of 2-step CFRA	OPPO	discussion	Rel-16	NR_2step_RACH-Core
R2-2000586	Open Issues on 2-step RACH	Apple	discussion	Rel-16	NR_2step_RACH-Core
R2-2000650	Views on Remaining RRC Issues for 2-Step RACH	CATT	discussion		NR_2step_RACH-Core
R2-2000778	Discussion on RO and PO configuration for CFRA	Fujitsu	discussion	Rel-16	NR_2step_RACH
R2-2000998	Resource configuration for 2-step CFRA	ZTE Corporation, Sanechips	discussion	Rel-16	

6.13.4 Other

CFRA for 2-step RACH for HO if time permits as per plenary guidance.
ZTE will summarize the proposals and open issues and provide possible way forward for online discussions. Companies are encouraged to work together towards a converged solution.

This will not be treated

R2-2000390	BSR over 2-step RA	Ericsson	discussion	Rel-16	NR_2step_RACH-Core
R2-2000392	Beam specific 2-step RA support	Ericsson	discussion	Rel-16	NR_2step_RACH-Core
R2-2000393	MsgA transmission for NR-U	Ericsson	discussion	Rel-16	NR_2step_RACH-Core
R2-2000916	Discussion on the release of the PUSCH resources	CMCC	discussion	Rel-16	
R2-2000917	Remaining issues on 2-step CFRA	CMCC	discussion	Rel-16	
R2-2000926	Open issues for 2-step CFRA	CMCC	discussion	Rel-16	Revised
R2-2000943	MSGB for CFRA	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_2step_RACH-Core
R2-2000956	Prioritized 2-step RACH	Huawei, HiSilicon	discussion	Rel-16	NR_2step_RACH-Core
R2-2001032	Remaining issues on 2-step CFRA	Qualcomm Incorporated	discussion	Rel-16	NR_2step_RACH-Core
R2-2001095	RAN2 aspect of UE capability for 2-step RACH	Intel Corporation	discussion	Rel-16	NR_2step_RACH-Core
R2-2001102	Discussion on MsgB PDCCH	Potevio Company Limited	discussion	Rel-16	NR_2step_RACH-Core
R2-2001471	Further discussion on 2-Step CFRA	CMCC	discussion	Rel-16	R2-2000926
R2-2001514	Releasing CFRA resources for 2-step RA type	LG Electronics	discussion		NR_2step_RACH-Core
R2-2001515	Draft 38.321 CR on release of CFRA resource for 2-step RA type	LG Electronics	draftCR	Rel-16	38.321 15.8.0 B NR_2step_RACH-Core
R2-2001518	Draft 38.331 CR on release of CFRA resource for 2-step RA type	LG Electronics	draftCR	Rel-16	38.331 15.8.0 NR_2step_RACH-Core

6.14 Single Radio Voice Call Continuity from 5G to 3G

(SRVCC_NR_to_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: RP-190713). Documents in this agenda item will be handled in a break out session
Time budget: 0.5 TU
Tdoc Limitation: 1 tdoc

Only running CRs are expected to be submitted for this Work Item. For important unexpected issues it's still possible to contribute to sub agenda item 6.14.2. This Work Item will likely only be handled via offline email discussions, kicked off at the e-meeting start.

6.14.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc

R2-2000325 Introduction of SRVCC from 5G to 3G Ericsson, ZTE CR Rel-16 37.340 16.0.0 0165 2 B SRVCC_NR_to_UMTS-Core R2-1916335
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

R2-2000335 Introduction of SRVCC from 5G to 3G Ericsson CR Rel-16 38.300 16.0.0 0186 - B SRVCC_NR_to_UMTS-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

✉ **[AT109e][104][SRVCC] Stage 2 CRs (Ericsson)**
Intended outcome: Agreed 37.340 and 38.300 CRs
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

R2-2001692 Introduction of SRVCC from 5G to 3G Ericsson, China Unicom CR Rel-16 38.300 16.0.0 0186 1 B SRVCC_NR_to_UMTS-Core
⇨ Revised in R2-2002370

R2-2002370 Introduction of SRVCC from 5G to 3G Ericsson, China Unicom CR Rel-16 38.300 16.0.0 0186 2 B SRVCC_NR_to_UMTS-Core
⇨ Agreed

R2-2001701 Introduction of SRVCC from 5G to 3G Ericsson, ZTE Corporation, China Unicom CR Rel-16 37.340 16.0.0 0165 3 B SRVCC_NR_to_UMTS-Core
⇨ Agreed

R2-2000542 Introduction of SRVCC from 5G to 3G Huawei, HiSilicon, China Unicom CR Rel-16 38.331 15.8.0 1446 - B SRVCC_NR_to_UMTS-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

✉ **[AT109e][105][SRVCC] RRC CR (Huawei)**
Intended outcome: Agreed 38.331 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

R2-2001693 Introduction of SRVCC from 5G to 3G Huawei, HiSilicon, China Unicom CR Rel-16 38.331 15.8.0 1446 1 B SRVCC_NR_to_UMTS-Core
⇨ Agreed

R2-2000651 Introduction of SRVCC from 5G to 3G China Unicom, Huawei, HiSilicon CR Rel-16 38.306 15.8.0 0235 - B SRVCC_NR_to_UMTS-Core
- Endorsed as baseline CR. Moved to offline email discussion for agreement
- No comments received during the offline email discussion
⇨ Agreed (unless there will be a later general decision at the end of the meeting to only endorse 38.306 CRs for now)

✉ **[AT109e][106][SRVCC] 38.306 CR (China Unicom)**
Intended outcome: Agreed 38.306 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

The following documents are withdrawn

R2-2000152 Running CR for the introduction of SRVCC from 5G to 3G China Unicom CR Rel-16
38.306 15.8.0 0222 - B SRVCC_NR_to_UMTS-Core Withdrawn

R2-2000174 Running CR for the introduction of SRVCC from 5G to 3G China Unicom CR Rel-16
38.306 15.8.0 0225 - B SRVCC_NR_to_UMTS-Core Withdrawn

R2-2000326 Running CR for introduction of SRVCC from 5G to 3G Ericsson draftCR Rel-15
38.300 15.8.0 B SRVCC_NR_to_UMTS-Core R2-1914646 Withdrawn

6.14.2 Other

6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR

(NR_CLI_RIM; leading WG: RAN1; REL-16; started: Dec 18; target; Dec 19; WID: RP-191997) Documents in this agenda item will be handled in a break out session.

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

Apart from running CRs, it's possible to contribute to sub agenda item 6.15.2 for the remaining open issues. This Work Item will only be handled via offline email discussions kicked off at the e-meeting start.

6.15.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc

R2-2001411 Introduction of cross link interference management Huawei, HiSilicon CR Rel-16
38.300 16.0.0 0201 - B NR_CLI_RIM
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

R2-2001412 Introduction of cross link interference management Huawei, HiSilicon, ZTE Corporation (Rapporteur) CR Rel-16 37.340 16.0.0 0182 - B NR_CLI_RIM
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

✉ **[AT109e][107][CLI] Stage 2 CRs (Huawei)**
Intended outcome: Agreed 37.340 and 38.300 CRs
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

R2-2001694 Introduction of cross link interference management Huawei, HiSilicon CR Rel-16
38.300 16.0.0 0201 1 B NR_CLI_RIM
⇨ revised due to some editorial corrections

R2-2001700 Introduction of cross link interference management Huawei, HiSilicon CR Rel-16
38.300 16.0.0 0201 2 B NR_CLI_RIM
⇨ Agreed

R2-2001695 Introduction of cross link interference management Huawei, HiSilicon, ZTE Corporation (Rapporteur) CR Rel-16 37.340 16.0.0 0182 1 B NR_CLI_RIM
⇨ Agreed

R2-2001542 Introduction of CLI handling and RIM in TS38.331 LG Electronics Inc. CR Rel-16
38.331 15.8.0 1494 - B NR_CLI_RIM
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

✉ **[AT109e][108][CLI] RRC CR (LG)**
Intended outcome: Agreed 38.331 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

R2-2001696 Introduction of CLI handling and RIM in TS38.331 LG Electronics Inc. CR Rel-16 38.331 15.8.0 1494 1 B NR_CLI_RIM
=> Coversheet update by MCC: Set revision to 2
=> Revised in R2-2001895

R2-2001895 Introduction of CLI handling and RIM in TS38.331 LG Electronics Inc. CR Rel-16 38.331 15.8.0 1494 2 B NR_CLI_RIM
⇨ Agreed

R2-2000441 Introduction of Cross Link Interference (CLI) handling and Remote Interference Management (RIM) Qualcomm Incorporated CR Rel-16 38.306 15.8.0 0230 - B NR_CLI_RIM-Core R2-1915716
- Endorsed as baseline CR. Moved to offline email discussion for agreement
- During the email discussion it was commented that RAN4 already specified a different UE behaviour than previously agreed by RAN2 for UEs indicating the FDMed reception (of DL signal/channel and SRS RSRP / CLI RSSI resources) is not supported
⇨ (For now) we assume the RAN4 understanding that in case FDMed reception is not supported the UE shall not be expected to receive PDCCH/PDSCH (no change needed to the 38.306 CR)
- No other comments were received during the offline email discussion
⇨ Agreed (unless there will be a later general decision at the end of this meeting to only endorse 38.306 CRs for now)

✉ **[AT109e][109][CLI] 38.306 CR (Qualcomm)**
Intended outcome: Agreed 38.306 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET

6.15.2 Other

The following two papers will be noted but not treated (for most proposals, feedback from RAN1/RAN3 to our previous LSs is needed first)

R2-2000555 Remaining Issues of UE-CLI Reporting Nokia, Nokia Shanghai Bell discussion Rel-16
⇨ Noted

R2-2000556 UE-CLI Measurements for EN-DC Nokia, Nokia Shanghai Bell discussion Rel-16
⇨ Noted

R2-2000557 Draft LS to RAN3 on UE-CLI measurements for EN-DC Nokia, Nokia Shanghai Bell discussion Rel-16
⇨ Noted

R2-2001621 Remaining last issues on CLI Ericsson discussion Rel-16 NR_CLI_RIM
⇨ Noted

6.16 Enhancements on MIMO for NR

(NR_eMIMO-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192271). Documents in this agenda item will be handled in a break out session.

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

It's possible to contribute to all sub agenda items, to address the remaining open issues. Summary documents may then be utilized to summarize documents submitted to a given sub-AI and to make tentative proposals. For this Work Item, the discussion (on summary/company tdocs) will start via offline email discussions and will then continue during a web conference and further followup offline email discussions.

6.16.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc

R2-2000095 LS on explicit higher layer signalling on PUCCH resource grouping for simultaneous spatial relation updates (R1-1913423; contact: LGE) RAN1 LS in Rel-16 NR_eMIMO-Core To:RAN2
⇨ Noted

R2-2000096 Reply LS on multi PDCCH-based and single PDCCH-based multi-TRP operation (R1-1913463; contact: Huawei) RAN1 LS in Rel-16 NR_eMIMO-Core To:RAN2
⇨ Noted

6.16.2 RRC aspects

Including output of email discussion [108#36][NR eMIMO] Running RRC CR (Ericsson).
A summary document will also be utilized to treat this agenda item (Ericsson).

R2-2001104 Proposals for [108#36][NR eMIMO] Running RRC CR (Ericsson) Ericsson Limited discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001109 Running RRC CR for Introduction of NR eMIMO Ericsson draftCR Rel-16 38.331 15.8.0 B NR_eMIMO-Core R2-1916343
⇨ Revised in R2-2002071

R2-2002071 Introduction of MIMO enhancements Ericsson CR Rel-16 38.331 15.8.0 1500 B NR_eMIMO-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion

R2-2001671 Summary of [NR eMIMO] RRC aspects Ericsson discussion Rel-16 NR_eMIMO-Core
⇨ Initially moved to offline email discussion with the intention to go back online during the web conference call(s)

✉ **[AT109e][110][EMIMO] RRC CR (Ericsson)**
Initial scope: Continue the discussion on RRC aspects, based on R2-2001671
Initial intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals that need further (online) discussion

Initial intermediate deadline (for companies' feedback): Tuesday 2020-02-25 20:00 CET
Initial intermediate deadline (for rapporteur's summary): Wednesday 2020-02-26 01:30 CET
Second phase scope: Continue the discussion on RRC aspects which are still open after the discussion on R2-2001677
Second phase intended outcome: summary of the offline discussion in R2-2001684:
- Set of proposals with full consensus (aim to agree to those over email) and corresponding updated CR
- Set of proposals that need further (online) discussion

Second intermediate deadline (for companies' feedback): Friday 2020-02-28 12:00 CET
Second intermediate deadline (for rapporteur's summary and updated CR): Monday 2020-03-02 12:00 CET
Final scope: Discuss the updated CR
Final intended outcome: Agreed 38.331 CR
Final deadline for companies' feedback: Wednesday 2020-03-04 12:00 CET
Final deadline for rapporteur's version for agreement: Thursday 2020-03-05 12:00 CET

R2-2001705 Introduction of MIMO enhancements Ericsson CR Rel-16 38.331 15.8.0 1500 1 B NR_eMIMO-Core
⇨ Coversheet update MCC: Clauses affected field is empty.

R2-2001896 Introduction of MIMO enhancements Ericsson CR Rel-16 38.331 15.8.0 1500 2 B NR_eMIMO-Core
⇨ Agreed

✉ **[AT109e][120][EMIMO] LS to RAN1 (Ericsson)**
Scope: Discuss which questions to ask RAN1 regarding RRC parameters
Intended outcome: Agreed LS to RAN1 in R2-2001683

Deadline: Wednesday 2020-03-04 12:00 CET

R2-2001683 LS on eMIMO RRC parameters Ericsson LS out Rel-16 NR_eMIMO-Core
To:RAN1
⇨ Approved

R2-2001677 Offline discussion 110: eMIMO RRC CR discussion Ericsson discussion Rel-16 NR_eMIMO-Core

Proposed agreements that seem to have consensus for email approval/with short online view:

Proposal 2 Given the above analysis we propose to keep the three modes for ULFPTX
Note: further proposal to inform RAN1 with LS
- QC thinks we should inform RAN1 of this

Proposal 3 Agree the BDFactor to be placed under PhysicalCellGroupConfig with ENUMERATED {n1}.
- Nokia don't think this is correct because they think this should be per cell, not per cell group. Ericson has a different understanding. Apple think that this is per cell in the RAN1 list.

Proposal 7 Agree the current RRC running CR implementation i.e. have only rsrp-ThresholdSSBBFR which is used for beam selection for MAC CE and rename rsrp-ThresholdSSBBFR to rsrp-ThresholdBFR. (MAC CR needs to be aligned)
Proposal 8 Agree the current RRC running CR implementation for max number of detection resource limitation as show above.
Note: There were comments on fine tuning the restriction. This could be done over email with after above agreement.

Agreements:
1. Given the above analysis we propose to keep the three modes for ULFPTX. Inform RAN1 of this decision and ask if this is fine for them
2. BDFactor is signalled per cell. Ask RAN1 for confirmation
3. Agree the current RRC running CR implementation i.e. have only rsrp-ThresholdSSBBFR which is used for beam selection for MAC CE and rename rsrp-ThresholdSSBBFR to rsrp-ThresholdBFR. (MAC CR needs to be aligned)
4. The current RRC running CR implementation for max number of detection resource limitation as show above.

Proposals that would benefit from online discussion:

Proposal 1 Agree to implement two LTE CRS pattern lists corresponding to each CORESETPoolIndex as indicated in above changes and merge the changes to the running RRC CR for NR eMIMO
Discussion: up to 6 CRS patterns in two lists or one list. If two list how to extend in future, if one list how to implement overlapping/non-overlapping restrictions.
- Ericsson suggests to start assuming two lists and change later if we really find a problem.
- Nokia thinks that for the overlapping/non-overlapping issue we can refer to RAN1 spec
- Vivo think one list is better to align to RAN1 intention although both can work
- QC think that the description of the overlapping/non-overlapping issue should be covered in the field description

Proposal 4 Agree the existing RepetitionSchemeConfig IE in the running CR as baseline for repetition scheme configuration.
Discussion: How to interpret RAN1 intention on if fdm-tdm and slotBased are mutually exclusive always or not. Further, how to implement configuration restrictions that is, in code or in field descriptions.
- Huawei, Samsung, QC think that fdm-tdm and slotBased are mutually exclusive
- Ericsson suggests to still use a SEQUENCE and ask RAN1

Proposal 5 Move the configuration of repetition schemes from BPW-DownlinkDedicated to PDCCH-Config i.e. implement this change in running RRC CR.
Proposal 6 Discuss and agree the value range for coresetPoolIndex-r16 in ControlResourceSet.
Discussion: If we explicitly configure INTEGER(0..1) do we need restriction that if 0 is configured 1 has to be configured as well in addition to rules on absence for legacy compatibility?
Proposal 9 Discuss if the parameters enableDefaultBeamPlForPUSCH0_0, enableDefaultBeamPlForPUCCH, enableDefaultBeamPlForSRS, and PLRS-update parameter are needed.
- Huawei/QC think that these parameters are needed.

From Question 10:

Issue1:
Should capture that dataScramblingIdentityPDSCH2 can only be configured if PDCCH-Config in the same BWP-DownlinkDedicated includes at least one ControlResourceSet configured with coresetPoolIndex (could also capture that it is deleted by the UE if this is no more the case).
Issue2:
There are several structures with Need R for SetupRelease, we do not understand how this can work

Agreements:
1. Agree to implement two LTE CRS pattern lists corresponding to each CORESETPoolIndex as indicated in above changes and merge the changes to the running RRC CR for NR eMIMO. Can reconsider this if we find an issue.
2. Agree the existing RepetitionSchemeConfig IE (i.e. SEQUENCE) in the running CR as baseline for repetition scheme configuration, with additional restriction in the field description. Also ask RAN1 for confirmation that fdm-tdm and slotBased are mutually exclusive
3. enableDefaultBeamPlForPUSCH0_0, enableDefaultBeamPlForPUCCH, enableDefaultBeamPlForSRS, and PLRS-update parameter are kept in the RRC CR for now. Can consider to remove them later if not really needed

⇨ Proposals not concluded online are moved to a second phase of offline email discussion 110

R2-2001684 Offline discussion 110: eMIMO RRC CR discussion - Second round discussion Ericsson Rel-16 NR_eMIMO-Core

Attempt to conferm the following proposals
1. *Move the configuration of repetition scheme to PDSCH-Config*
2. *Use explicit indexing for the value range for coresetPoolIndex-r16 in ControlResourceSet and thus INTEGER (0..1)*
3. *Clarify in field description that dataScramblingIdentityPDSCH2 is used only when coresetPoolIndex is set to 1*
4. *Correct need code to M for SetupRelease*

Agreements:
1. Move the configuration of repetition scheme to PDSCH-Config
2. Use explicit indexing for the value range for coresetPoolIndex-r16 in ControlResourceSet and thus INTEGER (0..1)
3. Clarify in field description that dataScramblingIdentityPDSCH2 is used only when coresetPoolIndex is set to 1
4. Correct need code to M for SetupRelease

R2-2001345 Remaining RRC signalling aspects of NR eMIMO Intel Corporation discussion Rel-16 NR_eMIMO-Core
- Ericsson is planning to consider this in the RRC CR. Some changes might be needed though
⇨ The discussion will continue as part of offline 110 on RRC CR drafting, also considering the discussion on configuration for MAC CE
⇨ Noted

The following papers are covered by the summary document and then noted

R2-2000860 Multiple rate matching patterns with M-TRP Nokia, Nokia Shanghai Bell discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001036 Discussion the MIMO RRC parameter CRS pattern list Qualcomm Incorporated discussion Rel-16 NR_eMIMO-Core
⇨ Noted

6.16.3 DL MAC CE design

DL MAC CE design for TCI states activation/deactivation (for both single-PDCCH and Multi-PDCCH mTRP operation) and for all other functionalities defined by RAN1.
Including output of email discussion [108#68][NR eMIMO] Design of DL MAC CEs (Oppo).

A summary document will also be utilized to treat this agenda item (Oppo).

The following two papers will be handled during the first web conference call

R2-2000660 Report of [108#68][NR eMIMO] Design of DL MAC CEs OPPO report Rel-16 NR_eMIMO-Core

Proposal 1 Separate MAC CEs for PUCCH resource-based and PUCCH resource group-based spatial relation activation/deactivation.

- CATT think there is no huge majority in favour of separate MAC CE and then we could live with one. QC also thinks we can live with a single MAC CE, which could be considered as a baseline. Vice-chair thinks there is no baseline and we need to decide.
- Nokia and Samsung think that separate MAC CE are cleaner and there is no big issue with an additional LCID
- Ericsson wonders is a group MAC CE is needed at all if we go for a pure RRC configuration based approach.
- Vivo wonders whether we can reuse legacy MAC CE. Nokia/Oppo think we can use legacy MAC CE when possible otherwise (for 64 spatial relations) we need a new MAC CE

Proposal 2 In case the single PUCCH spatial relation MAC CE design is agreed, the new MAC CE can be designed to indicate a single spatial relation among up to 64 spatial relations per PUCCH resource, and an additional bit is used to differentiate that whether the MAC CE is PUCCH resource-based or PUCCH resource group-based.

Proposal 3 In case the separate PUCCH spatial relation MAC CEs design is agreed, the Extended PUCCH spatial relation Activation/Deactivation MAC CE indicates the spatial relation info with an explicit spatial relation info index.

Proposal 4 In case the separate PUCCH spatial relation MAC CEs design is agreed, the Group-based PUCCH spatial relation activation/deactivation MAC CE support spatial relation update for single PUCCH resource group.

Proposal 5 Introduce one new MAC CE for AP SRS spatial relation indication, and another new MAC CE for SRS pathloss reference RS update.

- QC wonders whether we need a new LCID is needed for MAC CE for AP SRS spatial relation indication. Oppo think this is needed
- Ericsson think that the positioning WI will also impact the SRS related MAC CE and it would be good to have consistent approach

Proposal 6 For AP SRS spatial activation/update MAC CE, reuse the R15 SP SRS Activation/Deactivation MAC CE format.

Proposal 7 For SRS Pathloss Reference RS Activation/Deactivation MAC CE, pathloss reference RS update for single SRS resource set is supported.

Proposal 8 PUSCH pathloss reference RS update MAC CE with single mapping between sri-PUSCH-PowerControlId and PUSCH-PathlossReferenceRS-Id is supported.

Proposal 9 For PUSCH Pathloss Reference RS activation/deactivation MAC CE, the PUSCH-PathlossReferenceRS-Id and sri-PUSCH-PowerControlId is included explicitly.

Proposal 10 Unified approach is used for designing the MAC CEs regarding multiple CCs/BWPs.

Proposal 11 RAN2 choose the unified approach for designing the MAC CEs regarding multiple CCs/BWPs between option 1 (MAC CE+RRC configuration approach) and option 2 (RRC configuration only approach).

- Intel thinks that MAC CEs are being abused. RRC is supposed to do the job.
- Ericsson/Huawei think that the RRC configuration based approach is better.
- Nokia/Samsung think that option 1 is aligned to RAN1 preference.
- ZTE think that option 1 implies that the network has to send potentially many MAC CEs.
- Nokia/Samsung can accept to go for the majority (option2) but would like to have the possibility to reconsider this if any problems are found

Who is in favour of option 1:

- Apple, QC, Samsung, Nokia

Who is in favour of option 2:

- Vivo, Futurewei, LGE, CATT, Ericsson, Huawei, Intel, ZTE, Oppo

Who cannot accept option 1:

- Futurewei, LGE, CATT, Ericsson, Huawei, ZTE, Vivo

Who cannot accept option 2:

- Samsung, Nokia

Proposal 12 *If RRC configuration only approach is agreed, RAN 2 discuss whether R16 UE should support MAC CE with granularity of both per CC-list and per CC.*

Proposal 13 *If R16 UE supports MAC CE with granularity of both per CC-list and per CC, separate LCIDs is reserved for differentiating the granularity of the received MAC CE, i.e. either per CC-list or per CC.*

Proposal 14 *Multiple TRP case is not considered for MAC CEs regarding multiple CCs/BWPs.*

Proposal 15 *RAN2 further discuss how to design CC list-based SRS activation/deactivation MAC CE.*

Agreements:
1. We have separate MAC CEs for PUCCH resource-based and PUCCH resource group-based spatial relation activation/deactivation. We might reconsider this if we go for a pure RRC configuration based approach.
2. In case the separate PUCCH spatial relation MAC CEs design is agreed, the Extended PUCCH spatial relation Activation/Deactivation MAC CE indicates the spatial relation info with an explicit spatial relation info index.
3. In case the separate PUCCH spatial relation MAC CEs design is agreed, the Group-based PUCCH spatial relation activation/deactivation MAC CE support spatial relation update for single PUCCH resource group.
4. Introduce one new MAC CE for AP SRS spatial relation indication, and another new MAC CE for SRS pathloss reference RS update. We need to check whether this is consistent with the outcome of the positioning WI on SRS related MAC CE
5. For AP SRS spatial activation/update MAC CE, reuse the R15 SP SRS Activation/Deactivation MAC CE format.
6. For SRS Pathloss Reference RS Activation/Deactivation MAC CE, pathloss reference RS update for single SRS resource set is supported.
7. PUSCH pathloss reference RS update MAC CE with single mapping between sri-PUSCH-PowerControlId and PUSCH-PathlossReferenceRS-Id is supported.
8. For PUSCH Pathloss Reference RS activation/deactivation MAC CE, the PUSCH-PathlossReferenceRS-Id and sri-PUSCH-PowerControlId is included explicitly.
9. Unified approach is used for designing the MAC CEs regarding multiple CCs/BWPs: option 2 (RRC configuration only). We might reconsider this if we find a problem

⇨ Proposals not concluded online are moved to new offline email discussion 121 on DL MAC CE design

✉ **[AT109e][121][EMIMO] DL MAC CE design (Oppo)**
Scope: Continue the discussion on DL MAC CE design aspects which are still open after the discussion on R2-2000660 as well as those listed in R2-2001551
Intended outcome: summary of the offline discussion in R2-2001686 with e.g.:
- Set of proposals with full consensus (aim to agree to those over email) to be reflected in the updated MAC CR
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting

Final deadline (for companies' feedback): Friday 2020-02-28 12:00 CET
Final deadline (for rapporteur's summary): Monday 2020-03-02 12:00 CET
Proposed agreements in R2-2001686 indicated for email agreement and not challenged until Monday 2020-03-02 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2001686 Offline discussion 121: DL MAC CE design OPPO discussion Rel-16 NR_eMIMO-Core

Proposal 1 *If the CC indicated in the MAC CE is configured as part of a CC-list, this MAC CE applies to all the CCs in the CC list; otherwise, the MAC CE applies to single CC.*

⇨ Agreed

Proposal 2 *Multiple TRP case is not considered for MAC CEs regarding multiple CCs/BWPs, i.e. TCI States Activation/Deactivation for UE-specific PDSCH MAC CE and TCI State Indication for UE-specific PDCCH MAC CE.*

⇨ Agreed

Proposal 3 RAN2's understanding is to introduce a new SRS activation/deactivation MAC CE for multiple CCs/BWPs, and the MAC CE activate the spatial relation info for SRS resource instead of SRS resource set.

- QC thinks that, since proposal 4 will send LS to RAN1 for further clarification on the understanding of proposal 3, proposal 3 is not the RAN2 common understanding. Proposal 3 has dependence on the feedback from RAN1. We suggest at least adding the condition on the proposal 3 that proposal 3 can be reconsidered if RAN1 replied LS gives different understanding
- Ericsson thinks that it should be possible to indicate more than one SRS resource in one MAC CE in order to avoid overhead. This is especially if we go with new LCID space in these MAC CEs.

⇨ To be discussed online

- Intel wonders Ericsson thinks that we can agree in RAN2 that one MAC CE includes more than one SRS resource or we ask RAN1 for this. Ericsson thinks RAN2 can decide. Samsung thinks that single SRS resource is enough (multiple SRS resource is an optimization).

Proposal 4 Send an LS to RAN1 to confirm the understanding of P3.

⇨ Ok to send an LS. Content to be discussed online

Proposal 5 RAN2 discusses the details on designing the SRS activation/deactivation MAC CE for multiple CCs/BWPs in the SRS resource level.

⇨ To be discussed online

Proposal 6 Existing "TCI State Indication for UE-specific PDCCH MAC CE" is used for multi PDCCH-based TRP transmission.

⇨ Agreed

Proposal 7 The legacy Rel-15 MAC CE format is used as a baseline for designing the TCI state activation/deactivation for UE-specific PDSCH MAC CE for mPDCCH case

- Ericsson thinks this is indeed whether sPDCCH and mPDCCH operation is supposed to be separated or not. We think this should get official RAN1 input/agreement and best way to get it is likely asking about it in LS

⇨ To be discussed online

- Samsung don't see the problem with this proposal.

Proposal 8 Introduce a new LCID of mPDCCH-based MAC CE for TRP2 and use same format of the existing MAC CE (R15) of TCI States Activation/Deactivation for UE-specific PDSCH.

- Ericsson thinks that even if we would assume RAN1 comes up with agreement that the operation should be separate the Proposal 8 does not really implement that as the Rel-15 existing MAC CE would need to be modified to explain that for mPDCCH operation, this MAC CE is used for CORESETIndex 0 and new MAC CE is used for CORESETIndex 1. The way to actually separate is to use Rel-15 MAC CE for sPDCCH and new almost copy MAC CE for mPDCCH both CORESETPoolIndex 0 and 1.

⇨ To be discussed online

- Samsung thinks this is a modelling issue.
- ZTE thinks that we could reuse a reserved bit instead of a new LCID. Ericsson would prefer this.

- Vice-chair thinks that we also need to re-discuss the agreement "We have separate MAC CEs for PUCCH resource-based and PUCCH resource group-based spatial relation activation/deactivation. We might reconsider this if we go for a pure RRC configuration based approach" based on the agreement to go for a RRC configuration based approach
- Samsung still prefers RRC + MAC CE but can accept to go for RRC configuration only.
- CATT supports to change the previous agreement. Vivo as well.

Agreements via email (from [121][EMIMO]):

1. If the CC indicated in the MAC CE is configured as part of a CC-list, this MAC CE applies to all the CCs in the CC list; otherwise, the MAC CE applies to single CC.
2. Multiple TRP case is not considered for MAC CEs regarding multiple CCs/BWPs, i.e. TCI States Activation/Deactivation for UE-specific PDSCH MAC CE and TCI State Indication for UE-specific PDCCH MAC CE.
3. Existing "TCI State Indication for UE-specific PDCCH MAC CE" is used for multi PDCCH-based TRP transmission.

Agreements online:

4. RAN2's understanding is to introduce a new SRS activation/deactivation MAC CE for multiple CCs/BWPs, and the MAC CE activate the spatial relation info for SRS resource instead of SRS resource set. Send an LS to RAN1 to confirm the understanding of P3 (exact wording to be decided). This understanding can be reconsidered if RAN1 reply LS gives different understanding
5. The legacy Rel-15 MAC CE format is used, reusing the first MAC CE reserved bit instead of a new LCID, for designing the TCI state activation/deactivation for UE-specific PDSCH MAC CE for mPDCCH case
6. We have only one MAC CE for PUCCH resource-based and PUCCH resource group-based spatial relation activation/deactivation (reverts the agreement in the first conf call). In the same MAC CE it will be possible to indicate multiple PUCCH resources (i.e. variable size MAC CE). Details to be discussed in the MAC CR drafting (if we cannot converge we might also go back to the initial agreement).

R2-2001551 Summary of DL MAC CE design for aganda 6.16.3 OPPO discussion Rel-16 NR_eMIMO-Core Late
⇨ Discussion moved to new offline email discussion 121 on DL MAC CE design

The following papers are covered by the summary document and then noted

R2-2000385 MAC CEs regarding multiple CCs/BWPs vivo discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2000659 CC list-based SRS Activation MAC CE OPPO discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2000766 Enhancement of multiple PDCCH-based TRP transmission Samsung discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2000890 Views on eMIMO MAC CEs CATT discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001034 Design of MIMO DL MAC CE Qualcomm Incorporated discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001126 Remaining update for PDSCH TCI state MAC CE Ericsson discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001128 New MAC CE for indicating spatial resource for PUCCH resources Ericsson draftCR Rel-16 38.321 15.8.0 NR_eMIMO-Core
⇨ Noted

R2-2001196 MAC CE signalling for multi-beam enhancement Huawei, HiSilicon discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001465 Considerations on TCI state MAC CE for mPDCCH mTRP transmission ZTE Corporation, Sanechips discussion Rel-16 NR_eMIMO-Core
⇨ Noted

6.16.4 General beam management enhancements

Including details of BFR procedure for Scell. Other aspects, if any, can also be covered here
Including output of email discussion [108#69][NR eMIMO] Running MAC CR (Samsung)
Including output of email discussion [108#70][NR eMIMO] BFR MAC CE (Samsung)
A summary document will also be utilized to treat this agenda item (Samsung).

R2-2000767 MAC running CR for NR eMIMO Samsung CR Rel-16 38.321 15.8.0 0691 - B NR_eMIMO-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion (to be kicked off after progress of the discussion on DL/UL MAC CE design and the general beam enhancement aspects)

✉ **[AT109e][111][EMIMO] MAC CR (Samsung)**
Scope: Update the CR based on the outcome of the discussion on R2-2000660 (DL MAC CE design) and R2-2001678, R2-2001685 and R2-2001686.
Intended outcome: Agreed 38.321 CR
Intermediate deadline (for companies' feedback on the endorsed baseline CR): Friday 2020-02-28 12:00 CET
Intermediate deadline (for rapporteur's updated CR): Monday 2020-03-02 12:00 CET
Final deadline for companies' feedback: Wednesday 2020-03-04 12:00 CET
Final deadline for rapporteur's version for agreement: Thursday 2020-03-05 12:00 CET

R2-2001706 MAC running CR for NR eMIMO Samsung CR Rel-16 38.321 15.8.0 0691 1 B NR_eMIMO-Core
⇨ Coversheet update by MCC:Clauses affected field is empty, improve title wording.
R2-2001897 Introduction of eMIMO for NR Samsung CR Rel-16 38.321 15.8.0 0691 2 B NR_eMIMO-Core
=> **Agreed**

R2-2001672 Summary of [NR eMIMO] Beam management enhancements Samsung discussion Rel-16 NR_eMIMO-Core
⇨ Initially moved to offline email discussion with the intention to go back online during the web conference call(s)

✉ **[AT109e][112][EMIMO] Beam management enhancements (Samsung)**
Initial scope: Continue the discussion on beam management enhancements, based on R2-2001672
Initial intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals that need further (online) discussion

Initial intermediate deadline (for companies' feedback): Tuesday 2020-02-25 20:00 CET
Initial intermediate deadline (for rapporteur's summary): Wednesday 2020-02-26 01:30 CET
Revised scope: Continue the discussion on beam management aspects which are still open after the discussion on R2-2001678 as well as BFR MAC CE aspects listed in R2-2000227
Final intended outcome: summary of the offline discussion in R2-2001685 with e.g.:
- Set of proposals with full consensus (aim to agree to those over email) to be reflected in an updated MAC CR
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Friday 2020-02-28 12:00 CET
Final deadline (for rapporteur's summary): Monday 2020-03-02 12:00 CET
Proposed agreements in R2-2001685 indicated for email agreement and not challenged until Monday 2020-03-02 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2001678 Offline discussion 112: Beam management enhancements Samsung discussion Rel-16 NR_eMIMO-Core

Agreements:
1. SCell BFR MAC CE can be transmitted using UL grant of any serving cell. Note that this option is implemented in running CR.
2. BFR MAC CE has an LCP priority higher than BSR MAC CE. Discussion can continue this meeting on whether this is higher or lower than Configured Grant Confirmation MAC CE.
3. No new timer to avoid triggering multiple BFRQ MAC CEs and handle BFRQ MAC CE retransmission(s) is not introduced for now. Can come back with this proposal in the next meeting
4. If we agree on a bitmap based BFR MAC CE format, introduce a truncated SCell BFR MAC CE format
5. RA prioritisation for Scell BFR is not supported.

⇨ Proposals not concluded online are moved to a second phase of offline email discussion 112

Proposal 1: SCell BFR MAC CE can be transmitted using UL grant of any serving cell. Note that this option is implemented in running CR.
Rapporteur's comment: The proposal is based on majority view (9/6).

- Nokia thinks that in NR-U we decided not to do this and wonder why we need a different behaviour here
- Vivo/Samsung think this case is different from LBT failure case and we don't necessarily need to align among WIs. Samsung also indicates that the other alternative in the discussion was to leave this to UE implementation so that would be the alternative
- Nokia thinks that if we have beam correspondence UL is gone if DL is gone and they are afraid that we might need to change in the future.

Proposal 2: BFR MAC CE has an LCP priority higher than BSR MAC CE but lower than Configured Grant Confirmation MAC CE.
Rapporteur's comment: The proposal is based on majority view (9/8).

- Samsung thinks that all agree that BFR MAC CE has an LCP priority higher than BSR MAC CE so that can be agreed.

Proposal 3:New Timer to avoid triggering multiple BFRQ MAC CEs and handle BFRQ MAC CE retransmission(s) is not introduced.
Rapporteur's comment: The proposal is based on majority view (8/7).

- Nokia wonders what the solution is if there is no timer an there is no ack from the network
- Ericsson don't think a new timer to protect against lost MAC CE is needed
- Lenovo think that with proposal 1 now there is an even higher risk that no ack is received

Proposal 4: Introduce a truncated SCell BFR MAC CE format where,
- Ci field is included but octet(s) containing candidate beam availability indication (AC) and Candidate RS ID fields of one or more SCells are truncated in order not to exceed remaining UL resource.
- LCID for Truncated BFR MAC CE is different from non-truncated BFR MAC CE
Rapporteur's comment: The proposal is based on majority view (10/4).

Proposal 5: The transmission of the beam failure information of a certain SCell only cancels the pending BFR SR triggered by this Scell
Rapporteur's comment: The proposal is based on majority view (9/4).

Proposal 6: RA prioritisation for Scell BFR is not supported.
Rapporteur's comment: The proposal is based on majority view (12/4).

Proposal 7: Triggered BFRs for the SCell are cancelled upon Scell deactivation.
Rapporteur's comment: The proposal is based on majority view (almost consensus).

Proposal 8: UE shall not ignore measurement gaps while monitoring PDCCH addressed to C-RNTI/CS-RNTI for receiving an UL grant for new transmission after transmitting BFRQ SR and BFRQ MAC CE.
Rapporteur's comment: The proposal is based on majority view (8/4).

Proposal 9: Consecutive octets containing 'AC' field at the end of SCell BFR MAC CE can be omitted.
Rapporteur's comment: The proposal is based on majority view (3/3, 6 has no strong view and seems ok to support).

Proposal 10: BFR MAC CE for BFR on SpCell is not supported in R16.
Rapporteur's comment: There is no consensus or majority to introduce BFR MAC CE for BFR on SpCell. There is also no consensus or clear majority on detailed solutions (see summary of Q14 and Q15).

R2-2001685 Offline discussion 112: Beam management enhancements - Second round Samsung
discussion Rel-16 NR_eMIMO-Core

Proposals for agreement (significant majority)
Proposal 1: A bitmap is included in SCell BFR MAC CE to indicate failed SCell indices.

⇨ Agreed

Proposal 2: The length of the bitmap is either 1 or 4 octets. A single octet bitmap is used when the highest ServCellIndex of the MAC entity's SCell configured with beam failure detection is less than 8, otherwise four octets are used.

⇨ Agreed

Proposal 3:One bit field is included in SCell BFR MAC CE to indicate whether candidate beam is available or not. This field is included only for failed SCell.

⇨ Agreed

Proposal 4: 6 bit candidate RS ID field is included in SCell BFR MAC CE for failed SCell. The field is set to index of candidate RS in candidate RS list. The field is included only if new candidate beam is available for failed SCell.

⇨ Agreed

Proposal 5: Adopt the TP in section 5 of R2-2000227.

⇨ Agreed

Proposal 6: Truncated SCell BFR MAC CE format:

- Ci field is included (as in non-truncated format) but octet(s) containing candidate beam availability indication (AC) and Candidate RS ID fields of one or more SCells are truncated in order not to exceed remaining UL resource.

- LCID for Truncated BFR MAC CE is different from non-truncated BFR MAC CE

⇨ Agreed

Proposal 8: The transmission of the beam failure information of a certain SCell only cancels the pending BFR SR triggered by this SCell.

⇨ Agreed

Proposal 9: Triggered BFRs for the SCell are cancelled upon Scell deactivation.

⇨ Agreed

Proposal 10: UE shall not ignore measurement gaps while monitoring PDCCH addressed to C-RNTI/CS-RNTI for receiving an UL grant for new transmission after transmitting BFRQ SR and BFRQ MAC CE.

⇨ Agreed

Proposals for discussion

Proposal 6: SCell BFR MAC CE has same priority as Configured Grant Confirmation MAC CE.

- Nokia in principle is fine but this could also be impacted by decisions in NR-U
- Ericsson has no problem with either higher or lower priority, but equal is strange.
- Samsung thinks this is a corner case and in case it will be up to UE implementation.

Proposal 11: BFR MAC CE for BFR on SpCell is not supported in R16.

- Apple thinks there is a (small) majority in favour of supporting BFR MAC CE for BFR on SpCell so we should discuss whether to actually support this in R16
- Samsung thinks we should fix the problem we have and not introduce a completely new solution

⇨ The proposal has quite some support. The problem is whether this would fit in the time we have, also considering the different views on the different detailed aspects

⇨ Email discussion until the next meeting on the technical details to converge on a single solution. We will then re-assess whether to include this or not as part of the eMIMO WI.

✉ **[RAN2#109e][EMIMO] BFR MAC CE for BFR on SpCell (Apple)**
Intended outcome: Discuss the technical details to converge on a single solution.
Deadline: until the next meeting

Agreements via email (from second round of [112][EMIMO]):

1. A bitmap is included in SCell BFR MAC CE to indicate failed SCell indices.
2. The length of the bitmap is either 1 or 4 octets. A single octet bitmap is used when the highest ServCellIndex of the MAC entity's SCell configured with beam failure detection is less than 8, otherwise four octets are used.
3. One bit field is included in SCell BFR MAC CE to indicate whether candidate beam is available or not. This field is included only for failed SCell.
4. 6 bit candidate RS ID field is included in SCell BFR MAC CE for failed SCell. The field is set to index of candidate RS in candidate RS list. The field is included only if new candidate beam is available for failed SCell.
5. Adopt the TP in section 5 of R2-2000227.
6. Truncated SCell BFR MAC CE format (truncated format is used if normal format does not fit):

- Ci field is included (as in non-truncated format) but octet(s) containing candidate beam availability indication (AC) and Candidate RS ID fields of one or more SCells are truncated in order not to exceed remaining UL resource.
- LCID for Truncated BFR MAC CE is different from non-truncated BFR MAC CE

7. The transmission of the beam failure information of a certain SCell only cancels the pending BFR SR triggered by this SCell.
8. Triggered BFRs for the SCell are cancelled upon Scell deactivation.
9. UE shall not ignore measurement gaps while monitoring PDCCH addressed to C-RNTI/CS-RNTI for receiving an UL grant for new transmission after transmitting BFRQ SR and BFRQ MAC CE.

Agreements online:

10. SCell BFR MAC CE has same priority as Configured Grant Confirmation MAC CE. (we might come back to this if real problems are found)

The following paper will be handled during the first web conference call

R2-2000227 Summary of Email discussion 108#70 - BFR MAC CE Samsung Electronics Co., Ltd discussion Rel-16 NR_eMIMO-Core
⇨ The discussion will continue as part of offline email discussion 112

The following papers are covered by the summary document and then noted

R2-2000226 Remaining issues of SCell BFR Samsung Electronics Co., Ltd discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2000386 SR cancellation due to the truncated BFR MAC CE vivo discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2000587 SCell BFR Operation Apple, Nokia, Nokia Shanghai Bell discussion Rel-16 NR_eMIMO-Core R2-1915934
⇨ Noted

R2-2000658 Open issues on SCell BFR OPPO discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2000891 Views on Remaining Issues of SCell BFR CATT discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001304 Consideration on Truncated format on SCell BFR MAC CE LG Electronics Inc. discussion NR_eMIMO-Core
⇨ Noted

R2-2001421 Remaining issues on SCell BFR procedure Asia Pacific Telecom co. Ltd discussion
⇨ Noted

R2-2001484 Remaining issues on SCell BFR Qualcomm Inc discussion Rel-16
⇨ Noted

R2-2001509 The remaining issue on BFR on SpCell and SCell ZTE Corporation, Sanechips, Asia Pacific Telecom co. Ltd discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001599 Remaining issues of SCell BFR ASUSTeK discussion Rel-16 NR_eMIMO-Core R2-1916037
⇨ Noted

R2-2001600 SCell BFR regarding Scell deactivation ASUSTeK discussion Rel-16 NR_eMIMO-Core
⇨ Noted

R2-2001652 BFR MAC CE for SpCell Ericsson, Nokia, Nokia Shanghai Bell, Apple discussion Rel-16 NR_eMIMO-Core
⇨ Noted

The following document is withdrawn

R2-2001464 The remaining issue on BFR on SpCell and SCell ZTE Corporation, Sanechips, Asia Pacific Telecom co. Ltd discussion Rel-16 NR_eMIMO-Core Withdrawn

6.18 Private Network Support for NG-RAN

(NG_RAN_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; target; Mar 20; WID: RP-191563). Documents in this agenda item will be handled in a break out session.

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

It's possible to contribute to all sub agenda items, to address the remaining open issues. Summary documents may then be utilized to summarize documents submitted to a given sub-AI and to make tentative proposals. For this Work Item, the discussion (on summary/company tdocs) will start during a web conference and will then continue via offline email discussions.

6.18.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc

R2-2000568 NPN Work Plan Nokia (Rapporteur) discussion Rel-16 NG_RAN_PRN-Core R2-1914598
⇨ Noted

R2-2000025 Reply LS on Sending CAG ID in NAS layer (R3-197591; contact: Ericsson) RAN3 LS in Rel-16 NG_RAN_PRN To:SA3, SA2, RAN2 Cc:CT1
⇨ Noted (content covered in the summary paper)

R2-2000074 Reply LS on Sending CAG ID in NAS layer (S3-194559; contact: Qualcomm) SA3 LS in Rel-16 FS_Vertical_LAN_SEC To:RAN3, SA2, RAN2 Cc:CT1
⇨ Noted (content covered in the summary paper)

R2-2000057 Reply LS on sending CAG ID during resume procedure (S2-1912731; contact: Qualcomm) SA2 LS in Rel-16 Vertical_LAN To:CT1 Cc:RAN2
⇨ Noted (content covered in the summary paper)

R2-2000069 LS on Sending CAG ID (S2-2001616; contact: Ericsson) SA2 LS in Rel-16 Vertical_LAN To:CT1, RAN2, RAN3, SA3, SA
⇨ Noted

R2-2000078 LS on NPN network sharing (S5-197805; contact: Huawei) SA5 LS in Rel-16 FS_OAM_NPN To:SA2 Cc:RAN2, RAN3, SA1
⇨ Noted

R2-2000065 LS reply on NPN network sharing (S2-2001398; contact: Huawei) SA2 LS in Rel-16 Vertical_LAN To:SA5 Cc:RAN2, RAN3, SA1
⇨ Noted

R2-2000055 LS on RAN sharing for NPNs (S2-1912602; contact: Qualcomm) SA2 LS in Rel-16 Vertical_LAN To:RAN2, RAN3
⇨ Noted

R2-2000066 Reply LS on CMAS/ETWS and emergency services for SNPNs (S2-2001400; contact: Qualcomm) SA2 LS in Rel-16 Vertical_LAN To:RAN2 Cc:SA1, CT1
⇨ Noted

R2-2000079 LS on CAG definition (S5-197806; contact: Huawei) SA5 LS in Rel-16 FS_OAM_NPN To:SA2, RAN2 Cc:RAN3, CT4
⇨ Questions to RAN2 need to be answered. The discussion can be based on R2-2002069
⇨ Noted

R2-2000067 LS reply on CAG definition (S2-2001401; contact: Huawei) SA2 LS in Rel-16 Vertical_LAN To:SA5 Cc:RAN2, RAN3, CT4
⇨ Noted

R2-2002069 [DRAFT] LS on CAG definition Huawei LS out Rel-16 NG_RAN_PRN-Core To:SA5 Cc:SA2 Late
- QC suggests to remove reference to SNPN cells in Q2 as they wonder whether all combinations are possible.
- QC, Ericsson, Nokia think that from RAN2 point of view all combinations are supported
- Vice-chair wonders whether we need to clarify this in Stage 2.

⇨ Agree to send a response to SA5 along the lines in the draft reply LS. Detailed wording to be discussed offline
⇨ Also discuss offline which combinations are allowed (from Stage2 perspective) and whether further guidance from other groups is needed
⇨ [After offline discussion] There is no need to capture in Stage 2 specification (TS 38.300) whether the RAN sharing of all three network types (i.e. the combination of "PLMN(s) + SNPN(s) + CAG(s)") is supported. No LS to other groups is needed for this.

✉ **[AT109e][116][PRN] Reply LS to SA5 (Huawei)**
Scope: Discuss the wording of the reply LS to SA5. Also check whether there is a common understanding on which combinations are allowed and whether further guidance from other groups is needed
Intended outcome:
1. Agreed LS to SA5.
2. Decision on the need (and in case on the content) of an LS to other groups to clarify which combinations are possible
Deadline: Tuesday 2020-03-03 12:00 CET

R2-2001679 Draft reply LS on CAG definition Huawei LS out Rel-16 NG_RAN_PRN-Core To:SA5 Cc:SA2
⇨ Revised in R2-2001703 (to remove 'Draft' and put 'RAN2' as source)

R2-2001703 Reply LS on CAG definition Huawei LS out Rel-16 NG_RAN_PRN-Core To:SA5 Cc:SA2, RAN3, CT4
⇨ Approved

R2-2000051 Reply LS on NPN clarifications (S1-193605; contact: Qualcomm) SA1 LS in Rel-16 Vertical_LAN, NG_RAN_PRN To:SA2, RAN3 Cc:RAN2, SA3
⇨ Noted

R2-2002096 Reply LS on manual CAG selection (S1-201084; contact: Qualcomm) SA1 LS in Rel-16 To:CT1 Cc: RAN2, SA2
⇨ Noted

R2-2000569 Non-Public Networks Nokia, China Telecom (Rapporteurs) CR Rel-16 38.300 16.0.0 0195 - B NG_RAN_PRN-Core R2-1914599
⇨ Revised in R2-2002068

R2-2002068 Non-Public Networks Nokia, China Telecom (Rapporteurs) CR Rel-16 38.300 16.0.0 0195 1 B NG_RAN_PRN-Core R2-1914599
⇨ Endorsed as baseline CR. Moved to offline email discussion for agreement

✉ **[AT109e][113][PRN] Stage 2 CR (Nokia)**
Intended outcome: Agreed 38.300 CR, taking into account proposals in R2-2000570 and possible new agreements during the meeting.
Deadline for feedback on baseline CR and R2-2000570: Thursday 2020-02-27 12:00 CET
Deadline for feedback on further updates: Wednesday 2020-03-04 16:00 CET
Deadline for rapporteur's version for agreement: Thursday 2020-03-05 12:00 CET

R2-2002346 Non-Public Networks Nokia, China Telecom (Rapporteurs) CR Rel-16 38.300 16.0.0 0195 2 B NG_RAN_PRN-Core
⇨ Agreed

R2-2000570 Emergency Calls in CAG-Only Cells Nokia (Rapporteur), China Telecom, Ericsson, Intel, Nokia Shanghai Bell, Vodafone, ZTE discussion Rel-16 NG_RAN_PRN-Core
⇨ To be considered as part of the offline email discussion 113

The following paper is covered by the summary document(s) and then noted

R2-2001331 Open issues in NPN Qualcomm Incorporated discussion
⇨ Noted

6.18.2 Cell selection and reselection

Including output of email discussion [108#37][PRN] Running RRC CR (Nokia).
Including output of email discussion [108#71][PRN] Running 38.304 CR (Qualcomm).
A summary document will also be utilized to treat this agenda item (Qualcomm).

R2-2001035 Introducing the support of Non-Public Networks Nokia (Rapporteur) CR Rel-16 38.331 15.8.0 1468 - B NG_RAN_PRN-Core
⇨ Endorsed as baseline CR. Moved to offline email discussion (to be kicked off after progress on the remaining open issues)

✉ **[AT109e][114][PRN] RRC CR (Nokia)**
Scope: Update the RRC CR, based on the progress on the remaining open issues
Intended outcome: Agreed 38.331 CR
Deadline: Thursday 2020-03-05 12:00 CET

R2-2001707 Introducing the support of Non-Public Networks Nokia (Rapporteur) CR Rel-16 38.331 15.8.0 1468 1 B NG_RAN_PRN-Core
⇨

R2-2001311 Report for email discussion [108#71][PRN] Running 38.304 CR (Qualcomm) Qualcomm Incorporated discussion
⇨ Noted

R2-2001310 PRN Running CR for TS 38.304 Qualcomm Incorporated CR Rel-16 38.304 15.6.0 0148 - B NG_RAN_PRN
⇨ Endorsed as baseline CR. Moved to offline email discussion (to be kicked off after progress on the remaining open issues)

✉ **[AT109e][115][PRN] 38.304 CR (Qualcomm)**
Scope: Update the 38.304 CR, based on the progress on the remaining open issues
Intended outcome: Agreed 38.304 CR
Deadline: Thursday 2020-03-05 12:00 CET

R2-2001708 PRN Running CR for TS 38.304 Qualcomm Incorporated CR Rel-16 38.304 15.6.0 0148 1 B NG_RAN_PRN
⇨ Coversheet update by MCC: Improved title wording

R2-2001898 Introduction of PRN for TS 38.304 Qualcomm Incorporated CR Rel-16 38.304 15.6.0 0148 2 B NG_RAN_PRN
=> **Agreed**

The following paper will be handled during the first web conference call

R2-2001673 Summary of [PRN] Cell Selection and selection Qualcomm discussion Rel-16 NG_RAN_PRN -Core
⇨ Revised in R2-2001676

R2-2001676 Summary of [PRN] Cell Selection and selection Qualcomm discussion Rel-16 NG_RAN_PRN -Core

A decision on the following proposals (sorted and tentatively <u>amended</u> by the session chair, based on latest comments on the reflector) was attempted online:

Proposal 1: RRC_INACTIVE state is supported for SNPN and CAG. FFS whether any specific enhancement is needed

- Lenovo wonders whether we need to specify that mandatory features apply to NPN
- Nokia would like to remove the FFS and not link this to Rel-15 features only

Proposal 2: Remove the following Editor's Notes without introducing any other changes:

Editor's Note: The need for list of NIDs depends on the RAN sharing scenarios to be supported.

Editor's Note: The support of sharing logical cells is FFS.

- Huawei wonders whether we need to explain more in the running CR.
- Nokia, QC, and Ericsson think this is already covered but can further check offline if anything is needed

Proposal 3: RAN2 confirm that For SNPN, cellReservedForOperatorUse is allowed to be configured per SNPN, while for CAG, cellReservedForOperatorUse is allowed to be configured per PLMN.

- Ericsson and Nokia wonder why we need this restriction

Proposal 9a: PCI range of SNPN cells can be optionally signalled to UEs. Further details FFS (i.e. proposals 9b, 9c)

- Ericsson and Nokia wonder what the intended use is for this. LG could live without.
- CMCC think there are benefits also for SNPN. CATT, Huawei, ZTE, Sony agree.
- Lenovo, Google, Qc, Ericsson, Nokia, NEC think this is not needed

Proposal 5: ASN.1 and RRC design shall be such that a Rel-15 UE considers a CAG-only cell as acceptable cell if the cell is not barred to Rel-15 UEs, and if a PLMN ID without CAG list is broadcast and that PLMN is forbidden (e.g. by use of PLMN ID for which all registration attempts are rejected such that the PLMN ID becomes forbidden).

- Vice-chair and others think this could be worded as a Stage2 clarification

Proposal 20: RAN2 to discuss whether a Rel-16 non-NPN capable UE is required to read the NPN identifier information broadcasted in SIB1 by a cell.

- Ericsson and ZTE think that a Rel-16 non-NPN capable UE should behave as a Rel-15 UE
- Intel and LG think that a non-NPN Rel-16 UEs might need to be able to read some Rel-16 IEs

Proposal 12: RAN2 to discuss if proximity indication is supported or not for CAGs.

- Nokia thinks that PCI confusion does not justify to have this now for CAG. Ericsson/Intel also think this is not needed.
- Huawei, ZTE, Vivo think this is useful
- Google, LG, Sony, Ericsson, Intel and Nokia think we don't need this

Proposal 13: RAN2 to discuss whether EN-DC is supported in NPNs. If not, trackingAreaCode should be mandatory in NPN-IdentityInfo.

- Vodafone think this could be interesting to some extent.
- Nokia think we can first of all agree that EN-DC is not supported

Agreements:

1. RAN2 understanding is that all mandatory features apply to NPN (we might check this again for Rel-16 features if any problems are found)
2. Remove the following Editor's Notes without introducing any other changes
   Editor's Note: The need for list of NIDs depends on the RAN sharing scenarios to be supported.
   Editor's Note: The support of sharing logical cells is FFS.
3. No PCI range of SNPN cells will be signalled
4. Clarify in Stage 2 that a Rel-15 UE considers a CAG-only cell as acceptable cell if the cell is not barred to Rel-15 UEs, and if a PLMN ID without CAG list is broadcast and that PLMN is "not allowed" (e.g. by use of PLMN ID for which all registration attempts are rejected such that the PLMN ID becomes not allowed). Discuss wording as part of the Stage 2 discussion
5. Proximity indication is not supported CAGs
6. EN-DC is not supported for NPN

⇨ Proposals not concluded online are moved to offline email discussion

✉ **[AT109e][117][PRN] Cell Selection and selection aspects (Qualcomm)**
Scope: Continue the discussion on cell selection and reselection aspects, trying to conclude on proposals from R2-2001676 not concluded online.
Initial intended outcome:

- Initial set of proposals with full consensus (agreeable over email) in R2-2001680:

Initial intermediate deadline (for companies' feedback): Thursday 2020-02-27 23:59 CET
Initial intermediate deadline (for rapporteur's list of proposals): Friday 2020-02-28 12:00 CET

Proposed agreements in R2-2001680 not challenged until Monday 2020-03-02 12:00 CET will be declared as agreed by the session chair.
Final intended outcome: summary of the offline discussion in R2-2001697 with e.g.:
- (Further) set of proposals with full consensus, if any (agreeable over email)
- Set of proposals with almost full consensus to discuss in the follow up conference call
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Monday 2020-03-02 23:59 CET
Final deadline (for rapporteur's summary): Tuesday 2020-03-03 12:00 CET
Proposed agreements in R2-2001697 not challenged until Tuesday 2020-03-03 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2001680 offline discussion 117: [PRN] Cell Selection and selection - Intermediate status Qualcomm, ZTE Corporation (Session Chair) discussion Rel-16 NG_RAN_PRN -Core

Following proposals had unanimous support in previous discussion:

Proposal 2.1: When a cell broadcasts any CAG IDs or NIDs, NPN-capable Rel-16 UE can treat the cell with cellReservedForOtherUse = true as a candidate during cell selection and cell reselection.

⇨ Agreed

Proposal 3.2: For CAG-capable Rel-16 UE, emergency calls in a CAG-only cell can be supported by setting cellReservedForOtherUse=true and allowing the Rel-16 Ues to ignore this flag and access the PLMNs in the NPN list in limited service state.

⇨ Agreed

Proposal 8: High quality criteria is not considered for SNPNs in Rel-16.

⇨ Agreed

Proposals that had support from significant majority (and not explicitly challenged before the submission deadline for this document)

Proposal 2.2: Non-NPN-capable Rel-16 UE treat a cell with cellReservedForOtherUse = true as barred.

- QC does not agree: This creates different behavior for emergency calls by UEs of the same release. Suggested way forward: Non-NPN-capable Rel-16 UE treat a cell with cellReservedForOtherUse=true as barred. FFS if there is an exception when a Non-NPN-capable UE is placing an emergency call on a cell that is not suitable due to CAG
- Also Nokia does not agree: This makes emergency sessions from CAG-only cells impossible for non-CAG capable UEs.
- Also Vodafone does not agree: This will create a scenario where emergency sessions from CAG-only cells will become impossible for non-CAG capable UEs.

Proposal 4.1: For unlicensed spectrum and a UE in SNPN AM, if the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the registered or selected SNPN ID, the UE shall not consider this cell as candidate for cell reselection but should continue to consider other cells on the same frequency for cell reselection.

⇨ Agreed

Proposal 4.3: UE in SNPN AM does not ignore intraFreqReselection broadcast by a SNPN cell in licensed spectrum.

⇨ Agreed

Proposal 5.2: UE not in SNPN AM does not ignore intraFreqReselection broadcast by a CAG cell in licensed spectrum.

⇨ Agreed

Proposal 6.3: For RRC_IDLE/RRC_INACTIVE UE in manual CAG/SNPN mode, UE AS informs the NAS if UE AS can't search for an acceptable or suitable cell belonging to the selected CAG/SNPN.

- Samsung does not agree: Agree with the intention of the proposal. However, we would not prefer to specify detailed AS-NAS interaction

Proposal 7: RAN2 confirms following definition for NPN-only cell: A cell that is only available for NPNs' subscriber. This is indicated by setting the cellReservedForOtherUse IE to true while the npn-IdentityInfoList-r16 IE is present in CellAccessRelatedInfo.

- CATT does not agree: It will restrict the REL15 UE and Non-NPN-capable Rel-16 UE to access the CAG only for emergency service as REL15 UE and Non-NPN-capable Rel-16 UE treat a cell with cellReservedForOtherUse = true as barred according to Proposal 2.2. The definition of NPN-only cell should allow REL15 UE and Non-NPN-capable Rel-16 UE to access the CAG only cell for emergency service.

Proposal 9: All CAG identities associated to the same PLMN identity is listed in the same cag-IdentityList.

- Softbank does not agree: This is ambiguous whether it applies to only the cell broadcasting CAG-ids or the entire system broadcasting CAG-ids. If it means the latter case, it significantly restricts PLMN operator's deployments. We suggest updating the proposal as follows: All If the cell broadcast multiple CAG identities, CAG identities associated to the same PLMN identity is listed in the same cag-IdentityList in the cell.

Proposal 10: CAG-capable UE is not allowed to reselect to a CAG member cell ignoring highest ranked cell or best cell acc. To absolute priority reselection rules

⇨ Agreed

Other proposals that had a majority (and not explicitly challenged before the submission deadline for this document):

Proposal 1: PCI values for CAGs are signalled per PLMN per frequency. FFS whether per CAG-ID signalling is allowed. PCI values are signalled as a list of ranges.

- Nokia does not agree: This is just a possible optimization that can be postponed for later releases.

Proposal 3.1: RAN2 confirms that emergency call is possible using the following for any Rel-16 UE on a cell that provides normal services only to UEs accessing CAGs: by setting cellReservedForOtherUse = false and if a PLMN ID without CAG list is broadcast and that PLMN is "not allowed" (e.g. by use of PLMN ID for which all registration attempts are rejected such that the PLMN ID becomes not allowed).

- Samsung does not agree: Emergency calls on CAG cells which are considered as barred by Rel-15 UEs and Rel-16 UEs need to be handled with a unified approach. The barred cell is not suitable for camping but how to consider the barred cell as acceptable for emergency calls needs further discussion. We prefer to postpone this issue for next meeting.
- Also Nokia does not agree: This is actually true, but this should not be the only solution for Rel-16 UEs. If the cell is not barred for Rel-15 UEs then the cell cannot be considered CAG-only, as we do not meet the SA1/SA2 requirements.

Proposal 11: No enhancement in Rel-16 to include NID/CAG ID or network type indicator along with the inter-frequency carrier info in SIB4.

⇨ Agreed

Agreements via email (from first round of [117][PRN]):

2.1 When a cell broadcasts any CAG IDs or NIDs, NPN-capable Rel-16 UE can treat the cell with cellReservedForOtherUse = true as a candidate during cell selection and cell reselection.

3.2 For CAG-capable Rel-16 UE, emergency calls in a CAG-only cell can be supported by setting *cellReservedForOtherUse=true* and allowing the Rel-16 Ues to ignore this flag and access the PLMNs in the NPN list in limited service state.

4.1 For unlicensed spectrum and a UE in SNPN AM, if the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the registered or selected SNPN ID, the UE shall not consider this cell as candidate for cell reselection but should continue to consider other cells on the same frequency for cell reselection.

4.3 UE in SNPN AM does not ignore *intraFreqReselection* broadcast by a SNPN cell in licensed spectrum.

5.2 UE not in SNPN AM does not ignore *intraFreqReselection* broadcast by a CAG cell in licensed spectrum.

8. High quality criteria is not considered for SNPNs in Rel-16.

10. CAG-capable UE is not allowed to reselect to a CAG member cell ignoring highest ranked cell or best cell acc. To absolute priority reselection rules

11. No enhancement in Rel-16 to include NID/CAG ID or network type indicator along with the inter-frequency carrier info in SIB4.

R2-2001697 offline discussion 117: [PRN] Cell Selection and selection - Final status discussion Rel-16 NG_RAN_PRN -Core Qualcomm

Following proposals which are reworded versions of proposals in Section 3 are expected to have full consensus.

Proposal 5.4-Wayforward-U: For unlicensed spectrum and for a UE with non-empty allowed CAG list, if the highest ranked cell or best cell according to absolute priority reselection rules is a CAG cell which is not suitable due to not being a CAG member cell, the UE shall not consider this cell as candidate for cell reselection but should continue considering other cells on the same frequency for cell reselection. It is FFS whether "should continue considering" or "shall continue considering".

- Ericsson thinks that this proposal goes beyond what we have for NR-U. In NR-U the UE is only allowed to select other intra-frequency cells if the highest ranked cell belongs to a different operator. However, according to the above proposal the UE is also allowed to select other intra-frequency cell if the highest ranked cell belongs to the correct operator but it's not a CAG member cell. To make the proposal agreeable to everyone we suggest to rewrite it like this: "Proposal 5.4-Wayforward-U: for unlicensed spectrum and for a UE with non-empty allowed CAG list, if the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the selected/registered/equivalent PLMN, the UE shall not consider this cell as candidate for cell reselection but should continue considering other cells on the same frequency for cell reselection. It is FFS whether "should continue considering" or "shall continue considering". Then we can leave it as FFS how to handle the case when the cell belongs to the correct operator but it's not a CAG member cell.

⇨ To be discussed online

- QC thinks another way to add FFS is whether this behaviour applies only when the cell does not belong to registered, selected or equivalent PLMN

Proposal 9-Wayforward: If the cell broadcast multiple CAG identities, CAG identities associated to the same PLMN identity is listed in the same cag-IdentityList in the cell.

⇨ Agreed

Agreements via email (from second round of [117][PRN]):
9. If the cell broadcast multiple CAG identities, CAG identities associated to the same PLMN identity is listed in the same cag-IdentityList in the cell

Agreements online:
1. FFS whether PCI values for CAGs are signalled per PLMN per frequency or no new ASN.1 IEs are introduced in Rel-16 for signalling of PCI values for CAGs
5.4 For unlicensed spectrum and for a UE with non-empty allowed CAG list, if the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the selected/registered/equivalent PLMN, the UE with no empty allowed CAG list shall behave according to NR-U agreement. FFS how to handle the case when the cell belongs to the correct operator but it's not a CAG member cell. (We might come back to this if serious concerns / problems are found with this)
7. Definition for NPN-only cell: A cell that is only available for normal service for NPNs' subscriber. From a UE point of view this is determined by detecting the setting of the cellReservedForOtherUse IE to true while the npn-IdentityInfoList-r16 IE is present in CellAccessRelatedInfo (this only applies for Rel-16 and later NPN-capable UEs)

Following proposals have almost full consensus.

Proposal 1-Wayforward:

A. RAN2 confirms that one of the following options is used for signalling of PCI values for CAGs:

1. PCI values for CAGs are signalled per PLMN per frequency. FFS whether per CAG-ID signalling is allowed. PCI values are signalled as a list of ranges.

2. No new ASN.1 IEs are introduced in Rel-16 for signalling of PCI values for CAGs.

B. RAN2 should select one option from above.

Proposal 6.3-Wayforward: RAN2 should either agree the following or postpone the discussion of the issue: For RRC_IDLE/RRC_INACTIVE UE in manual CAG/SNPN mode, UE AS informs the NAS if UE AS can't search for an acceptable or suitable cell belonging to the selected CAG/SNPN.

- Samsung thinks we can postpone this

⇨ Postponed

Proposal 7-Wayforward: RAN2 either postpones discussion of definition for NPN-only cell or agrees to the following as a working assumption: A cell that is only available for NPNs' subscriber. This is indicated by setting the cellReservedForOtherUse IE to true while the npn-IdentityInfoList-r16 IE is present in CellAccessRelatedInfo.

- CATT thinks that RAN2 has agreed that access attempts by Rel-15 UEs for emergency services on CAG-only cells is possible, that means cellReservedForOtherUse can be false for CAG-only cell. If NPN-only cell is defined with setting the cellReservedForOtherUse IE to true, then the definition of NPN-Only cell will conflict with the RAN2 agreement. As it seems there is not a good way for definition of NPN-only cell right now, maybe we can adopt a

general definition for NPN-only cell to facilitate other descriptions in RRC spec and then consider a more complete definition further.

- As a general comment, Nokia thinks that there are a number of proposals that are related to the topic whether a non-best cell can be selected by the UE. For licensed NR (and LTE) there is clear agreement that using the non-best cell should be avoided as it may create high level of interference. For the sake of simplicity we could follow the agreements made for PLMNs with NPNs in Rel-16, and later we can discuss whether there is a possibility to further optimize the UE behavior for NPNs.

Key open issues.

Proposal 2.2-Wayforward: RAN2 to select between the two:

1. Identify following as an open issue to be resolved in next meeting: FFS whether non-NPN-capable Rel-16 UE treats a cell with cellReservedForOtherUse = true as barred or not.

2. When a cell broadcasts any CAG IDs or NIDs, non-NPN-capable Rel-16 UE can treat the cell with cellReservedForOtherUse = true NOT as barred.

⇨ Postponed

Proposal 4.2-Wayforward: RAN2 should either agree the following or postpone the discussion of the issue:

For licensed spectrum and a UE in SNPN AM, if the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the registered or selected SNPN ID, UE uses Rel-15 behavior of NOT considering other cells on the same frequency for a maximum of 300 seconds.

- Huawei thinks that for PLMN, one frequency is often exclusively used by one operator, so if the highest ranked cell belongs to an unsuitable PLMN (being part of the "list of 5GS forbidden TAs for roaming" or belonging to a PLMN which is not indicated as being equivalent to the registered PLMN), it is reasonable to exclude all cells on the frequency. However, for SNPN, the frequency could be shared by PLMN cells and SNPN cells. If the highest ranked cell is not suitable due to unmatched SNPN ID, the UE should still be allowed to access the PLMN cells on the frequency. So we prefer not to exclude all cells on the frequency.

Proposal 5.4-Wayforward-L: RAN2 should either agree the following or postpone the discussion of the issue: for licensed spectrum and for a UE with non-empty allowed CAG list, if the highest ranked cell or best cell according to absolute priority reselection rules is a CAG cell which is not suitable due to not being a CAG member cell, UE uses Rel-15 behavior of NOT considering other cells on the same frequency for a maximum of 300 seconds. FFS whether enhancements for network control are needed.

Proposal 6.2-Wayforward: RAN2 should discuss if the following issue can be postponed: After performing access on the manual selected CAG, which one of following two UE behaviours is used:

a. UE reselects a cell belong to allowed CAG list.

b. UE shall prioritize to reselect a cell supporting selected CAG ID, but also can consider cells belonging to allowed CAG list in case that cells supporting selected CAG ID is not available.

- CATT thinks that instead of just postponing it, RAN2 should discuss the possibility on sending LS to SA2/CT1 for a clarification: 1. Should we prioritize manually selected CAG ID in UE mobility, including cell selection/reselection in idle/inactive and handover in connected mode? 2. If SA2 clarify that manually selected CAG ID does not need to be prioritize in UE mobility, we would like to know further about the purpose of the feature “manual CAG selection”.

Other open issues

Discussion of the following proposals can be postponed.

Proposal 3.1-Wayforward: Though there are no strong objections to this proposal, discussion of the following is proposed to be postponed so other issues regarding emergency calls can be discussed first: emergency call is possible using the following for any Rel-16 UE on a cell that provides normal services only to UEs accessing CAGs: by setting cellReservedForOtherUse = false and if a PLMN ID without CAG list is broadcast and that PLMN is "not allowed" (e.g. by use of PLMN ID for which all registration attempts are rejected such that the PLMN ID becomes not allowed).

Proposal 5.1-Wayforward: Discussion of the following is postponed: UE shall perform ranking of all cells that fulfil the cell selection criterion S, which is defined in 5.2.3.2, but may exclude CAG cells that are known by the UE not to be CAG member cells.

Proposal 6.1-Wayforward: Discussion of the following is postponed: AS and NAS operate as discussed below during manual CAG selection:

1. #1. As part of AS-NAS interface, NAS optionally provides AS with allowed CAG list.

2. #2. Upon triggering of manual CAG selection by NAS, AS scans all carrier frequencies and obtains PLMNs and CAG IDs broadcast by found cells. Note that UE does not take allowed CAG list into account in this step.

3. #3. AS provides the found PLMNs and CAGs to NAS, and optionally the associated HRNN if provided by NG-RAN.

4. #4. NAS selects a CAG ID and provides AS with the selected CAG ID (and the selected CAG ID can be in or out of allowed CAG list optionally provided before).

5. #5. With cell selection, the UE select a cell belonging to the selected PLMN and the selected CAG ID. Note that UE does not take allowed CAG list into account in this step. UE is allowed to access a cell which fulfils the cell selection criteria and is not barred or reserved for operator use for UEs not belonging to Access Identities 11 or 15 and inform NAS that access is possible (for location registration procedure).

The following papers are covered by the summary document(s) and then noted

R2-2000003 Access Control about NPN CATT discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000004 Idle and Inactive Open Issues for NPN CATT discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000132 Support of emergency calls in NPN-only cells Ericsson discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000357 Remaining issues on the cell reselection ZTE Corporation, Sanechips discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000400 Proposals on Editor's Notes of running RRC CR Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000402 Handling of selected CAG ID in Idle/Inactive mode Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000829 Blacklist/whitelist for PCI range signaling and stage-3 details Sony discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001035 Introducing the support of Non-Public Networks Nokia (Rapporteur) CR Rel-16 38.331 15.8.0 1468 - B NG_RAN_PRN-Core
⇨ Noted

R2-2001170 Remaining mobility issues for idle mode and connected mode Intel Corporation discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001174 Open issues in the specification of NPN in TS 38.304 Lenovo, Motorola Mobility discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001376 General considerations on idle and inactive mode for NPN Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN
⇨ Noted

R2-2001423 Signalling Design on the PCI Range CMCC discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001424 TP on NPN Running RRC for PCI list of PRN Cells CMCC discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001526 Resolving miscellaneous issues LG Electronics France discussion NG_RAN_PRN-Core
⇨ Noted

R2-2001527 High Quality Criterion for SNPN LG Electronics France discussion NG_RAN_PRN-Core
⇨ Noted

R2-2001528 Manual CAG selection LG Electronics France discussion NG_RAN_PRN-Core
⇨ Noted

The following document is withdrawn

R2-2000399 Support for Non-Public Networks Nokia (Rapporteur) draftCR Rel-16 38.331 15.8.0 NG_RAN_PRN-Core R2-1915388 Withdrawn

6.18.3 Connected mode aspects

Connected mode specific aspects, also including CAG ID transmission related issues (e.g. inclusion of CAG ID during Resume, etc).
A summary document will also be utilized to treat this agenda item (Nokia).

The following paper will be handled during the first web conference call

R2-2001674 Summary of [PRN] Connected mode aspects Nokia discussion Rel-16 NG_RAN_PRN -Core

Proposal 3.1: There is no need to include CAG ID in RRCResumeComplete message for UE in automatic CAG selection mode.

- Ericsson/Nokia think we could agree on this also for manual CAG selection mode.
- Lenovo thinks the problem is that with manual CAG selection the CAG ID could be a not allowed one and it could make sense to send it via AS.

Agreements:
1. For cells shared between PLMNs and NPNs, non-NPN capable UEs use the first PLMN ID in the Rel-15 PLMN list for the SIB validity check.
2. To index NPNs, build on the existing plmn-IdentityIndex (to avoid ASN.1 changes other than in SIB1).
3. In RAN sharing scenarios, the lowest index values belong to the PLMNs (using legacy indexing) and the highest index values belong to NPNs.
4. Add a condition that NPN-only cell generating NPN-indexes (for PNI-NPNs and SNPNs) shall count the PLMN-index part as zero.
5. There is no need to include CAG ID in RRCResumeComplete message for UE in automatic CAG selection mode.

FFS:
1. Whether the selectedPLMN-Identity can refer to a NPN in the description of RRCSetupComplete RRCResumComplete messages and the relevant procedures.

⇨ Proposals not concluded online are moved to offline email discussion

✉ **[AT109e][118][PRN] Connected mode aspects (Nokia)**
Scope: Continue the discussion on connected mode aspects, trying to conclude on proposals from R2-2001674 not concluded online.
Initial intended outcome:
- Initial set of proposals with full consensus (agreeable over email) in R2-2001681

Initial intermediate deadline (for companies' feedback): Thursday 2020-02-27 23:59 CET
Initial intermediate deadline (for rapporteur's list of proposals): Friday 2020-02-28 12:00 CET
Proposed agreements in R2-2001681 not challenged until Monday 2020-03-02 12:00 CET will be declared as agreed by the session chair.
Final intended outcome: summary of the offline discussion in R2-2001698 with e.g.:
- (Further) set of proposals with full consensus, if any (agreeable over email)
- Set of proposals with almost full consensus to discuss in the follow up conference call
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Monday 2020-03-02 23:59 CET
Final deadline (for rapporteur's summary): Tuesday 2020-03-03 12:00 CET
Proposed agreements in R2-2001698 not challenged until Tuesday 2020-03-03 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2001681 offline discussion 118: [PRN] Connected mode aspects - Intermediate status Nokia discussion Rel-16 NG_RAN_PRN -Core

Proposals with full consensus

Proposal 4.1: Extend the current measurement reporting procedures to include NPN information to support ANR. (It is FFS if it is mandatory for all Rel-16 UEs to support it.)

⇨ Agreed

Proposal 4.2: The CAG ID/SNPN NID information shall be added into the CGI-InfoNR. (It is FFS if it is mandatory for all Rel-16 UEs to support it.)

⇨ Agreed

> Agreements via email from first round of [118][PRN]):
> 4.1: Extend the current measurement reporting procedures to include NPN information to support ANR. (It is FFS if it is mandatory for all Rel-16 UEs to support it.)
> 4.2: The CAG ID/SNPN NID information shall be added into the CGI-InfoNR. (It is FFS if it is mandatory for all Rel-16 UEs to support it.)

R2-2001698 offline discussion 118: [PRN] Connected mode aspects - Final status Nokia discussion
Rel-16 NG_RAN_PRN -Core

Proposals to be agreed during the email review:

Proposal 1.1: For NPN-only cells, the first NPN ID (PLMN ID and NID or PLMN ID and CAG ID) is used for the SIB validity check by NPN capable UEs.

⇨ Agreed

Proposal 2.1: There is no need to create any order between SNPNs and PNI-NPNs during the indexing.

⇨ Agreed

Proposal 4.3: There is no necessary of the CAG-UE to report the MemberStatus and corresponding identity of reported cell acquired from system information in the measurement report message as what the LTE CSG-UEs execute.

⇨ Agreed

Proposal 5.1: Normal network controlled mobility procedure can apply for a UE leaving a CAG cell in connected mode.

⇨ Agreed

> Agreements via email from second round of [118][PRN]):
> 1.1 For NPN-only cells, the first NPN ID (PLMN ID and NID or PLMN ID and CAG ID) is used for the SIB validity check by NPN capable UEs.
> 2.1 There is no need to create any order between SNPNs and PNI-NPNs during the indexing.
> 4.3 There is no need for the CAG-UE to report the MemberStatus and corresponding identity of reported cell acquired from system information in the measurement report message as what the LTE CSG-UEs execute.
> 5.1 Normal network controlled mobility procedure can apply for a UE leaving a CAG cell in connected mode.

> Agreements online:
> 1.2 For cells shared between PLMNs and NPNs, NPN capable UEs use the first PLMN ID in the Rel-15 PLMN list.
> 3.1 The selectedPLMN-Identity can refer to a NPN (a SNPN or a PNI-NPN) or set of PNI-NPNs having the same PLMN ID (in case CAG ID is not sent in the RRC message) in the description of RRCSetupComplete message and the relevant procedures.

Proposals to be discussed online:

Proposal 1.2: For cells shared between PLMNs and NPNs, NPN capable UEs use the first PLMN ID in the Rel-15 PLMN list.

- Huawei suggests the following revision: For cells shared between PLMNs and NPNs, NPN capable UEs use the first NPN ID in the Rel-15 PLMN list.

Proposal 3.1: The selectedPLMN-Identity can refer to a NPN (a SNPN or a PNI-NPN) or set of PNI-NPNs having the same PLMN ID (in case CAG ID is not sent in the RRC message) in the description of RRCSetupComplete RRCResumComplete messages and the relevant procedures.

- Intel thinks this seems to contradict the following agreement: "For SNPN, there is no need to include SNPN ID in the RRCResumeComplete message since the UE context is known to the network": maybe it is good to make this clear that selectedPLMN-Identity is not used in RRCResumeComplete for SNPN in this release.

Proposal 3.3: There is no need to include CAG ID in RRCResumeComplete message for UE in manual CAG selection mode.

- CATT thinks that Proposal 3.3 depends on the conclusion of Open issue 2 (Q3.2), It is better to make a decision on Proposal 3.3 after the Open issue 2 (Q3.2) is concluded. And for Open issue 2 (Q3.2), “manual CAG selection” is a feature defined in NAS, so it is the SA2/CT1’s

responsibility to clarify the functionality of manual CAG selection including the role of manually selected CAG ID in UE mobility in RRC_CONNECTED state.

⇨ Send an LS to SA2/CT1 asking questions for clarifications on manual CAG selection. Discuss wording offline

✉ **[AT109e][122][PRN] LS to SA1/SA2/CT1 (Nokia)**
Scope: Agree questions for clarifications to SA2/CT1 on manual CAG selection and to SA1/SA2/CT1 on UAC parameters for CAG
Intended outcome: LS to SA1/SA2/CT1
Deadline: Thursday 2020-03-05 18:00 CET

✉ **[RAN2#109e][PRN] Remaining open issues (Nokia)**
Intended outcome: Discuss and resolve the remaining PRN open issues.
Deadline: until the next meeting

Open issues and proposals to postpone to next meeting

Open Issue 1 (Q2.2 and Q3.2): Indexing of PNI-NPNs

PNI-NPNs having the same PLMN ID are considered

- *Option A: separate networks when indexing (i.e. they will have their own index values).*
- *Option B: single network when indexing (i.e. they will have a common single index value).*

It should also be discussed which network index value should be used in RRC messages for PNI-NPNs. The related proposal is the following:

"When there is no need to send the selected CAG ID in the RRC message (this disclaimer intends to make this agreement independent from the agreement whether CAG ID is sent or not sent to the network in some RRC messages), the UE shall use the smallest PLMN/NPN index value that refers to PLMN or PNI-NPN that has the same PLMN identity as the selected PNI-NPN in the RRCSetupComplete and RRCResumComplete messages interpedently from the selected CAG ID.)"

Open issue 2 (Q3.3): UE in manual CAG selection mode shall only stay on cell supporting the selected CAG ID in RRC_CONNECTED state"

Open issue 3 (Q4.1 and Q4.2): Whether the support of the extension of measurement reporting procedures and CGI-InfoNR to include NPN information is mandatory for all Rel-16 UEs.

Issues that should no longer be pursued

Issue 1 (Q4.4): Introduction of a new indicator whether to include the npn-IdentityInfoList in the reportCGI field.

R2-2001704 LS on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs Nokia LS out Rel-16 NG_RAN_PRN-Core To:SA1, SA2, CT1
⇨

The following papers are covered by the summary document(s) and then noted

R2-2000005 Connected Mode Open Issues for NPN CATT discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000358 Consideration on the remaining Connected State Issues ZTE Corporation, Sanechips discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000401 Proposals on open RRC issues Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001071 Discussion on the proximity indication in connected mode vivo discussion R2-1916098
⇨ Noted

R2-2001377 General considerations on connected mode for NPN Huawei, HiSilicon, China Telecom discussion Rel-16 NG_RAN_PRN
⇨ Noted

R2-2001430 Access and mobility control for NPN CMCC discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001572 Transfer of NPN ID in RRC connection establishment Samsung Electronics Co., Ltd discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001573 Discussion on ANR for NPN Samsung Electronics Co., Ltd discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001586 Remaining issues discussion on NPN China Telecom discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

6.18.4 Other

Including HRNN (Human Readable Name) aspects and common idle and connected mode aspects (e.g. access control, etc.)
A summary document will also be utilized to treat this agenda item (ZTE).

The following paper will tentatively be handled during the first web conference call

R2-2001675 Summary of [PRN] Other (HRNN, Access Control, etc) ZTE Corporation discussion Rel-16 NG_RAN_PRN -Core
⇨ Proposals are moved to offline email discussion

✉ **[AT109e][119][PRN] HRNN and Access Control aspects (ZTE)**
Scope: Discuss the proposals from R2-2001675.
Initial intended outcome:
- Initial set of proposals with full consensus (agreeable over email) in R2-2001682

Initial intermediate deadline (for companies' feedback): Thursday 2020-02-27 23:59 CET
Initial intermediate deadline (for rapporteur's list of proposals): Friday 2020-02-28 12:00 CET
Proposed agreements in R2-2001682 not challenged until Monday 2020-03-02 12:00 CET will be declared as agreed by the session chair.
Final intended outcome: summary of the offline discussion in R2-2001699 with e.g.:
- (Further) set of proposals with full consensus, if any (agreeable over email)
- Set of proposals with almost full consensus to discuss in the follow up conference call
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Monday 2020-03-02 23:59 CET
Final deadline (for rapporteur's summary): Tuesday 2020-03-03 12:00 CET
Proposed agreements in R2-2001699 not challenged until Tuesday 2020-03-03 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2001682 offline discussion 119: [PRN] HRNN and Access Control aspects - Intermediate status ZTECorporation discussion Rel-16 NG_RAN_PRN -Core

Following proposals had unanimous support in previous discussion.
Proposal1a: HRNN is broadcast in a new SIB.
⇨ Agreed
Proposal3a: The UAC parameters should be configured per SNPN.
⇨ Agreed
Proposal3b: The UAC parameters per SNPN are configured by reusing the existing uac-BarringPerPLMN-List.
⇨ Agreed

Proposals that had support from significant majority.
Proposal 1b: Associate the HRNN and the Network ID implicitly. The SIB for HRNN shall have the same amount of HRNN elements as the number of CAGs and NIDs in SIB1. These elements can also be absent.
⇨ Agreed
Proposal 1c: ASN.1 in Proposal 1c in R2-2001682 can be taken as a baseline.
⇨ Agreed
Proposal 2: The UAC parameters for CAG should be configured per PLMN by reusing the existing fields, which means NW may only configure different uac-ImplicitACBarringList / uac-ExplicitACBarringList for different PLMNs. For CAGs associated with the same PLMN ID, the same uac-ImplicitACBarringList / uac-ExplicitACBarringList applies.

- Nokia does not agree: if there is no way to have CAG ID specific UAC parameters, then we do not see a clear way for operators to prioritize/control access attempts in case of a congestion. Therefore we would like to postpone the decision on this proposal.

Agreements via email (from first round of [119][PRN]):
1a. HRNN is broadcast in a new SIB.
1b. Associate the HRNN and the Network ID implicitly. The SIB for HRNN shall have the same amount of HRNN elements as the number of CAGs and NIDs in SIB1. These elements can also be absent.
1c. ASN.1 in Proposal 1c in R2-2001682 can be taken as a baseline.
3. The UAC parameters per SNPN are configured by reusing the existing uac-BarringPerPLMN-List.
3a. The UAC parameters should be configured per SNPN.

R2-2001699 offline discussion 119: [PRN] HRNN and Access Control aspects - Intermediate status ZTECorporation discussion Rel-16 NG_RAN_PRN -Core

Proposal with almost full consensus:
Proposal 2: The UAC parameters for CAG should be configured per PLMN by reusing the existing fields, which means NW may only configure different uac-ImplicitACBarringList / uac-ExplicitACBarringList for different PLMNs. For CAGs associated with the same PLMN ID, the same uac-ImplicitACBarringList / uac-ExplicitACBarringList applies.

- Nokia does not agree: If there is no way to have CAG ID specific UAC parameters, then we do not see a clear way for operators to prioritize/control access attempts in case of a congestion.
- Vodafone also does not agree: Having a 'coarse' PLMN control is not workable and we definitely need finer CAG level control for closed access groups.
⇨ To be discussed online
- Ericsson thinks it's still possible to have different barring for different slices.
- Intel thinks it's possible to do what Vodafone wants still having per PLMN configuration
⇨ Add questions for this to the LS to SA2/SA1/CT1

The following papers are covered by the summary document(s) and then noted

R2-2000130 Remaining RRC aspects of NPN Ericsson discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2000131 Remaining RRC aspects of NPN Ericsson draftCR Rel-16 38.331 15.8.0 B NG_RAN_PRN-Core
⇨ Noted

R2-2000668 Consideration on the HRNN and Access control ZTE Corporation, Sanechips, Qualcomm Inc discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001072 Consideration on fixed MCC for SNPN vivo discussion R2-1916097
⇨ Noted

R2-2001155 UE-initiated change of NPN UE configuration Lenovo, Motorola Mobility discussion NG_RAN_PRN-Core
⇨ Noted

R2-2001169 Network indexing for UAC and Connection Control Intel Corporation discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001378 Considerations on SI Validity Checking Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN
⇨ Noted

R2-2001585 Discussion on human-readable network name China Telecom, Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

R2-2001587 Discussion on the deployment for CAG China Telecom, Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN-Core
⇨ Noted

6.19 Other NR Rel-16 WIs/SIs

This agenda item is to be used for LSs and documents relating to Rel-16 NR but for which there is no existing RAN WI/SI (e.g. LSs from CT/SA requesting RAN2 action) or for which there is no allocated RAN2 time (e.g. some RAN4 led WIs with no RAN2 time but might require introduction of UE capability signalling).

Time budget: 0.5 TU

R2-2002214 LS on suspend indication to the NAS (C1-201040; contact: Samsung) CT1 LS in Rel-16 5G_CIoT To:RAN2

By Web Conf – Proposed Noted

NTN – Cc RAN2

R2-2000099 LS to RAN3 for TPs endorsed in RAN1 (R1-1913506; contact: Thales) RAN1 LS in Rel-16 FS_NR_NTN_solutions To:RAN3 Cc:RAN2

⇒ **Noted**

R2-2000029 Reply LS on LS on dependencies on AS design for mobility management aspects of NTN in 5GS / LS on system level design assumptions for satellite in 5GS (R3-197699; contact: Qualcomm) RAN3 LS in Rel-16 FS_NR_NTN_solutions, FS_5GSAT_ARCH To:SA2 Cc:RAN2, CT1

⇒ **Noted**

Other – Cc RAN2

R2-2000030 Reply LS on energy efficiency (R3-197745; contact: Orange) RAN3 LS in Rel-16 FS_LTE_NR_data_collect To:SA5 Cc:RAN2, SA

⇒ **Noted**

R2-2000047 LS on Local NR positioning in NG-RAN (RP-193262; contact: Nokia) RAN LS in Rel-16 FS_NR_local_pos To:SA2 Cc:SA, RAN2, RAN3

⇒ **Noted**

R2-2000080 LS on analysis of GSMA GST attributes (S5-197853; contact: China Mobile) SA5 LS in Rel-16 MA5SLA To:SA2, RAN3, I£TF Cc:SA, SA1, SA6, RAN2, GSMA 5GJA, ETSI ISG ZSM

⇒ **Noted**

QoE

R2-2000090 Reply on QoE Measurement Collection (S4-200241; contact: Ericsson) SA4 LS in To:SA5, CT1, RAN2 Cc:RAN3

⇒ **Noted**

R2-2000076 LS on Reply on QoE Measurement Collection (S5-197543; contact: Ericsson) SA5 LS in Rel-16 QOED To:SA4 Cc:CT1, RAN2, RAN3

⇒ **Noted**

RRM Policy

R2-2000077 Reply on radio resource management policy (S5-197637; contact: Ericsson) SA5 LS in Rel-16 eNRM To:RAN3, RAN2

⇒ **Noted**

General:

DISCUSSION on LSes.
- DT think there should be another LS on UP integrity protection.
- MCC: Have not received yet.
- Chair: This seems potentially important so if we can't treat today we can treat by email
- Huawei are ok to note the QoE LSes, but think there may be papers later. Chair confirms that that is ok. Nokia think we might need a WI to do some work. Ericsson think that we have discussed and conclude to do nothing.

By Web Conf

UL TX Switching – NR-FR1

R2-2000043 LS on UE capabilities and RRC signalling on Tx switching period delay (R4-1916083; contact: Apple) RAN4 LS in Rel-16 NR_RF_FR1 To:RAN2 Cc:RAN1

⇒ **Noted**

R2-2000019 Reply LS on Tx switching between two uplink carriers (R1-1913585; contact: China Telecom) RAN1 LS in Rel-16 NR_RF_FR1 To:RAN4 Cc:RAN2

⇒ **Noted**

R2-2002124 LS on FDD band capability signalling for uplink sharing (R4-1916180; contact: Nokia) RAN4 LS in Rel-16 NR_FDD_bands_varduplex To:RAN2

R2-2001580 Discussion on support of UL Tx swithing ChinaTelecom, CMCC, ChinaUnicom, Orange, Huawei, HiSilicon, ZTE, CATT, Vivo discussion Rel-16 NR_RF_FR1

⇒ **Noted**

R2-2000861 Introduction of UL Tx switching for UL MIMO in FR1 Nokia, Nokia Shanghai Bell discussion Rel-16 NR_RF_FR1

⇒ **Noted**

R2-2000870 RRC signalling for Tx switching for UL MIMO Nokia, Nokia Shanghai Bell CR Rel-16 38.331 15.8.0 1459 - B NR_RF_FR1
=> Revised in R2-2002060

R2-2002060 RRC signalling for Tx switching for UL MIMO Nokia, Nokia Shanghai Bell CR Rel-16 38.331 15.8.0 1459 1 B NR_RF_FR1

R2-2000871 UE capabilities for Tx switching for UL MIMO Nokia, Nokia Shanghai Bell CR Rel-16 38.306 15.8.0 0241 - B NR_RF_FR1

R2-2001581 38306CR UE capability of supporting UL Tx switching ChinaTelecom,Huawei,HiSilicon,CMCC,ZTE, ChinaUnicom CR Rel-16 38.306 15.8.0 0256 - B NR_RF_FR1

⇒ **Postponed (email next meeting)**

R2-2001582 38331CR UE capability and RRC configuration of supporting UL Tx switching ChinaTelecom,Huawei,HiSilicon,CMCC,ZTE, ChinaUnicom CR Rel-16 38.331 15.8.0 1495 - B NR_RF_FR1

⇒ **Postponed (email next meeting)**

DISCUSSION on docs and CRs above
- Nokia think the CT 306 CR is missing some parts, and think the config for ENDC and UL mimo parts are missing.
- Huawei think R4 has not limited the UC to only UL mimo and think CT version should be the starting point.
- MTK has question on the UE cap, and wonder if we really need another full BC list. Ericsson think maybe we can do it simpler.
- Intel think we may have difficulty to converge now, and R4 are still discussing. Suggest an email discussion to next meeting.
- QC agrees that R4 are still discussing, and think we cannot agree on CRs at this meeting. Oppo agrees, but still think some principles can be discussed.

- Nokia think there was a Way Forward agreed in R4 tht is not referenced in all papers.

✉ **[Post-109e][R16 Other] UL TX Switching – NR-FR1 (China Telecom)**
Scope: Progress CRs as far as possible taking into account progress in R4 and R1.
Intended outcome: Report, and if possible agreeable CRs
Deadline: Next Meeting

By Email – Discussion

NR HST

R2-2000040 LS on the UE capability and network assistance signalling for Rel-16 NR HST RRM (R4-1915855; contact: China Mobile) RAN4 LS in Rel-16 NR_HST To:RAN2

⇒ **Noted**

R2-2001656 LS on the UE capability and network assistance signalling for Rel-16 NR HST demodulation (R4-1915916; contact: CMCC) RAN4 LS in Rel-16 NR_HST To:RAN2

⇒ **Noted**

R2-2000919 Discussion on signalling for R16 NR HST CMCC discussion Rel-16
=> Revised in R2-2002084

R2-2002084 Discussion on signalling for R16 NR HST CMCC, CATT discussion Rel-16

⇒ **Noted**

✉ **[AT109e][050][R16 Other WISI] NR HST (CMCC)**
Scope: Treat documents above
Intended outcome: Focus first on LS and discussion doc. Achieve initial agreements, agree what we shall do. Treatment of CRs expected next meeting.
CLOSED

Agreements [AT109e][050][R16 Other WISI]

⇒ **Introduce network assistant signalling in the IE ServingCellConfigCommon and IE ServingCellConfigCommonSIB to enable the enhanced RRM requirements for Rel-16 NR HST.**

⇒ **Introduce network assistant signalling in the IE ServingCellConfigCommon and IE ServingCellConfigCommonSIB to enable the enhanced UE demodulation requirements for HST-SFN deployment with joint transmission scheme for Rel-16**

⇒ **Introduce new UE capability for NR HST to indicate whether UE is capable of supporting the enhanced RRM requirements.**

⇒ **Introduce new UE capability for NR HST to indicate whether UE is capable of the enhanced demodulation processing for HST-SFN joint transmission scheme with velocity up to 500km/h.**

R2-2002262 Report of [AT109e][050][R16 Other WISI] NR HST CMCC (rapporteur) discussion Rel-16 NR_HST

R2-2000920 38.331 CR on introduction of RRC parameters and UE capabilities for Rel-16 NR HST CMCC, Huawei, HiSilicon CR Rel-16 38.331 15.8.0 1464 - B NR_HST
=> Revised in R2-2002085

R2-2002085 38.331 CR on introduction of RRC parameters and UE capabilities for Rel-16 NR HST CMCC, Huawei, HiSilicon, CATT CR Rel-16 38.331 15.8.0 1464 1 B NR_HST

R2-2000921 38.306 CR on introduction of UE capabilities for Rel-16 NR HST CMCC, Huawei, HiSilicon CR Rel-16 38.306 15.8.0 0242 - B NR_HST
=> Revised in R2-2002086

R2-2002086 38.306 CR on introduction of UE capabilities for Rel-16 NR HST CMCC, Huawei, HiSilicon, CATT CR Rel-16 38.306 15.8.0 0242 1 B NR_HST

Recommended bit rate

R2-2000438 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated discussion Rel-16 E_FLUS

R2-2000439 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 36.321 15.8.0 1464 - B E_FLUS
=> Revised in R2-2002178

R2-2002178 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 36.321 15.8.0 1464 1 B E_FLUS

⇒ **[AT109e][051][R16 Other WISI] Agreed**

R2-2000440 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 38.321 15.8.0 0688 - B E_FLUS
=> Revised in R2-2002179

R2-2002179 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 38.321 15.8.0 0688 1 B E_FLUS

⇒ **[AT109e][051][R16 Other WISI] Agreed**

R2-2002176 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4230 - B E_FLUS

⇒ **[AT109e][051][R16 Other WISI] Agreed**

R2-2002177 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 38.331 15.8.0 1502 - B E_FLUS

⇒ **[AT109e][051][R16 Other WISI] Agreed**

R2-2002180 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 36.306 15.7.0 1743 - B E_FLUS

⇒ **[AT109e][051][R16 Other WISI] Agreed**

R2-2002181 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated CR Rel-16 38.306 15.8.0 0260 - B E_FLUS

⇒ **[AT109e][051][R16 Other WISI] Agreed**

✉ **[AT109e][051][R16 Other WISI] Rec bitrate FLUS and MTSI (QC)**
Scope: Treat documents above, feel free to split into phases.
CLOSED

UL sharing vardup FDD

R2-2000864 Support of UL sharing for variable-duplex FDD bands Nokia, Nokia Shanghai Bell CR Rel-16 38.306 15.8.0 0239 - B NR_FDD_bands_varduplex

✉ **[AT109e][052][R16 Other WISI] UL sharing for variable-duplex FDD bands (Nokia)**
Scope: Treat documents above
CLOSED

⇒ **[AT109e][052][R16 Other WISI] Postpone to next meeting (if still different interpretations of R4 agreement, send LS to R4 from next meeting)**

Not to be Treated

NTN

R2-2000054 LS OUT on Location of UEs and associated key issues (S2-1912560; contact: Thales) SA2 LS in Rel-16 FS_5GSAT_ARCH To:RAN2, RAN3, SA3-LI

R2-2000846 draft response to SA2 LS on Location of UEs and associated key issues THALES LS out Rel-16 To:SA2 Cc:RAN3, SA3-LI

- [AT109e][000] Nicholas Chauberre: Would it be possible to treat this LS and draft response via an email discussion so that a response can be agreed before the end of this RAN2#109e meeting. This would allow SA2 WG to finalise during its april meeting the on going study FS_5GSAT_ARCH and the related Technical Report 23.737 “Study on architecture aspects for using satellite access in 5G ?
- [AT109e][000] Chair: Dear Nicholas and all NTN fans, In the LS R2 is asked to review feasibility of SA2 solutions, meaning that R2 people need to familiarize themselves with these solutions, and make conclusions based on the outcome of the RAN SI on NTN. Looking at your proposed reply I think this is not possible/reasonable during R2 109e meeting, and this is the reason why I proposed to Not Treat/postpone. Email discussion to next meeting seems to me a possibly reasonable way to treat. Could that be a possibility? Any other comments?

Online Mar 26:

- Chair wonder if we can treat this, e.g. by email to next meeting.
- Nokia think this is for Rel-17 and would prefer to not send anything from this meeting. QC also think this is not urgent and think SA2 can look at the TR.
- Chair: no support expressed to reply before we start R17 work (but companies may have not been prepared for this discussion)
- Chair: to be concluded in [AT109e][000] whether we’d attempt to do anything by email to next meeting.

MPE – NR-FR2

R2-2000046 LS on MPE enhancements (R4-1916183; contact: Qualcomm) RAN4 LS in Rel-16 NR_RF_FR2_req_enh To:RAN2

R2-2000178 L2 aspects of MPE mitigation InterDigital discussion Rel-16 NR_RF_FR2_req_enh

R2-2001089 Initial view on introduction of the MPE related enhancements Apple discussion Rel-16 NR_RF_FR2_req_enh-Core

ECN

R2-2000059 LS on the support for ECN in 5GS (S2-1912765; contact: Qualcomm) SA2 LS in Rel-15 5GS_Ph1 To:RAN2, SA4 Cc:RAN3, CT1

DISCUSSION

- [109e][000] Ericsson (Mats): I’d like to flag an LS in agenda item 6.19. Ref R2-2000059.
- [109e][000] Chair: Can you briefly explain. My reasoning: It seems SA2 think we should consider removing ECN from our TS. In my understanding, we (Access Stratum) refer to the IETF mechanism ECN in Stage-2 mainly to avoid inventing AS mechanisms that would replace ECN. In system-level and codec-group TSes, at least for LTE I guess they also specify how it is used in more detail. In my understanding, we (R2) have no proposals on the table now addressing this problem area, so I thought it was not urgent for us. Will SA2 or SA4 be helped by a quick reply from us?
- [109e][000] Ericsson (Mats): I checked your minutes again and if “not to be treated” implies the LS is postponed and will be treated at the next meeting, that is okay for me. I agree there does not seem to be any urgency, but I want to make sure we do not simply note the LS and not reply anything ever.
- [109e][000] Chair: Yes “Not to be treated” just applies for this meeting. And an non-treated LS will not even be Noted, it will be input to the next meeting automatically by MCC.

R2-2000091 Reply LS on Support for ECN in 5GS (S4-200298; contact: Qualcomm) SA4 LS in Rel-15 5GS_Ph1 To:SA2 Cc:RAN2, RAN3, CT1

Temporary Boost

R2-2000574 LS on Temporary Boost Nokia LS out Rel-16 To:SA4 Cc:RAN3, SA2 Late

R2-2000573 Temporary Boost Nokia, Nokia Shanghai Bell discussion Rel-16 Late

Withdrawn

R2-2000218 CR to 36.331 on introducing autonomous gap in Rel-16 ZTE Corporation,Sanechips,CATT,OPPO CR Rel-16 36.331 15.8.0 4188 - B NR_RRM_enh-Core Withdrawn

R2-2000219 CR to 36.306 on introducing autonomous gap in Rel-16 ZTE Corporation,Sanechips,CATT,OPPO CR Rel-16 36.306 15.7.0 1728 - B NR_RRM_enh-Core Withdrawn

R2-2001088 On the introduction of P-bit into the single entry PHR MAC CE Apple discussion Rel-16 NR_RF_FR2_req_enh-Core

R2-2000862 RRC signalling for Tx switching for UL MIMO Nokia, Nokia Shanghai Bell discussion Rel-16 38.331 NR_RF_FR1 Withdrawn

R2-2000863 UE capabilities for Tx switching for UL MIMO Nokia, Nokia Shanghai Bell discussion Rel-16 38.306 NR_RF_FR1 Withdrawn

6.20 NR TEI16 enhancements

Small Technical Enhancements to NR. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see RP-191602 endorsed at RAN#84. Please submit to 6.20.x.

NOTE that proponent companies are responsible to ensure that correct CRs are provided in all groups for proposals that have impact in >1 working group.

Time budget: 1 TU

Tdoc Limitation: No Limitation for Operators, 6 tdocs for others. NOTE for TEI, the tdoc limitation applies to new proposals, not to open proposals since previous meeting(s)

R2 109e: For TEI16, no treatment of new proposals, nor open proposals not covered by email discussions. Email discussions [108#xx] will be treated. In-principle agreed CRs will be treated. Could consider to start email discussions to next meeting, e.g. based on new incoming LSes.

✉ **[AT109e][053][TEI16] IPA CRs (Chairman)**
Scope: Approval of in-principle agreed CRs for AI 6.20.x
CLOSED

6.20.1 RAN2 led TEI16 enhancements - Control plane related

Including outcome of the email discussion [108#58][TEI16] NeedForGap Signaling (MTK)
Including outcome of the email discussion [108#59][TEI16] DL segmentation CRs (Ericsson)
Including outcome of the email discussion [108#60][TEI16] DRX coord (Huawei)

The following documents will be treated by email discussion

R2-2000238 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 36.305 15.4.0 0083 1 B TEI16 R2-1912203
⇨ Agreed in email discussion [AT109e][602]

R2-2000239 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 37.355 15.0.0 0248 - B TEI16
⇨ Revised in R2-2002121

R2-2002121 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 37.355 15.0.0 0248 1 B TEI16
⇨ Agreed in email discussion [AT109e][602]

R2-2000240 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 38.305 15.5.0 0013 1 B TEI16 R2-1912205
⇨ Agreed in email discussion [AT109e][602]

Above tdocs for agreement by email discussion:

✉ **[AT109e][602][NR TEI] BDS B1C signal CRs (CATT)**
Scope: Agree to the CRs in R2-2000238, R2-2000239, and R2-2000240
Intended Outcome: Agreed CRs
Deadline: Wednesday 2020-02-26 1200 CET

R2-2001238 Transfer of unicast RS observations with GNSS integer ambiguity level information Ericsson discussion Rel-16

R2-2001256 Introducing support for GNSS Integer Ambiguity Level Indications Ericsson CR Rel-16 37.355 15.0.0 0252 - B TEI16 R2-1916412
⇨ Agreed in email discussion [AT109e][603]

For agreement by email discussion:

✉ **[AT109e][603][NR TEI] GNSS integer ambiguity level indication CR (Ericsson)**
Scope: Agree to the CR in R2-2001256
Intended Outcome: Agreed CR
Deadline: Wednesday 2020-02-26 1200 CET

=> Coversheet update byMCC: Correct revision to 1.

R2-2001894 Introducing support for GNSS Integer Ambiguity Level Indications Ericsson CR Rel-16 37.355 15.0.0 0252 1 B TEI16
=> **Agreed**

6.20.1.0 In-principle-agreed CRs

CRs in-principle agreed at previous meeting(s) need to be submitted at this meeting. They need to be updated to be based on the lastest version of the specification.

By Email

Second SMTC

R2-2000302 Introduction of a second SMTC per frequency carrier in idle/inactive Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo Inc., Samsung, Ericsson CR Rel-16 38.331 15.8.0 1218 3 B TEI16 R2-1914660
- [AT109e][053][TEI16] Orange (Marcin): In summary of change we added the sentence agreed during RAN2#108: “A legacy UE in Idle/RRC_Inactive mode may underestimate signal strength with SMTC2/longer periodicity because the UE will attempt to measure non-existing transmission.”
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

R2-2000303 Introduction of a second SMTC for inter-RAT cell reselection Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo Inc., Samsung, Ericsson CR Rel-16 36.331 15.8.0 4114 2 B TEI16 R2-1914661
- [AT109e][053][TEI16] Orange (Marcin): • In summary of change we added the sentence agreed during RAN2#108: “A legacy UE in Idle/RRC_Inactive mode may underestimate signal strength with SMTC2/longer periodicity because the UE will attempt to measure non-existing transmission.” Corrections in IE names for errors found during RRC merge.
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

EPS Voice Fallback

⇒ **R2-2000580 and R2-2000581 treated with R2-2000582 below in [AT109e][074][TEI16] instead**

NAS handling error of nas-Container for security key derivation

R2-2002104 NAS handling error of nas-Container for security key derivation Intel Corporation CR Rel-16 38.331 15.8.0 1149 2 F TEI16, NR_newRAT-Core Late
- [AT109e][053][TEI16] Intel (Sudeep): The only change from the IPA is for R2-2002105 (LTE CR), where a copy paste error on impacted architecture in the cover page is corrected.
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

R2-2002105 NAS handling error of nas-Container for security key derivation Intel Corporation CR Rel-16 36.331 15.8.0 4099 2 F TEI16, NR_newRAT-Core, LTE_5GCN_connect-Core
- [AT109e][053][TEI16] Intel (Sudeep): The only change from the IPA is for R2-2002105 (LTE CR), where a copy paste error on impacted architecture in the cover page is corrected.
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

Misc

R2-2000155 Inclusion of 90MHz UE Bandwidth VODAFONE CR Rel-16 38.306 15.8.0 0223 - C NR_newRAT-Core
=> Revised in R2-2002133

R2-2002133 Inclusion of 90MHz UE Bandwidth VODAFONE, Sprint, Ericsson CR Rel-16 38.306 15.8.0 0223 1 C NR_newRAT-Core, TEI16

⇒ **[AT109e][053][TEI16] Agreed**

R2-2000687 Correction on usage of access category 2 for UAC for RNA update MediaTek Inc. CR Rel-16 38.331 15.8.0 1141 2 F NR_newRAT-Core, TEI16 R2-1911696
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

R2-2001383 Support of releasing UL configuration Huawei, HiSilicon, CMCC, China Telecom, MediaTek Inc., Vodafone, Orange, vivo, OPPO, Spreadtrum Communications, China Unicom CR Rel-16 38.331 15.8.0 1168 3 F TEI16 R2-1914671
- [AT109e][053][TEI16] Huawei (Yang): Regarding the below IPA CR, the only change is to adapt the coversheet to indicate the latest spec version and revision number
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

PRACH prioritization parameters for MPS and MCS

R2-2002102 PRACH prioritization parameters for MPS and MCS Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson CR Rel-16 38.331 15.8.0 1361 1 B NR_newRAT-Core, TEI16 R2-1915006 Late
- [AT109e][053][TEI16] Perspecta Labs (Achilles): no changes other than those needed to comply with the resubmission: proposed normative text is now vs latest specs v15.8.0. Cover page label update
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

R2-2002103 PRACH prioritization parameters for MPS and MCS Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson CR Rel-16 38.321 15.8.0 0675 1 B NR_newRAT-Core, TEI16 R2-1915007 Late

- [AT109e][053][TEI16] Perspecta Labs (Achilles): no changes other than those needed to comply with the resubmission: proposed normative text is now vs latest specs v15.8.0. Cover page label update
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

maxUplinkDutyCycle for inter-band EN-DC PC2 UE

R2-2002107 CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE CMCC CR Rel-16 38.306 15.8.0 0145 1 F ENDC_UE_PC2_TDD_TDD R2-1909449 Late

- [AT109e][053][TEI16] CMCC (Ningyu) updated to latest version of TS and add corresponding CR for each other in cover sheet.
- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

R2-2002106 CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE CMCC CR Rel-16 38.331 15.8.0 1152 2 F ENDC_UE_PC2_TDD_TDD R2-1911786 Late

- [AT109e][053][TEI16] CMCC (Ningyu) updated to latest version of TS and add corresponding CR for each other in cover sheet.
- [AT109e][053][TEI16] Lenovo (Hyung-Nam) Capability name between 331/306 is not aligned. 331 uses the name “maxUplinkDutyCycle-interBandENDC-TDD” whereas 306 uses the name “maxUplinkDutyCycle-interBandENDC-TDD-PC2”.
- [AT109e][053][TEI16] CMCC (Ningyu) Thank you Hyung-Nam for pointing out that error and sorry for my mistake. I change the IE from "maxUplinkDutyCycle-interBandENDC-TDD-r16" to "maxUplinkDutyCycle-interBandENDC-TDD-PC2-r16" for 331CR IE.

⇒ **Revised**

R2-2002130 CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE CMCC CR Rel-16 38.331 15.8.0 1152 3 F ENDC_UE_PC2_TDD_TDD

- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h, can be agreed, please provide revision

⇒ **[AT109e][053][TEI16] Feb 28: Agreed**

6.20.1.1 Open / ongoing proposals

By Web Conf

Need for Gap Signalling – email discussion

R2-2000716 Report of [108#58][TEI16] NeedForGap Signaling (MTK) MediaTek Inc. discussion

R2-2001445 Discussion on FFS issue in NR SA NeedForGap Signalling Nokia,Nokia Shanghai Bell discussion Rel-16 TEI16

R2-2000717 Introduction of NeedForGap capability for NR measurement - 36.331 MediaTek Inc. CR Rel-16 36.331 15.8.0 4197 - B NR_newRAT-Core, TEI16 Revised

R2-2001648 Introduction of NeedForGap capability for NR measurement - 36.331 MediaTek Inc. CR Rel-16 36.331 15.8.0 4197 1 B NR_newRAT-Core, TEI16 Revised

R2-2002108 Introduction of NeedForGap capability for NR measurement - 36.331 MediaTek Inc. CR Rel-16 36.331 15.8.0 4197 2 B NR_newRAT-Core, TEI16

R2-2000718 Introduction of NeedForGap capability for NR measurement - 36.306 MediaTek Inc. CR Rel-16 36.306 15.7.0 1730 - B NR_newRAT-Core, TEI16

DISCUSSION LTE PART

- Intel think we should not rush, and think is it important to get it right.

- Nokia agree to go the static way for LTE. For NR part there are many open issues.
- Huawei support these CRs.
- ZTE think static is the way to go for LTE and are ok with the CRs, but think.
- QC think it would be good to check until June.
- Docomo think the current CRs are good, but could wait until June for final approve

⇒ **CRs above agreed in principle (agreement Q2), can update details if needed.**

R2-2000719 Introduction of NeedForGap capability for NR measurement - 38.300 MediaTek Inc. CR
Rel-16 38.300 16.0.0 0191 - B NR_newRAT-Core, TEI16

R2-2000720 Introduction of NeedForGap capability for NR measurement - 38.331 MediaTek Inc. CR
Rel-16 38.331 15.8.0 1453 - B NR_newRAT-Core, TEI16
=> Revised in R2-2002309

R2-2002309 Introduction of NeedForGap capability for NR measurement - 38.331 MediaTek Inc. CR
Rel-16 38.331 15.8.0 1453 1 B NR_newRAT-Core, TEI16

R2-2000721 Introduction of NeedForGap capability for NR measurement - 38.306 MediaTek Inc. CR
Rel-16 38.306 15.8.0 0238 - B NR_newRAT-Core, TEI16

DISCUSSION

- MTK think the main controversy is condition to and in which message to signal, and also the contents of the signalling.
- Oppo think semistatic would be better for LTE as well. MTK and Huawei confirm dynamic is already agreed.

P5 in 0716 above:

- Intel are ok with Resume. For reconfig complete Intel think this could be simpler, i.e. only after change. ZTE agrees with Intel.
- Nokia think resume and reconfig complete are ok, and think the need for gap report can be requested by the network as well.
- Docomo think that NeedForGap signalling may bring problems e.g. message size at cell edge, so support that network can control.
- Huawei think there was some case missing. Intel think is changed is sufficient and cover all cases. Samsung agrees with Intel. QC also agrees that this should be general, and think the proposed FFS is not needed.
- Vivo think that if RRC reconfig includes handover it is ok.
- Ericsson would like to check what is meant by “is changed”. Chair think we can check CRs later.
- Samsung think that the UE is configured for this and upon configuration the UE will report.
- Intel also think that network can request.
- ZTE would like to use the work endabled instead of configured.

⇒ **The use of dynamic Need for gaps is configured by RRC.**

⇒ **The UE includes the *NeedForGap* signalling In RRC Resume Complete, The UE always includes it.**

⇒ **The UE includes the *NeedForGap* signalling In RRC Reconfiguration Complete, The UE includes the signalling if NeedForGap is changed.**

⇒ **FFS if there are additional conditions (e.g. additional network control) and/or additional trigger (network request).**

✉ **[AT109e][080][TEI16] NeedForGap capability (MTK)**
Scope: Progress this based on agreements and papers above
CLOSED

R2-2002308 Report of [AT109e][080][TEI16] NeedForGap capability (MTK) MediaTek discussion
Rel-16 NR_newRAT-Core, TEI16

⇒ **Noted**

- [AT109e][080][TEI16] Chairman: if this feature shall progress, we need to converge the discussion, and the discussion need to be small, this is TEi16. In addition to P1 which seems to have full support I strongly suggest that we agree the simplification/scope reducing proposals that seems to have significant support P3 and P5, and leave the other two FFS.

Agreements and FFSs [AT109e][080][TEI16]:

⇒ **In dynamic need for gap reporting, the network could deconfigure the feature temporarily in order to prevent UE from sending the information. The UE shall report the NeedForGap information if the feature is enabled by the network from disable (i.e. the UE reports the information no matter the capability is changed or not).**

⇒ **In Rel-16, the reporting of additional NeedForGap information based on the potential band combinations is not supported. The UE reports the NeedForGap information based on resultant configuration (current configured band combination).**

⇒ **In Rel-16, the reporting of measurement gap requirement information with granularity of frequency range (e.g. FR1 and/or FR2) is not supported.**

⇒ **It is FFS whether to introduce a target band filter configuration for dynamic need for gap reporting. If agreed, the UE only reports the NeedForGap information for the corresponding target bands provided by the network.**

⇒ **It is FFS whether to report NeedForGap information for intra-frequency measurement. If agreed, the intra-frequency NeedForGpp information should be reported by separate IE (different from the one for inter-frequency measurement).**

R2-2001480 LS on NeedForGap capability MediaTek Inc. LS out Rel-16 NR_newRAT-Core, TEI16
To:RAN4

R2-2001648 Introduction of NeedForGap capability for NR measurement - 36.331 MediaTek Inc. CR Rel-16 36.331 15.8.0 4197 1 B NR_newRAT-Core, TEI16 R2-2000717

EPS Voice Fallback – was in-principle-agreed

R2-2000580 Introduction of voice fallback indication Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson CR Rel-16 38.331 15.8.0 1312 2 C TEI16 R2-1915033

- [AT109e][053][TEI16] QC (Masato): Revision 2: Added need code to voiceFallbackIndication. Changed the inter-operability analysis for the case the UE is implemented according to the CR and the network is not. Editorial changes, e.g. to replace spaces by tabs.

R2-2002326 Introduction of voice fallback indication Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson, Sharp CR Rel-16 38.331 15.8.0 1312 3 C TEI16

⇒ **Agreed**

R2-2000581 Introduction of voice fallback indication Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson CR Rel-16 36.331 15.8.0 4136 2 C TEI16 R2-1915034

- [AT109e][053][TEI16] QC (Masato): Revision 2: UE behaviour previously described in NOTE was changed to procedural text in 5.3.3.2 and 5.3.3.3. Editorial changes.

⇒ **Agreed**

EPS Voice Fallback – additional

R2-2000582 Introdution of EPS voice fallback enhancement Qualcomm Incorporated CR Rel-16 38.306 15.8.0 0233 - C TEI16

- Huawei wonder why this is optional wo signalling.

- QC think the assumption is that the UE can just ignore indication from the network so the network can always signal.
- Huawei think this shall be with signalling.
- TMO think we can agree this CR and there is no reason to have signalling
- Intel wonders if there is a problem with having a signalled UE capability. QC think it would work.
- LG also think it would be safer to signal this.
- Samsung wonders if we need any differentiation? QC think not as this is a higher layer function.

⇒ **Will have a signalled capability, update this CR and the agreed in principle RRC CR.**

R2-2002327 Introdution of EPS voice fallback enhancement Qualcomm Incorporated CR Rel-16 38.306 15.8.0 0233 1 C TEI16

⇒ **Agreed**

✉ **[AT109e][074][TEI16] EPS Voice Fallback (QC)**
Scope: Add signalled Cabaility
Intended outcome: Agreed CRs (all three CRs together), based on R2-2000580, R2-2000581, R2-2000582
CLOSED

DRX coordination – emal discussion

R2-2001380 Report of [108#60][TEI16] DRX coordination Huawei, HiSilicon discussion Rel-16 TEI16

⇒ **noted**

R2-2001381 CR to 38.331 on DRX coordination Huawei, HiSilicon CR Rel-16 38.331 15.8.0 1489 - C TEI16

⇒ **agreed**

NR – ENDC handover – CR agreed in principle last meeting

R2-2002077 Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16 China Telecom, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO, Mediatek, VIVO, CATT CR Rel-16 37.340 15.8.0 0185 - B TEI16 R2-1916586 Late

- CT indicate there was no change

⇒ **agreed**

R2-2001448 Discussion on support of inter-RAT HO from SA to EN-DC Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16

DISCUSSION

- QC support P1, and think this is very efficient, but think it can be further enhanced to increase applicability. LG are interested in P1 but think it is not essential for R16. Apple agrees with LG. Docomo as well, but think fast MCG recovery is also applicable, so better to discuss in later release.
- Intel think this is not essential for now.
- Apple support P2
- Ericsson think P1 is not essential, and think that P2 can be resolved by network impl.
- Huawei think these are not critical, and think P2 brings the need for more change.
- MTK also don't think this is essential
- Chair: There is some interest but most companies don't want this in R16.

⇒ **Noted**

R2-2001131 Support of inter-RAT handover from NR to EN-DC in TS 36.331 China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm draftCR Rel-16 36.331 15.8.0 TEI16
=> Revised in R2-2002336

R2-2002336 Support of inter-RAT handover from NR to EN-DC in TS 36.331 China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson CR Rel-16 36.331 15.8.0 4232 - B TEI16

⇒ **[AT109e][075][TEI16] Agreed**

R2-2001132 Support of inter-RAT handover from NR to EN-DC in TS 38.331 China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm draftCR Rel-16 38.331 15.8.0 TEI16
=> Revised in R2-2002337

R2-2002337 Support of inter-RAT handover from NR to EN-DC in TS 38.331 China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson CR Rel-16 38.331 15.8.0 1505 - B TEI16

⇒ **[AT109e][075][TEI16] Agreed**

R2-2001130 Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 36.306. China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm draftCR Rel-16 36.306 15.7.0 TEI16
=> Revised in R2-2002339

R2-2002339 Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 36.306. China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson CR Rel-16 36.306 15.7.0 1745 - B TEI16

⇒ **[AT109e][075][TEI16] Agreed**

R2-2001133 Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 38.306 China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm draftCR Rel-16
=> Revised in R2-2002338

R2-2002338 Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 38.306 China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson CR Rel-16 38.306 15.8.0 0261 - B TEI16

⇒ **[AT109e][075][TEI16] Agreed**

DISCUSSION (On line)
- Oppo wonder why we need UE cap 38306. CT think this is needed to configure NR measurements for target SN. Samsung are also wondering this.
- Nokia agree to have this cap in 38306, so the target node can decide which to include in the config.
- ZTE think that if we need to do enhancement we need to consider the Nokia P2 above.
- Samsung wonder then if we really need the 38306 capability?
- Vivo think yes. Ericsson think the capability is useful.

✉ **[AT109e][075][TEI16] NR – ENDC handover (China Telecom)**
Scope: Progress Stage-3 CRs, Decide finally whether 38306 capability is needed.
Intended outcome: Agreed CRs (if not 100% agreement, decide action by email)
CLOSED

R2-2002340 Summary of offline discussion [AT109e][075][TEI16] China Telecom discussion Rel-16 TEI16

⇒ **[AT109e][075][TEI16] Noted**

⇒ **[AT109e][075][TEI16] nr-HO-ToEN-DC-r16 capability in the UE-NR-Capability is needed**

By Email

DL RRC Segmentation – outcome of Email Discussion

R2-2000931 Introduction of DL RRC segmentation Ericsson CR Rel-16 36.300 16.0.0 1266 - B TEI16

R2-2000934 Introduction of DL RRC segmentation Ericsson CR Rel-16 38.300 16.0.0 0196 - B TEI16

- [AT109e][054][TEI16] Ericsson (Mattias) These Stage-2 CRs are no longer needed. The CRs below will refer to RACS Stage-2 instead.

R2-2000932 Introduction of DL RRC segmentation Ericsson CR Rel-16 36.306 15.7.0 1732 - B TEI16

=> Revised in R2-2002158

R2-2002158 Introduction of DL RRC segmentation Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 36.306 15.7.0 1732 1 B TEI16

⇒ **[AT109e][054][TEI16] Agreed**

R2-2000933 Introduction of DL RRC segmentation Ericsson CR Rel-16 36.331 15.8.0 4200 - B TEI16

=> Revised in R2-2002159

R2-2002159 Introduction of DL RRC segmentation Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 36.331 15.8.0 4200 1 B TEI16

⇒ **[AT109e][054][TEI16] Agreed**

R2-2000935 Introduction of DL RRC segmentation Ericsson CR Rel-16 38.306 15.8.0 0243 - B TEI16

=> Revised in R2-2002160

R2-2002160 Introduction of DL RRC segmentation Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 38.306 15.8.0 0243 1 B TEI16

⇒ **[AT109e][054][TEI16] Agreed**

R2-2000936 Introduction of DL RRC segmentation Ericsson CR Rel-16 38.331 15.8.0 1465 - B TEI16

=> Revised in R2-2002161

R2-2002161 Introduction of DL RRC segmentation Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon CR Rel-16 38.331 15.8.0 1465 1 B TEI16

⇒ **[AT109e][054][TEI16] Agreed**

✉ **[AT109e][054][TEI16] DL RRC segmentation (Ericsson)**
Scope: DL RRC Segmentation, tdocs above
CLOSED

Autonomous Gap – LS request from R4

R2-2000434 LS on CGI reading with autonomous gaps (R4-1914782; contact: ZTE) RAN4 LS in Rel-16 NR_RRM_enh-Core To:RAN2

⇒ **Noted**

R2-2000169 Autonomous gap support for CGI reading vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel, Mediatek, Nokia, Qualcomm incorporated, ZTE Corporation, Sanechips CR Rel-16 36.331 15.8.0 4187 - B TEI16

=> Revised in R2-2002144

R2-2002144 Autonomous gap support for CGI reading vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel, Mediatek, Nokia, Qualcomm incorporated, ZTE Corporation, Sanechips CR Rel-16 36.331 15.8.0 4187 1 B TEI16

=> Revised in R2-2002255

R2-2002255 Autonomous gap support for CGI reading vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel, Mediatek, Nokia, Qualcomm incorporated, ZTE Corporation, Sanechips
CR Rel-16 36.331 15.8.0 4187 2 B TEI16

⇒ **[AT109e][055][TEI16] agreed**

R2-2000216 Introducing autonomous gap in CGI reporting ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO CR Rel-16 38.331 15.8.0 1434 -
B NR_RRM_enh-Core
=> Revised in R2-2002146

R2-2002146 Introducing autonomous gap in CGI reporting ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO CR Rel-16 38.331 15.8.0 1434 1
B NR_RRM_enh-Core
=> Revised in R2-2002278

R2-2002278 Introducing autonomous gap in CGI reporting ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO CR Rel-16 38.331 15.8.0 1434 2
B NR_RRM_enh-Core

⇒ **[AT109e][055][TEI16] Agreed**

R2-2000171 Autonomous gap support for CGI reading vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel, MediaTek, Qualcomm incorporated, ZTE Corporation, Sanechips CR
Rel-16 36.306 15.7.0 1727 - B TEI16
=> Revised in R2-2002145

R2-2002145 Autonomous gap support for CGI reading vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel, MediaTek, Qualcomm incorporated, ZTE Corporation, Sanechips CR
Rel-16 36.306 15.7.0 1727 1 B TEI16

⇒ **[AT109e][055][TEI16] Agreed**

R2-2000217 CR to 38.306 on introducing autonomous gap in Rel-16 ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO CR Rel-16 38.306 15.8.0 0226
- B NR_RRM_enh-Core Revised

R2-2001638 CR to 38.306 on introducing autonomous gap in Rel-16 ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO CR Rel-16 38.306 15.8.0 0226
1 B NR_RRM_enh-Core R2-2000217
=> Revised in R2-2002147

R2-2002147 Introducing autonomous gap in CGI reporting ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO CR Rel-16 38.306 15.8.0 0226 2
B NR_RRM_enh-Core

⇒ **[AT109e][055][TEI16] Agreed**

✉ **[AT109e][055][TEI16] Autonomous Gaps (vivo, ZTE)**
Scope: Autonomous gaps, tdocs above
CLOSED

R2-2002219 Reply LS on CGI reading with autonomous gaps ZTE Corporation LS out Rel-16
NR_RRM_Enh_Core To:RAN4

⇒ **[AT109e][055][TEI16] Approved**

IDC

R2-2000362 Introduction of NR IDC solution vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO INC., NEC, Xiaomi Communications, Qualcomm Inc, CATT, InterDigital, China Telecom, Ericsson CR Rel-16 38.331 15.8.0 1443 - B TEI16
=> Revised in R2-2002175

R2-2002175 Introduction of NR IDC solution vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO INC., NEC, Xiaomi Communications, Qualcomm Inc, CATT, InterDigital, China Telecom, Ericsson, Samsung CR Rel-16 38.331 15.8.0 1443 1 B TEI16

⇒ **[AT109e][056][TEI16] Agreed**

R2-2000363 UE capability for IDC vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO INC., NEC, Xiaomi Communications, Qualcomm Inc, CATT, InterDigital, China Telecom, Ericsson CR Rel-16 38.306 15.8.0 0229 - B TEI16

⇒ **[AT109e][056][TEI16] Agreed**

R2-2000575 Introduction of NR IDC Solution Nokia, CATT, Ericsson, Huawei, InterDigital, NEC, NTT DOCOMO INC., Nokia Shanghai Bell, Qualcomm, vivo, ZTE CR Rel-16 38.300 16.0.0 0190 - B TEI16

⇒ **[AT109e][056][TEI16] Agreed**

F

✉ **[AT109e][056][TEI16] IDC (vivo)**
Scope: IDC, tdocs above
Intended outcome: Agreed CRs
CLOSED

Multiple LTE CRS rate matching patterns

R2-2000865 Introduction of multiple LTE CRS rate matching patterns Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 15.8.0 1458 - B TEI16

R2-2000866 Introduction of multiple LTE CRS rate matching patterns Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.306 15.8.0 0240 - B TEI16

- QC think we should treat this as requested by R1
- Nokia think this is related to eMIMO
- ZTE are generally ok, but wonder if there is a conflict with legacy config, in servingcellcommon, Nokia think this is a valid comment.
- QC think that in R1 LS they are already asking for 6 patterns, also in the scope of TEI.
- Nokia think these CRs is for single TRP and there may be different capabilities. QC think that configuration could be one single solution, and capabilities is different.

⇒ **Postpone (see what is needed in Q2, on top of eMIMO CRs)**

Not To Be Treated

5G indicator

R2-2000048 LS on 5G indicator (RP-193265; contact: Intel) RAN LS in Rel-16 NR_newRAT-Core, TEI16 To:RAN2 Cc:SA, CT, GSMA

3 tdocs Moved from 5.4:

R2-2000156 Completing the Solution for the 5G Indicator VODAFONE discussion

R2-2001199 Introduction of bandlist for ENDC for 5G indicator HUAWEI, British Telecom, HiSilicon CR Rel-16 36.331 15.8.0 4214 - C NR_newRAT-Core
=> Revised in R2-2002098

R2-2002098 Introduction of bandlist for ENDC for 5G indicator HUAWEI, British Telecom, HiSilicon CR Rel-16 36.331 15.8.0 4214 1 C NR_newRAT-Core

R2-2001576 Support of 5G indicator in EN-DC Samsung Electronics Co., Ltd discussion Rel-16 TEI16

Overheating

R2-2001325 36.331 CR for addressing overheating issue in (NG)EN-DC (comeback from RAN2#108) Huawei, Huawei Device, Apple, CATT CR Rel-16 36.331 15.8.0 4176 1 F TEI16 R2-1915260

R2-2001326 38.331 CR for addressing overheating issue in (NG)EN-DC (comeback from RAN2#108) Huawei, Huawei Device, Apple, CATT CR Rel-16 38.331 15.8.0 1413 1 F TEI16 R2-1915261

Cell Reselection ENDC

R2-2001575 Further discussion on EN-DC cell reselection Samsung Electronics Co., Ltd discussion Rel-16 TEI16

R2-2000914 CR on alternative cell reselection priorities in 38.304 CMCC, Ericsson CR Rel-16 38.304 15.6.0 0146 - B TEI

R2-2000915 CR on alternative cell reselection priorities in 38.331 CMCC, Ericsson CR Rel-16 38.331 15.8.0 1463 - B TEI

R2-2002037 CR on alternative cell reselection priorities in 36.304 CMCC, Ericsson, SoftBank CR Rel-16 36.304 15.5.0 0782 - B TEI16 Late

R2-2002038 CR on alternative cell reselection priorities in 36.331 CMCC, Ericsson, SoftBank CR Rel-16 36.331 15.8.0 4229 - B TEI16 Late

eDSS

R2-2000133 Introduction of enhanced support for dynamic spectrum sharing Ericsson CR Rel-16 38.331 15.8.0 1426 - B TEI16

R2-2000134 Introduction of enhanced support for dynamic spectrum sharing Ericsson CR Rel-16 38.306 15.8.0 0221 - B TEI16

Misc

R2-2001009 Missing reportAddNeighMeas in periodic measurement reporting Nokia, Nokia Shanghai Bell CR Rel-16 38.331 15.8.0 1290 1 F TEI16 R2-1913159

Treated in positioning parallel session

Introduction of B1C

R2-2000238 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 36.305 15.4.0 0083 1 B TEI16 R2-1912203

R2-2000239 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 37.355 15.0.0 0248 - B TEI16
=> Revised in R2-2002121

R2-2002121 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 37.355 15.0.0 0248 1 B TEI16

R2-2000240 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 38.305 15.5.0 0013 1 B TEI16 R2-1912205

Withdrawn

R2-2000168 Autonomous gap support for CGI reading vivo, CMCC, Ericsson CR Rel-16 38.331 15.8.0 1431 - B TEI16 Withdrawn

R2-2000170 Autonomous gap support for CGI reading vivo, CMCC, Ericsson CR Rel-16 38.306 15.8.0 0224 - B TEI16 Withdrawn

6.20.1.3 New proposals

User Plane Integrity protection
LATE LS:

R2-2002136 Mandatory User Plane Integrity for 5G (FSAG Doc 79_002; contact: DT) GSMA LS in To:SA, RAN, CT, RAN2, SA3, CT1, SA2

R2-2000906 Discussion on the flexible configuration of Maximum Data Rate Enumeration for UP Integrity ProtectionCMCC, Huawei, Hisilicon discussion Rel-16 R2-1915201

R2-2000604 Maximum Data Rate Enumeration for UP Integrity Protection Apple, ZTE Corporation, Sanechips discussion Rel-16 TEI16 R2-1915444

R2-2000605 Draft LS on Maximum Data Rate Enumeration for UP Integrity Protection Apple discussion Rel-16 TEI16 R2-1915445

- [AT109e][000] Chair: On specific operator request, Plan for UP integrity protection: no decisions at this meeting: a round of comments by email for next meeting, to pave the way for planning for next meeting.
- [AT109e][000] Chair: Note that the LS in R2-2002136 refers to some material where quite bold claims are made. R2 will not attempt to make any threat conclusions above AS layers.
- [AT109e][000] DT: Expect this will be discussed and RP and SP.
- [AT109e][000] Docomo, Huawei, QC: should wait until Plenaries have converged.

✉ **[Post109e][TEI16] Enhanced capability for UP Integrity Protection (DT)**
This email discussion is expected to start after RP#87e and scope may be updated then.
Scope: Enhanced capability for UP Integrity Protection. Gather comments on interest, feasibility, and possible solution direction, blocking aspects if any, considering R2-2002136, R2-2000906, R2-2000605.
Intended outcome: Report.
Deadline: Next Meeting

Not to be Treated

Misc

R2-2001327 On the enhancement of SRS carrier switching capability Huawei, HiSilicon discussion Rel-16 TEI16 R2-1915262

R2-2001328 On the over-cold issue Huawei, HiSilicon discussion Rel-16 TEI16

R2-2001238 Transfer of unicast RS observations with GNSS integer ambiguity level information Ericsson discussion Rel-16

R2-2001256 Introducing support for GNSS Integer Ambiguity Level Indications Ericsson CR Rel-16 37.355 15.0.0 0252 - B NR_pos, NR_pos-Core R2-1916412

R2-2001292 Allow fallback band combinations when reporting SRS-TxSwitch capability Qualcomm Incorporated CR Rel-16 38.306 15.8.0 0253 - C TEI16

R2-2001293 Discussion of the PUCCH & SRS Resource Release Qualcomm Incorporated discussion Rel-16 TEI16

R2-2000139 CR to 38.331 on missing freqBandIndicator in NR redirection Qualcomm Incorporated CR Rel-16 38.331 15.8.0 1467 - F TEI16

R2-2000244 CR to 36.331 on missing freqBandIndicator in NR redirection Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4202 - F TEI16

R2-2000324 additional SSB-ToMeasure for smtc2-LP OPPO, ZTE discussion Rel-16 TEI16

R2-2001041 On combined RRC procedures Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-16 TEI16 R2-1914651

R2-2001042 RRC processing delays for combined procedures Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 15.8.0 1288 2 F TEI16 R2-1914652

R2-2001120 On inter-frequencyand inter-RAT measurement priority handling Ericsson CR Rel-16 36.331 15.8.0 4204 - B TEI

R2-2001121 On inter-frequencyand inter-RAT measurement priority handling Ericsson CR Rel-16 38.331 15.8.0 1473 - B TEI

R2-2001122 Measurement priority handling in NR Ericsson discussion

R2-2000230 SRB only connection enhancement for PDU session change CATT,Huawei, HiSilicon discussion Rel-16 38.331

R2-2000231 SRB only connection ehancement option 1CATT,Huawei, HiSilicon draftCR Rel-15 38.331 15.8.0 F TEI16

R2-2000232 SRB only connection ehancement option 2CATT draftCR Rel-15 38.331 15.8.0 F TEI16

R2-2000598 0-PDCCH RRC Connections for Certain Application Types Apple discussion Rel-16 TEI16

R2-2000686 Mobility state related information inheritance after inter-RAT cell reselectionHuawei, HiSilicon, China Unicom discussion Rel-16 TEI16

R2-2000768 Additional UE capability filtering to limit the total number of carriers in NR Samsung discussion Rel-16 TEI16 R2-1915249

R2-2001188 On the support of NG-based (i.e. via CN) handover based using CGI report Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core R2-1914673

R2-2001447 Signaling of delta configuration for SCG in NR SA to EN-DC inter-system handover Qualcomm Incorporated discussion

Not available:

R2-2000108 LTE / NR Spectrum sharing in Band 40/n40 for LTE-NR Reliance Jio discussion Rel-16 Withdrawn

6.20.2 RAN2 led TEI16 enhancements - User plane related

6.20.2.0 In-principle-agreed CRs

CRs in-principle agreed at previous meeting(s) need to be submitted at this meeting. They need to be updated to be based on the lastest version of the specification.

By Email

R2-2001467 Correction on autonomous RACH retransmission for SRS switching Huawei, HiSilicon CR Rel-16 38.321 15.8.0 0696 - F TEI16

- [AT109e][053][TEI16] Chair Feb 27: No Comments last 24h

⇒ **[AT109e][053][TEI16] Agreed**

Withdrawn

R2-2000974 Correction on autonomous RACH retransmission for SRS switching Huawei, HiSilicon discussion Rel-16 TEI16 Late

6.20.2.1 Open / ongoing proposals

Not to be Treated

Secondary DRX – waiting for LS reply

R2-2000345 Introduction of secondary DRX group Ericsson, Qualcomm, Samsung, Deutsche Telekom, Verizon discussion Rel-16 NR_newRAT-Core

R2-2000407 Further considerations on secondary DRX group OPPO discussion Rel-16 TEI16

R2-2001433 Supporting WUS in multiple DRX groups Samsung discussion Late

R2-2000346 Introduction of secondary DRX group CR 38.306 Ericsson, Qualcomm, Samsung, Deutsche Telekom, Verizon CR Rel-16 38.306 15.8.0 0228 - C TEI16, NR_newRAT-Core

R2-2000347 Introduction of secondary DRX group CR 38.321 Ericsson, Qualcomm, Samsung, Deutsche Telekom, Verizon CR Rel-16 38.321 15.8.0 0686 - C TEI16, NR_newRAT-Core

R2-2000348 Introduction of secondary DRX group CR 38.331 Ericsson, Qualcomm, Samsung, Deutsche Telekom, Verizon CR Rel-16 38.331 15.8.0 1439 - C TEI16, NR_newRAT-Core

LCP mapping

R2-2000576 LCP Mapping Restrictions Nokia, Ericsson, Fujitsu, Nokia Shanghai Bell discussion Rel-16 TEI16 R2-1909118

R2-2000577 Dynamic LCP Mapping Restrictions Nokia, Nokia Shanghai Bell CR Rel-16 38.321 15.8.0 0689 - B TEI16

Withdrawn:

R2-2000779 SR_COUNTER initialization due to RRC reconfiguration Fujitsu discussion Rel-16 TEI16 R2-1915003 Withdrawn

6.20.2.3 New proposals

Not to be treated

R2-2000120 MAC upgrade for SR dropping in PHY CATT, Qualcomm Inc. discussion TEI16 R2-1914420

R2-2000121 Correction on the drx-HARQ-RTT-TimerDL CATT draftCR Rel-16 38.321 15.8.0 TEI16

R2-2000406 Cell restriction for CA duplication OPPO discussion Rel-16 TEI16

R2-2000578 QoS Flow Handling Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16 R2-1914602

R2-2000579 MDBV Enforcement Nokia, InterDigital, Nokia Shanghai Bell discussion Rel-16 TEI16 R2-1914603

R2-2000594 Preamble Selection for RACH Procedure Apple discussion Rel-16 TEI16 R2-1915937

R2-2000723 PDCP security issue about duplicate detection Samsung, LG Electronics Inc., Nokia, Nokia Shanghai Bell, LG Uplus discussion Rel-16 38.323 TEI16 R2-1914884

R2-2000724 CR on PDCP security issue Samsung, LG Electronics Inc., Nokia, Nokia Shanghai Bell, LG Uplus CR Rel-16 38.323 15.6.0 0032 3 F TEI16 R2-1914887

R2-2000725 Unnecessary deciphering for duplicated PDUs Samsung discussion TEI16 R2-1915066

R2-2000758 Enhancement on BSR format for the one LCG case Huawei, HiSilicon CR Rel-16 38.321 15.8.0 0690 - F TEI16

R2-2000832 RNTI ambiguity for CFRA and CBRA of 4-Step RACH Sony discussion Rel-16 TEI16 R2-1915242

R2-2000854 CFRA resource handling for BFR upon TAT expiry Nokia, Nokia Shanghai Bell, Apple, ASUSTek discussion Rel-16 TEI16

R2-2001015 Updates to reestablishment procedure ZTE Corporation, Sanechips, Intel Corporation, CATT CR Rel-16 38.331 15.8.0 1143 4 C TEI16 R2-1914788

R2-2001285 ON Duration adaptation LG Electronics Inc., LG Uplus, Vivo discussion Rel-16 TEI16 R2-1914903

R2-2001299 Handling of bwp-InactivityTimer upon BWP switching LG Electronics Deutschland discussion Rel-16 TEI16 R2-1916113

R2-2001307 Adaptation of QoS Flow to DRB Mapping for MDBV Enforcement Futurewei discussion Rel-16 TEI16

R2-2001355 Stopping ra-ResponseWindow for contention-free BFR Huawei, HiSilicon, China Unicom discussion Rel-16 TEI16

R2-2001554 Retransmission of an RLC SDU with a poll after discard procedure LG Electronics Inc., Ericsson, NTT Docomo, LG Uplus, Sharp discussion Rel-16 TEI16 R2-1913818

R2-2001644 SR_COUNTER initialization due to RRC reconfiguration Fujitsu, LG Electronics Inc. discussion Rel-16 TEI16 R2-1915003

6.20.3 TEI16 enhancements led by other WGs

Documents submitted to this agenda item will only be treated after a decision on the TEI has been made by another group and an LS informing RAN2 of their decision has been received. Tdoc limitation does not apply.

By Email – To be noted

LS in Cc RAN2

R2-2000050 Reply LS on enhanced access control for IMS signalling (S1-193595; contact: NTT Docomo) SA1 LS in Rel-16 TEI16 To:CT1 Cc:RAN2, SA

⇒ **Noted**

6.20.3.0 In-principle-agreed CRs

CRs in-principle agreed at previous meeting(s) need to be submitted at this meeting. They need to be updated to be based on the lastest version of the specification.

By Email

R2-2000360 Correction on beamSwitchTiming values of 224 and 336 vivo, Huawei, Hisilicon CR Rel-16 38.306 15.8.0 0214 1 F NR_newRAT-Core R2-1914687

- [AT109e][053][TEI16] Vivo (chenli): Apart from updating to the newest version of TS, I just updated the cover sheet to add the information on the corresponding RAN1 CR, “TS 38.214 CR 0060”
- [AT109e][053][TEI16] Chair Feb 27: no comments last 24h

⇒ **[At109e][053][TEI16] Agreed**

=> Coversheet revision by MCC: added TEI16 into WIs

R2-2001893 Correction on beamSwitchTiming values of 224 and 336 vivo, Huawei, Hisilicon CR Rel-16 38.306 15.8.0 0214 2 F NR_newRAT-Core, TEI16

=> **Agreed**

R2-2001379 CR to 38.331 on CSI-RS inter-node message Huawei, HiSilicon CR Rel-16 38.331 15.8.0 1354 1 C TEI16 R2-1914669

- [AT109e][053][TEI16] Huawei (lili): Apart from updating to the newest version of TS, I made a small editorial change to the following CR: the IE name was changed from “CSI-RS-Config-IEs” to “CSI-RS-Config-v16xx-IEs”
- [AT109e][053][TEI16] Lenovo (Hyung-Nam): I have problems how CSI-RS resources have been included in the MeasurementTimingConfiguration. To me it should be as follows <part excluded>
- [AT109e][053][TEI16]Thanks Hyung-Nam for spotting the issue. I have revised the CR accordingly (Note that I removed the “OPTIONAL” of csi-RS-Config-r16)

⇒ **Revised**

- [AT109e][053][TEI16] Chair Feb 27: no comments last 24h, can be agreed, please provide revision (rev 2)

R2-2002184 CR to 38.331 on CSI-RS inter-node message Huawei, HiSilicon CR Rel-16 38.331 15.8.0 1354 2 C TEI16

⇒ **[At109e][053][TEI16] Agreed**

6.20.3.1 Open / ongoing proposals

By Web Conf

CSI-RS capabilities under-reporting

R2-2000093 LS on Discussion over UE capabilities of FG2-36/2-40/2-41/2-43 (R1-1913295; contact: Huawei) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **Noted**

R2-2000683 Solution for under-reporting CSI-RS capabilities NTT DOCOMO, INC. discussion Rel-16 NR_newRAT-Core, TEI16 R2-1916277

⇒ **Noted**

4 Moved from 5.4.3:

R2-2001315 Discussion on under-reporting CSI-RS capabilities Huawei, HiSilicon, China Unicom, CMCC discussion Rel-15 NR_newRAT-Core Revised

R2-2001486 Discussion on under-reporting CSI-RS capabilities Huawei, HiSilicon, China Unicom, CMCC, China Telecom discussion Rel-15 NR_newRAT-Core R2-2001315

⇒ **Noted**

DISCUSSION on the two tdocs above
- Huawei want to do this for R15.
- QC has the same understanding as docomo, but think we need to negotiate no of triplets to signal. QC think we shouldn't do the Huawei P2. Ericsson are also aligned with the docomo proposal and also don't like the Huawei P2. Intel agrees as well, and think there are maintenance concerns with Huawei proposal.
- Samsung think that cap size is still something to focus on, and request response can be used for several scenario and wonders if this is possible for this case. Docomo are open but think we should not use this for so many things.
- CT think that for P2 we can use a new parameter, and think it would be ok to do this for R15.
- Huawei think their solution can work without P2, and wonder why we can't just introduce acc to R1 proposal. CMCC think we should just follow R1 LS and think we need this for Rel-15
- Docomo think the Huawei proposal becomes complex, esp with legacy signalling.

✉ **[AT109e][076][TEI16] Under-reporting CSI-RS capabilities (Docomo)**
Scope: Progress the solution and CR, use solution in R2-2000683, R2-2000688, R2-2000689 as baseline. If progress is good, determine the need for, scope of an LS
CLOSED (discussion on Reply LS continued by post meeting email)

R2-2001316 CR on CSI UE capabilities parameters (38.331) Huawei, HiSilicon, China Unicom, CMCC CR Rel-15 38.331 15.8.0 1412 1 F NR_newRAT-Core R2-1915903

R2-2001317 CR on CSI UE capabilities parameters (38.306) Huawei, HiSilicon, China Unicom, CMCC CR Rel-15 38.306 15.8.0 0213 1 F NR_newRAT-Core R2-1915904

R2-2000688 Extension of CSI-RS capabilities per codebook type NTT DOCOMO, INC. CR Rel-16 38.331 15.8.0 1451 - C NR_newRAT-Core, TEI16

R2-2000689 Extension of CSI-RS capabilities per codebook type NTT DOCOMO, INC. CR Rel-16 38.306 15.8.0 0237 - C NR_newRAT-Core, TEI16

⇒ **CRs are postponed**

R2-2000690 [DRAFT] Reply LS on CSI-RS capabilities (FG 2-33/36/40/41/43) NTT DOCOMO, INC. LS out Rel-16 NR_newRAT-Core, TEI16 To:RAN1

⇒ **Will have an LS out**

✉ **[Post109e][TEI16] Reply LS on CSI-RS capabilities (FG 2-33/36/40/41/43) (NTT DOCOMO, INC)**
Scope: Reply LS out to R1, based on discussion [AT109e][076][TEI16]
Intended outcome: Approved LS out
Deadline: March 12, 2020

By Email – Discussion

LS in

R2-2000014 LS on NR Rel-16 TEI (R1-1913580; contact: NTT Docomo) RAN1 LS in Rel-16 TEI16
To:RAN2, RAN4 Cc:RAN

⇒ **Noted**

Additional RACH configurations

R2-2001352 Introduction of additional RACH configurations for TDD FR1 NTT DOCOMO, INC. CR
Rel-16 38.331 15.8.0 1486 - B NR_newRAT-Core, TEI16

- [AT109e][057][TEI16] Chair: RAN1 has explicitly decided this to be a mandatory feature without capability signalling, which is somewhat unusual. Only one company has expressed concerns, but can allow further discussion. The provided CR seems to implement what was asked for.

⇒ **[AT109e][057][TEI16] Agreed, Can still discuss during Q2 the need for/introduction of a signalled capability for this feature.**

✉ **[AT109e][057][TEI16] Additional RACH config (NTT Docomo)**
Scope: tdoc above
Intended outcome: Agreed CRs
CLOSED

Downgraded configuration SRS antenna switching

R2-2001275 Downgrading configuration of SRS for antenna switching Intel Corporation discussion
Rel-16 TEI16

⇒ **[AT109e][058][TEI16] Noted**

R2-2002273 Summary of [AT109e][058][TEI16] Downgraded configuration SRS antenna switching (Intel OPPO) Rapporteur

⇒ **[AT109e][058][TEI16] Noted**

R2-2000198 Introduction of downgraded configurations for SRS antenna switching OPPO CR Rel-16 38.331 15.8.0 1433 - B NR_newRAT-Core
=> Revised in R2-2002066

R2-2002066 Introduction of downgraded configurations for SRS antenna switching OPPO, Intel CR
Rel-16 38.331 15.8.0 1433 1 B NR_newRAT-Core

R2-2002260 Introduction of downgraded configuration for SRS antenna switching OPPO, Intel CR
Rel-16 38.331 15.8.0 1433 2 B TEI16

⇒ **[AT109e][058][TEI16] Agreed**

R2-2002067 Introduction of downgraded configurations for SRS antenna switching OPPO CR Rel-16 38.306 15.8.0 0258 - B TEI16 Late

R2-2002261 Introduction of downgraded configurations for SRS antenna switching OPPO, Intel CR
Rel-16 38.306 15.8.0 0258 1 B TEI16 Late

⇒ **[AT109e][058][TEI16] Agreed**

R2-2001273 Downgrading configuration of SRS for antenna switching - Alt. 1 Intel Corporation CR
Rel-16 38.331 15.8.0 1480 - C TEI16

R2-2001274 Downgrading configuration of SRS for antenna switching - Alt. 1 Intel Corporation CR
Rel-16 38.306 15.8.0 0251 - C TEI16

R2-2001276 Downgrading configuration of SRS for antenna switching - Alt. 2 Intel Corporation CR
Rel-16 38.331 15.8.0 1481 - C TEI16

R2-2001277 Downgrading configuration of SRS for antenna switching - Alt. 2 Intel Corporation CR
Rel-16 38.306 15.8.0 0252 - C TEI16

✉ **[AT109e][058][TEI16] Downgraded configuration SRS antenna switching (Intel Oppo)**
Scope: tdocs above
Intended outcome: Agreed CRs

CLOSED

R2-2002273 Summary of [AT109e][058][TEI16] Downgraded configuration SRS antenna switching (Intel OPPO) OPPO (Rapporteur) discussion Rel-16 TEI16

⇒ **[AT109e][058][TEI16] Noted**

One-slot periodic TRS configuration

R2-2000911 Introduction of one-slot periodic TRS configuration for FR1 under a certain condition in TS38.306 CMCC draftCR Rel-16 38.306 15.8.0 B TEI

R2-2000912 Introduction of one-slot periodic TRS configuration for FR1 under a certain condition in TS38.331 CMCC draftCR Rel-16 38.331 15.8.0 B TEI

- [AT109e][059][TEI16] CMCC (Ningyu) As email discussion rappporteur, I would suggest we postpone the CRs and wait for RAN1's conclusion.

⇒ **Postponed**

✉ **[AT109e][059][TEI16] One-slot periodic TRS configuration (CMCC)**
CLOSED

Withdrawn:

R2-2000361 Correction on beamSwitchTiming values of 224 and 336 vivo CR Rel-16 38.331 15.8.0 1442 - F TEI16 Withdrawn

6.21 On demand SI in connected

On demand SI reception in RRC_CONNECTED may be relevant to several Rel-16 WIs (e.g. V2X, positioning, IIoT, etc). This agenda item is for the discussion of the generic procedure for on demand SI in RRC_CONNECTED; WI specific details of the SI content should be discussed within the appropriate AI for that WI.

Tdoc Limitation: 1 tdoc

Including outcome of the email discussion [108#61][R16] on-demand SI procedure in RRC_CONNECTED (Ericsson)

To be scheduled depending on progress of other items.

R2-2000875 Summary of [108#61][R16] On-demand SI procedure in RRC_CONNECTED_summary Ericsson discussion Rel-16 NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core

DISCUSSION

- Samsung point out that we agreed this is applicable to R16 SIBs and possible future SIBs, and only SIB9 if needed for IIOT.
- CATT think P4 should be postponed
- P2: Nokia wonder if there would be additional work to support SIB9, and would like to clarify this. Chair think that if unicast provisioning if for enhanced accuracy then maybe this need to be considered. Ericsson think that IIOT may use DL Information Transfer Msg.
- P2: MTK think this is ok, and think SIB9 should be included for other purpose than IIOT, e.g. positioning.
- Intel are ok with the P2 proposal as is. P3 formulation seems to be strange, why would spare bits not be considered. Huawei agree with Intel.
- Oppo think that the mechanism could allow also SIB1-8 to be requested, as this may be required in the future. Apple agrees that all SIBs should be possible.
- Samsung think SIB9 is also problematic.
- P4: Ericsson clarifies that this could be a bit in RRC reconfiguration, or possibly a SIB bit (seems to be preferred in the positioning session). Ericsson think the feature is optional for the network. SS think the current mechanism for on-demand in idle/inactive can be used.
- P4: CATT think this is only for SIB9. For R16 this should be mandatory if network support on-demand for Idle/Inactive. Ericsson think that for some cases e.g. V2X the network may want to provide some SIBs only in connected, not in Idle/Inactive. Samsung think this case is not valid.

- P4: Lenovo support this. Intel as well, and think it is not just for SIB9. Apple as well. LG support this as well, otherwise the UE will request unnecessarily from network that do not support.
- P4: Nokia think indeed this proposal can be tied to SIB9.

P5
- ZTE think this shall be left for UE implementation and need no further discussion. CATT agrees.
- MTK think that the network should always respond. Would there be networks that do not have this capability?
- LG think a prohibit timer would be useful. Vivo think this is useful for congestion case. Lenovo think there might be a case.
- Samsung assume that the UE know if the network has this capability, and there is two delivery mechanisms, dedicated and if the UE has common seach space, broadcast delivery is possible, and think this does not need to be specified. Intel agrees. CATT agrees as well. NEC also agrees.
- Apple also think the network shall always reply
- Chair proposes: The UE knows whether the network has capability for this feature (e.g. based on existing indication or FFS new indication), and it is assumed that the network always replies to a UE request. Ericsson think that the network can choose to ignore the UE, e.g. at high load.
- Intel think the network should always reply, and the only abnormal case when network doesn't reply is if the network loses the message.
- Nokia think we don't need to standardize much for this.
- Huawei would be ok either way,
- Ericsson strongly think a prohibit timer would be needed. Samsung think we didn't introduce a prohibit timer in R15.
- Intel wonder what "UE implementation" would mean? The procedure would normally always be successful.
- Apple think that anyway modification period would be a normal condition in the UE.
- Ericsson think there already is a method for the network to reject access in Idle/inactive mode, but not for connected. For V2X there may be cases with very frequent requests.

⇒ **In Rel-16 the UE is not allowed to request from SIB1 to SIB8 on-demand (FFS whether SIB9 is allowed is pending).**

⇒ **The list of requested SIBs provided by the UE contains only SIBs that are allowed to be requested on-demand, ASN.1 extension possibility is expected as usual.**

⇒ **FFS if an explicit network indication is specified in order to inform the UE whether the on-demand SIB request in RRC_CONNECTED is supported.**

⇒ **The UE knows whether the network has capability for this feature (e.g. based on existing indication or FFS new indication)**

R2-2001670 Feature summary for on-demand SIB in CONNECTED Ericsson (Rapporteur) discussion Rel-16
- Ericsson indicate that this doesn't impact the stage-2 CR

✉ **[AT109e][082][OdSIBconn] on-demand SIB in CONNECTED Functionality (Ericsson)**
Scope: Treat and progress based on R2-2001670
CLOSED

Agreements [AT109e][082][OdSIBconn]

⇒ **The UE in RRC_CONNECTED shall not request on-demand the SIB specified in the DCCA WI for early measurements.**

⇒ **The UE should trigger the on-demand SIB request only after checking if the required SIBs are mapped to a SI message as per *si-SchedulingInfo* in SIB1.**
a) If a CSS is configured in an active BWP, the on-demand request is triggered only for those SIBs with a *si-BroadcastStatus*is set to *notBroadcasting*.
b) if no CSS is configured for an active BWP, then the on-demand request is done

regardless of the *si-BroadcastStatus* since the UE cannot check the broadcast channel.

⇒ **If the UE does not have a valid stored version of a SIB, the same principles described in P4 are applied.**

⇒ **RAN2 to confirm that upon receiving RRC reconfiguration message which includes *reconfigurationWithSync* in *spCellConfig* of an MCG and *dedicatedSIB1-Delivery*, SI request may be initiated after MAC of MCG completes the random access procedure towards the target SpCell.**

⇒ ***DedicatedSIBRequest-r16* is not included in the the HandoverPreparationInformation.**

✉ **[Post109e][OdSIBconn] Open Issues (Ericsson)**
Scope: Address Open issues of On demand System Information in Connected
Intended outcome: Report, and agreeable CR
Deadline: Next meeting

R2-2000876 Running CR on 38.331 for on-demand SIB(s) in CONNECTED Ericsson CR Rel-16 38.331 15.8.0 1462 - B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core
- Ericsson explains that there are some FFSes, and the explicit indication is included now.
- Chair: Need to Exclude non-agreed parts.

=> Revised in R2-2002228

R2-2002228 Running CR on 38.331 for on-demand SIB(s) in CONNECTED Ericsson CR Rel-16 38.331 15.8.0 1462 1 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core

⇒ **[AT109e][083][OdSIBconn] Agreed**
=> Coversheet update by MCC: Improved title
=> Revised in R2-2002396

R2-2002396 Introduction of on-demand SI procedure in RRC_CONNECTED Ericsson CR Rel-16 38.331 15.8.0 1462 2 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core
=> Agreed

R2-2000877 Running CR on 38.300 for on-demand SI procedure in RRC_CONNECTED Ericsson CR Rel-16 38.300 16.0.0 0194 - B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core
- Ericsson explains this CR seems to be ok, not many comments.
- NEC point out that this CR should be based on R16 version

⇒ **Endorsed (small things can be fixed)**
=> Revised in R2-2002229

R2-2002229 Running CR on 38.300 for on-demand SI procedure in RRC_CONNECTED Ericsson CR Rel-16 38.300 16.0.0 0194 1 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core

⇒ **[AT109e][083][OdSIBconn] Agreed**
=> Coversheet update by MCC: Updated title

R2-2002397 Introduction of on-demand SI procedure in RRC_CONNECTED Ericsson CR Rel-16 38.300 16.0.0 0194 2 B NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core
=> Agreed

✉ **[AT109e][083][OdSIBconn] on-demand SIB in CONNECTED CRs (Ericsson)**

Scope: Treat and progress based on R2-2001670, Need to coordinate with NR pos CR to avoid clashes.
Intended outcome: agreed CRs 38300 38331
CLOSED

R2-2002227 On-demand SIB in CONNECTED Functionality Ericsson discussion Rel-16 NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core
=> Revised in R2-2002343

R2-2002343 On-demand SIB in CONNECTED Functionality Ericsson discussion Rel-16 NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core

R2-2000878 Open issues list for on-demand SIB Ericsson discussion Rel-16 NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core

R2-2000228 Remaining Issues of On Demand SI Procedure in RRC Connected Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core

R2-2000478 Remaining open issues on on-demand request in Connected mode Intel discussion Rel-16 TEI16

R2-2000500 On-demand SI support for EN-DC SCG vivo discussion

R2-2000607 Discussion on open issues in On Demand SI Apple discussion Rel-16 NR_newRAT-Core

R2-2000667 Remaining issues on on-demand SI in connected ZTE Corporation, Sanechips discussion Rel-16

R2-2000972 Discussion on SI request enhancement for Connected UEs Huawei, HiSilicon discussion Rel-16

R2-2001154 Discussion on open issues of on-demand SI procedure in connected Mobility Lenovo, Motorola discussion Rel-16 TEI16

R2-2001522 Resolving open issues for on-demand SI LG Electronics France discussion

6.22 Physical layer enhancements for NR ultra-reliable and low latency case (URLLC)

(NR_L1enh_URLLC-Core; leading WG: RAN1; REL-16; target; Mar 20; WID: RP-191584). Treated together with IIOT, AI 6.7. UL intra-UE prioritization and enhanced UL CG transmission should be discussed and addressed under RAN2 IIOT WI (do not submit under this AI), while the other objectives should be discussed under RAN2 eURLLC WI. This AI.

Time budget: 1 TU, will be treated together with IIOT.
Tdoc Limitation: 3 tdocs (for AI 6.22, or for 6.7 in addition to the tdoc limitation listed for 6.7)

6.22.1 Organizational

Running CRs etc
Including outcome of the email discussion [108#112][URLLC] RRC running CR (Huawei)

LSin

R2-2000020 Response LS on LCP Restriction for Dynamic Grant (R1-1913591; contact: Qualcomm) RAN1 LS in Rel-16 NR_L1enh_URLLC-Core To:RAN2

⇒ **Noted wo pres**

By Email

RRC CR – email disc 108#112
Input status – CR need to be endorsed.

R2-2001356 Report of [108#112][URLLC] RRC running CR Huawei, HiSilicon discussion Rel-16 NR_L1enh_URLLC-Core

R2-2001357 Running 38.331 CR for NR_L1enh_URLLC Huawei, HiSilicon CR Rel-16
38.331 15.8.0 1487 - B NR_L1enh_URLLC-Core
- Part 1 of the email discussion is to endorse the CR.

⇒ **[AT109e][060][URLLC] The running CR in R2-2001357 is endorsed.**
=> Revised in R2-2002313

R2-2002313 Running 38.331 CR for NR_L1enh_URLLC Huawei, HiSilicon CR Rel-16
38.331 15.8.0 1487 1 B NR_L1enh_URLLC-Core

⇒ **[AT109e][060][URLLC] Agreed**

✉ **[AT109e][060][URLLC] RRC CR (Huawei)**
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

MAC CR
Input Status – Endorsed R2#108

R2-2001358 Running 38.321 CR for NR_L1enh_URLLC Huawei, HiSilicon CR Rel-16
38.321 15.8.0 0695 - B NR_L1enh_URLLC-Core
=> Revised in R2-2002314

R2-2002314 Running 38.321 CR for NR_L1enh_URLLC Huawei, HiSilicon CR Rel-16
38.321 15.8.0 0695 1 B NR_L1enh_URLLC-Core

⇒ **[AT109e][061][URLLC] Agreed**

✉ **[AT109e][061][URLLC] MAC CR (Huawei)**
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

Stage-2 38300 CR
Input Status – nothing agreed yet

R2-2001359 Running 38.300 CR for NR_L1enh_URLLC Huawei, HiSilicon CR Rel-16
38.300 16.0.0 0200 - B NR_L1enh_URLLC-Core
=> Revised in R2-2002315

R2-2002315 Running 38.300 CR for NR_L1enh_URLLC Huawei, HiSilicon CR Rel-16
38.300 16.0.0 0200 1 B NR_L1enh_URLLC-Core

⇒ **[AT109e][062][URLLC] Agreed**

✉ **[AT109e][062][URLLC] Stage-2 38300 CR (Huawei)**
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

6.22.2 Control Plane

By Web Conf

Moved from 6.4, V2X Uu is treated with URLLC

R2-2000032 Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (R3-197775; contact: Nokia) RAN3 LS in Rel-16 eV2XARC To:SA2 Cc:RAN2

⇒ **Noted**

R2-2000571 Notification for Alternative QoS profiles Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core

- Ericsson agrees with Nokia, but the LS should be slightly modified and say this shall be used only when needed.
- QC think this is not R2 scope. Huawei agrees.
- Chair wonder if the issue is overhead. Nokia think yes and a problem is that notifications are sent also in bad coverage.
- Vodafone indeed think that this QoS negotiation can happen in bad coverage.

⇒ **Noted**

R2-2000572 Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point Nokia LS out Rel-16 5G_V2X_NRSL-Core To:SA2 Cc:RAN3

Not to be treated

R2-2001360 Discussion on UE feature list for URLLC Huawei, HiSilicon discussion Rel-16 NR_L1enh_URLLC-Core

6.22.3 User Plane

By Email

L2 parameter ranges

R2-2000780 PDCP discard timer with 0.5ms Fujitsu discussion Rel-16 NR_L1enh_URLLC-Core

R2-2000800 PDCP discard timers Ericsson discussion NR_L1enh_URLLC-Core

R2-2001332 New values for RLC and PDCP timers- Open issue and capabilities Qualcomm Incorporated discussion

R2-2001361 On Layer 2 parameter values to support delay critical GBR QoS flows Huawei, HiSilicon discussion Rel-16 NR_L1enh_URLLC-Core

✉ **[AT109e][063][URLLC] L2 Parameters (Huawei)**
Intended outcome: Treat the R2-2000780, R2-2000800, R2-2001332, R2-2001361, resolve issues, if any. Find OIs, if any.
CLOSED

R2-2002140 Summary of [AT109e][063][URLLC] L2 Parameters etc (Huawei) (email disc rapporteur) Huawei, HiSilicon

⇒ **[AT109e][063][URLLC] Noted**

Agreements [AT109e][063][URLLC]

⇒ **In Rel-16 NR, allow the value of 0.5 ms for the PDCP discard timer in URLLC WI.**

⇒ **In Rel-16 NR, do not introduce additional values of bucket size duration in URLLC WI.**

⇒ **In Rel-16 NR, do not introduce additional values of logical channel priority in URLLC WI.**

⇒ **In Rel-16 NR, additional values of PDCP discard timer is optional with a separate UE capability signalling.**

⇒ **In Rel-16 NR, additional values of RLC T-StatusProhibit timer is optional with a separate UE capability signalling.**

⇒ **In Rel-16 NR, additional values of RLC T-PollRetransmit timer is optional with a separate UE capability signalling.**

MAC CE

R2-2000799 on MAC CE design for eURLLC Ericsson discussion NR_L1enh_URLLC-Core

⇒ **noted**

✉ **[AT109e][064][URLLC] MAC CEs (Ericsson)**
Intended outcome: Treat R2-2000799, resolve issues, if any. Find OIs, if any.
CLOSED

R2-2002295 Summary on [AT109e][064][URLLC] MAC CEs (Ericsson) Ericsson discussion Rel-16 NR_L1enh_URLLC-Core

⇒ **[AT109e][064][URLLC] noted**

Agreements [AT109e][064][URLLC]

⇒ **Re-use one reserved bit in Rel-15 Aperiodic CSI Trigger State Subselection MAC CE to indicate one of the two lists for CSI aperiodic trigger state.**

⇒ **Both PUCCH spatial relation lists can be in-use simultaneously in Rel-16, and Rel-15 MAC CE cannot distinguish which list the MAC CE refers to.**

⇒ **Wait for RAN1 inputs on the maximum number of PUCCH resource per BWP when two HARQ-ACK codebooks are configured.**

⇒ **RAN2 to jointly design PUCCH spatial relation activation/de-activation MAC CE for Rel-16 eURLLC WI and Rel-16 eMIMO WI, if both are identified to be needed.**

By Web Conf

R2-2001485 Enhancement to PHR timeline with URLLC Qualcomm Inc discussion Rel-16
- MTK think the scenario existed already in R15, why didn't we do that then.
- LG think there is no problem to resolve in MAC and this is just an optimization.
- Lenovo also think this is not needed
- Apple support this proposal.

Chair: not sufficient support.

⇒ **noted**

Not to be treated

R2-2001567 Enhancements of SR cancellation for URLLC traffic LG Electronics Inc. discussion Rel-16 NR_L1enh_URLLC-Core R2-1915923

R2-2001362 On handling of URLLC traffic during measurement gaps in uplink Huawei, HiSilicon discussion Rel-16 NR_L1enh_URLLC-Core

7 Rel-16 LTE Work Items

Documents in these agenda items will be handled in break out sessions

7.1 Additional MTC enhancements for LTE

(LTE_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-191356)
Time budget: 2.5 TU
Documents in this agenda item will be handled in a break out session
Some sub-items in 7.1 and 7.2 may be treated jointly.

7.1.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

R2-2000056 LS on category M devices and NR (S2-1912608; contact: Qualcomm) SA2 LS in Rel-16 5G_CIoT To:RAN2

⇒ **Noted.**

R2-2000094 Reply LS on direct indication of ETWS/CMAS (R1-1913367; contact: Futurewei) RAN1 LS in Rel-16 LTE_eMTC5-Core To:RAN2

⇒ **Noted**

R2-2000387 RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC Document Rapporteur (BlackBerry) WI summary Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

⇒ **Noted**

✉ **[109e#xx] [NB-IoT/eMTC R16] Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and eMTC (Blackberry)**
Scope: Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and eMTC
Intended outcome: endorsed document in R2-2001886
Deadline: 1 week

R2-2001470 Report from eMTC/NB-IoT RRC CR coordination telco Ericsson discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

⇒ **Noted**

R2-2002211 Reply LS on extended NAS timers for CE in 5GS (C1-200717; contact: Ericsson) CT1 LS in Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core, 5G_CIoT To:RAN2 Cc:RAN3, SA2

⇒ **Noted**

R2-2002214 LS on suspend indication to the NAS (C1-201040; contact: Samsung) CT1 LS in Rel-16 5G_CIoT To:RAN2 Cc:SA2

⇒ **Noted**

Running CRs

R2-2001097 Introduction of Rel-16 eMTC enhancements Intel Corporation CR Rel-16 36.300 16.0.0 1267 - B LTE_eMTC5-Core

✉ **[AT109e][403][eMTC] Update 36.300 running CR (Intel)**
Scope: Update 36.300 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001868
Deadline: Friday, Mar 6th 12:00 CET

R2-2001868 Introduction of Rel-16 eMTC enhancements Intel Corporation CR Rel-16 36.300 16.0.0 1267 1 B LTE_eMTC5-Core

[Offline discussion #403] Comeback in the main session
=> Agreed

R2-2000501 Addressing Editor's Notes in 36.302 running CR for eMTC ZTE Corporation, Sanechips discussion Rel-16 36.302 LTE_eMTC5-Core

R2-2001213 Running 36.302 CR for R16 eMTC ZTE Corporation, Sanechips draftCR Rel-16 36.302 15.2.0 LTE_eMTC5-Core Late

✉ **[AT109e][404][eMTC] Update 36.302 running CR (ZTE)**
Scope: Update 36.302 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001869
Deadline: Friday, Mar 6th 12:00 CET

R2-2001869 Introduction of additional enhancements for R16 eMTC ZTE Corporation, Sanechips CR Rel-16 36.302 15.2.0 1203 - B LTE_eMTC5-Core

[Offline discussion #404] Comeback in the main session

=> Coversheet update by MCC: Revision = 1

R2-2001900 Introduction of additional enhancements for R16 eMTC ZTE Corporation, Sanechips CR Rel-16 36.302 15.2.0 1203 1 B LTE_eMTC5-Core
=> **Agreed**

R2-2000558 Rapporteur Summary :Discussion on cell selection for non-BL UE Nokia, Nokia Shanghai Bell discussion

R2-2001167 Introduction of Rel-16 eMTC enhancements Nokia CR Rel-16 36.304 15.5.0 0781 - B LTE_eMTC5-Core

✉ **[AT109e][405][eMTC] Update 36.304 running CR (Nokia)**
Scope: Update 36.304 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001870
Deadline: Friday, Mar 6th 12:00 CET

R2-2001870 Introduction of Rel-16 eMTC enhancements Nokia CR Rel-16 36.304 15.5.0 0781 1 B LTE_eMTC5-Core

[Offline discussion #405] Comeback in the main session
=> Agreed

R2-2001066 Open issues on the 36.306 running CR for eMTC Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core

R2-2001065 Introduction of additional enhancements for eMTC Huawei, HiSilicon CR Rel-16 36.306 15.7.0 1735 - B LTE_eMTC5-Core

✉ **[AT109e][406][eMTC] Update 36.306 running CR (Huawei)**
Scope: Update 36.306 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001871
Deadline: Friday, Mar 6th 12:00 CET

R2-2001871 Introduction of additional enhancements for eMTC Huawei CR Rel-16 36.306 15.7.0 1735 1 B LTE_eMTC5-Core

[Offline discussion #406] Comeback in the main session
=> Agreed

✉ **[109e#xx] [eMTC R16] 36.306 CR (Huawei)**
Scope: Capture the agreements from this meeting
Intended outcome: endorsed CR in R2-2001890
Deadline: next meeting

R2-2000976 Running CR on 36.321 for eMTC Ericsson CR Rel-16 36.321 15.8.0 1465 - B LTE_eMTC5-Core

✉ **[AT109e][407][eMTC] Update 36.321 running CR (Ericsson)**
Scope: Update 36.321 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001872
Deadline: Friday, Mar 6th 12:00 CET

R2-2001872 Running CR on 36.321 for eMTC Ericsson CR Rel-16 36.321 15.8.0 1465 1 B LTE_eMTC5-Core

[Offline discussion #407] Comeback in the main session
=> Agreed

R2-2000433 Introduction of Rel-16 eMTC enhancements Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4191 - B LTE_eMTC5-Core R2-1916364

[AT109e][408][eMTC] Update 36.331 running CR (Qualcomm)
Scope: Update 36.331 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001873
Deadline: Friday, Mar 6th 12:00 CET

R2-2001873 Introduction of Rel-16 eMTC enhancements Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4191 1 B LTE_eMTC5-Core

[Offline discussion #408] Comeback in the main session
=> Agreed

R2-2000305 Introduction of additional enhancements for eMTC Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0175 3 B LTE_eMTC5-Core R2-1916363

[AT109e][409][eMTC] Update 38.300 running CR (Qualcomm)
Scope: Update 38.300 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001892
Deadline: Friday, Mar 6th 12:00 CET
=> Agreed in R2-2000305

R2-2001892 Introduction of additional enhancements for eMTC Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0175 4 B LTE_eMTC5-Core

[Offline discussion #409] Comeback in the main session

7.1.2 Mobile-terminated (MT) early data transmission (EDT)

MT Early Data transmission for MTC and NB-IoT is treated jointly under this AI.
This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on the submitted tdocs). This may lead to postponing some items to the next meeting. A web conference may be used for handling some of the discussions in this AI.

R2-2001861 Summary of contributions on mobile-terminated (MT) early data transmission (EDT) BlackBerry UK Limited discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal: UE category information, i.e., Cat-M2 (Cat-NB2 for NB-IoT) is provided in the UE Radio Paging information container.

Proposal: Discuss the different alternative solutions based on e.g. the list below (which may not be exhaustive) and agree on a way forward.

Solution 1 Make MT-EDT (for Control Plane and User Plane) apply to FDD only for Rel-16 NB-IoT and eMTC.

Solution 2 Allow a Rel-16 TDD UE to support MO-EDT (for Control Plane and User Plane).

Solution 3 Make in the Rel-16, MT-EDT and MO-EDT (for CP and UP) apply to:

FDD only for NB-IoT;

FDD and TDD for eMTC.

Proposal: For MT-EDT for the user plane CIoT optimisation, lower layers are not configured for EDT.

Proposal: In 5.3.2.3, clarify that the mt-EDT is the one included in the UE's paging record.

Proposal: If MSG4 sizes for MT-EDT based on the UE category is allowed, it should be clarified in the specification.

- Huawei wonders what the use would be with the proposal to add UE category information in the paging information container. Qualcomm explained that it would be beneficial to know to compare with the size of the message. Huawei thinks the configuration would be the default configuration and thus it may not work for a message with a larger size, i.e., that is suitable for a Cat-M2 or Cat-NB2 UE.

R2-2000179 Cat. M2/NB2 indication in UERadioPagingInformation Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh4_LTE_eMTC6-Core

R2-2000397 Support of MT-EDT CIoT EPS optimisation (for CP and UP) BlackBerry UK Limited discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2001197 Remaining FFSs for MT-EDT ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

✉ **[AT109e][411][eMTC/NB-IoT] MT-EDT: Open issues (Huawei)**
Scope: Further discussion to address the remaining issues and identify potential agreements.
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001876
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001876 MT-EDT: Open issues Huawei discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal P1-1: Capture in stage 2 that the eNB uses the UE category included in the S1 paging message to trigger MT-EDT for message size beyond cat M1/NB1.
Proposal P2-1: In RRC section 5.3.3.3a, for UP MT-EDT, lower layers are not configured for EDT.

- QC thinks this proposal has already been captured in the latest version of 36.331.

Proposal P3-1: In RRC section 5.3.2.3, clarify that the mt-EDT is the one included in the UE's paging record. Wording to be discussed with running RRC CRs.

Agreements

- UE category information, i.e., Cat-M2 (Cat-NB2 for NB-IoT), is provided in the UE Radio Paging information container. FFS how the use of UE category information is captured in the specifications.
- Capture in stage 2 that the eNB uses the UE category included in the S1 paging message to trigger MT-EDT for message size beyond Cat M1/NB1.
- In RRC section 5.3.3.3a, for UP MT-EDT, lower layers are not configured for EDT.
- In RRC section 5.3.2.3, clarify that the mt-EDT is the one included in the UE's paging record.

7.1.3 UE-group wake-up signal (WUS)

UE-group wake-up signal (WUS) for MTC is treated jointly with NB-IoT under AI 7.2.3. Do not use this AI for any item that can be discussed jointly.

7.1.4 Transmission in preconfigured resources

Transmission in preconfigured resources for MTC is treated jointly with NB-IoT under AI 7.2.4. Do not use this AI for any item that can be discussed jointly.

7.1.5 Scheduling multiple DL/UL transport blocks

Scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast

Scheduling multiple DL/UL transport blocks for MTC and NB-IoT is treated jointly under this AI.

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on the submitted tdocs). This may lead to postponing some items to the next meeting. A web conference may be used for handling some of the discussions in this AI.

R2-2001862 Summary of contributions on scheduling multiple Dl/UL transport blocks Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

Proposal 1	For LTE-M the length of HARQ RTT timer is set to 7+k*N for bundled HARQ ACK, where k is equal to the number of HARQ ACK bundles.
Proposal 2	Remove Editor's note from RAN2 agreements document and clarify which agreements related to HARQ RTT timer length are for non-interleaved NB-IoT case.
Proposal 3	For unicast, multiple TBs scheduling is enabled separately for uplink and downlink for both LTE-M and NB-IoT.
Proposal 4	Discuss over email the details of unicast configuration for scheduling multiple TBs for 1) NB-IoT and 2) LTE-M.
Proposal 5	Explicit enabling indication for multiple TBs scheduling in SC-PTM is not needed.
Proposal 6	Discuss over email whether scheduling gap configuration is in SC-MTCH or in SIB20(-NB) for 1) NB-IoT and 2) LTE-M with details of configuration to be captured.
Proposal 7	For NB-IoT, support of multiTB-UL-r16 and multiTB-DL-r16 is conditional on support of two HARQ processes.
Proposal 8	For NB-IoT, introduce separate capabilities multiTB-UL-Interleaving-r16, and multiTB-DL-Interleaving-r16 conditional to support of multiTB-UL-r16 and multiTB-DL-r16 respectively.
Proposal 9	For NB-IoT, introduce a new capability multiTB-HARQ-ACK-Bundling-r16, conditional to support of multiTB-DL-Interleaving-r16.
Proposal 10	Discuss whether multiple TBs scheduling in multicast is optional without capability reporting.
Proposal 11	Postpone discussion or discuss over email whether drx-InactivityTimer for LTE-M needs changes when scheduling multiple TBs.

⇒ **Proposals 8 and 9 are to be discussed within the context of RAN1 feature list, i.e. once finalized, those will be captured in RAN2 specifications.**

R2-2000395 HARQ RTT Timers in Rel-16 NB-IoT BlackBerry UK Limited discussion Rel-16 NB_IOTenh3-Core

R2-2000644 Signalling aspect of multiple TBs scheduling for NB-IoT Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2000977 Scheduling enhancements for LTE-M and NB-IoT Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2002027 Summary of Scheduling multiple DL/UL transmission blocks Ericsson discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core
=> Withdrawn

✉ **[AT109e][412][eMTC/NB-IoT] Scheduling multiple TBs: Open issues (Ericsson)**
Scope: Further discussion on proposals 3, 4, 6, and 10 and identify potential agreements
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001877
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001877 Summary of contributions on scheduling multiple Dl/UL transport blocks discussion NB_IOTenh3-Core, LTE_eMTC5-Core Ericsson

Proposal 1 For unicast, multiple TBs scheduling is enabled separately for uplink and downlink for both LTE-M and NB-IoT.
Proposal 2 Capture TP for MultiTB-Config-NB in [2] in the running RRC CR for NB-IoT.
Proposal 3 RAN2 to further discuss whether scheduling gap configuration is in SCPTMConfiguration(-NB) (SC-MCCH) or in SIB20(-NB).
- Rapporteur thinks further discussion is needed.

Proposal 4 Multiple TBs scheduling in multicast is optional without capability reporting.

Agreements

- For LTE-M, the length of HARQ RTT timer is set to 7+k*N for bundled HARQ ACK, where k is equal to the number of HARQ ACK bundles.
- Remove Editor's note from the document that captures RAN2 agreements and clarify that those agreements are for non-interleaved NB-IoT case.
- Capture the following RAN1 agreement in RAN2 specifications: “For NB-IoT, support of multiTB-UL-r16 and multiTB-DL-r16 is conditional on support of two HARQ processes.”’
- For LTE-M and NB-IoT, multiple TBs scheduling is enabled separately for uplink and downlink for unicast.
- Capture TP for MultiTB-Config-NB in [2] in the running RRC CR for NB-IoT.
- For LTE-M and NB-IoT, multiple TBs scheduling in multicast is optional without capability reporting.
- For LTE-M and NB-IoT, the configuration for scheduling gap is in SCPTMConfiguration(-NB) (SC-MCCH).

7.1.6 Quality report in Msg3

Including outcome of the email discussion [108#72][eMTC] To finalize the 2 bit Quality report (Qualcomm)
A web conference or an offline discussion may be used for handling the outcome of the email discussion in this AI.

R2-2000309 Report of Email Discussion 108#72 To finalize the 2 bit Quality report Qualcomm Incorporated report

Proposal 1: RAN2 should support 2-bit CQI report in MSG3.
Proposal 2: Support the optimal and less restrictive solution (i.e. using R and F2 bits) to send 2-bit CQI in MSG3.

R2-2001863 Summary of contributions on quality report in Msg3 Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core

Proposal 1: Discuss the email report and if agreement on solution 1 then endorse proposal [2]. P2.
Proposal 2: [FFS] a configuration where 2-bit report is enabled and 4-bit report is disabled is not allowed.

Proposal 3: Quality Report trigger in Connected Mode for eMTC is the same MAC CE as agreed for NB-IoT.

Proposal 4: CQI reporting in MSG3 is configured per CE Level.

R2-2000310 Text proposal for 2-bit downlink channel quality reporting in MSG3 for eMTC Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core

R2-2001069 Remaining issue of DL quality report Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core

R2-2001235 Quality Report in eMTC Remaining Issues Ericsson discussion Rel-16

✉ **[AT109e][413][eMTC] Quality report: Open issues (Qualcomm)**
Scope: Further discussion on proposal 2 from R2-2000309 and proposals 2 and 4 from R2-2001863 and 10 and identify potential agreements
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001878
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001878 Report of Email Discussion 109e[413][eMTC] Quality report: Open issues Qualcomm Incorporated report

Proposal 1: Majority support solution 1.
- Ericsson still prefers not to have 2 bit CQI reporting but has sympathy with Huawei proposal.
- QC thinks option 1 is more flexible considering the freedom to use any LCID. Huawei disagrees.

Proposal 2: When 2-bit CQI reporting enabled in MSG3 then 8-bit reporting shall also be enabled.
Proposal 3: Majority do not support on per CE level enable/disable for CQI reporting.

Agreements

- RAN2 confirms that 2-bit CQI report in MSG3 is supported.
- Quality Report trigger in Connected Mode for eMTC is the same MAC CE as agreed for NB-IoT.
- When 2-bit CQI reporting enabled in MSG3 then 8-bit reporting shall also be enabled.
- Separate flags are not required to enable/disable CQI reporting per CE level.

7.1.7 MPDCCH performance improvement using CRS

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on the submitted tdocs). This may lead to postponing some items to the next meeting. A web conference may be used for handling some of the discussions in this AI.

R2-2000978 Stage-3 details for MPDCCH performance improvement Ericsson discussion LTE_eMTC5-Core

Proposal 1 When transmitted in SIB2, CRS-ChEstMPDCCH-Config contains the power-ratio applied in RRC_IDLE and in RRC_CONNECTED.

Proposal 2 When transmitted in RadioResourceConfigDedicated, CRS-ChEstMPDCCH-Config contains the CRS localized mapping type applied in RRC_CONNECTED.

Proposal 3 Capture the text proposal in Section 2.2.

✉ **[AT109e][414][eMTC] MPDCCH performance imp: Open issues (Qualcomm)**
Scope: Further discussion on proposals 1 and 2 and identify potential agreements

Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001879
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001879 Report of [AT109e][414][eMTC] MPDCCH performance imp: Open issues discussion Qualcomm LTE_eMTC5-Core

Proposal 1	Power ratio can be included in dedicated signalling (in addition to SIB2).
Proposal 2	Localized mapping type is possible to be included only in dedicated signalling. Value “predefined” is DEFAULT.
Proposal 3	It should be possible to enable the feature for IDLE mode UEs but disable in CONNECTED mode.
Proposal 4	TP1 (with separate IEs CRS-ChEstMPDCCH-ConfigCommon-r16 and CRS-ChEstMPDCCH-ConfigDedicated-r16) is baseline for running CR.

Agreements

- Power ratio can be included in dedicated signalling (in addition to SIB2).
- Localized mapping type is possible to be included only in dedicated signalling. Value “predefined” is DEFAULT.
- It should be possible to enable the feature for IDLE mode UEs but disable in CONNECTED mode.
- TP1 in R2-2001879 (with separate IEs CRS-ChEstMPDCCH-ConfigCommon-r16 and CRS-ChEstMPDCCH-ConfigDedicated-r16) is baseline for running CR.

7.1.8 Improvements for non-BL UEs

CE mode A and B improvements for non-BL UEs among “enhancements to idle mode mobility”, “UE demodulation performance requirements for 2 RX antennas and full duplex FDD”, “Dual layer DL reception”, “Feedback based on CSI-RS”, “ETWS/CMAS in connected mode”

No documents should be submitted to AI 7.1.8. Please submit the documents to AI 7.1.8.x

7.1.8.1 Idle Mode Mobility

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on submitted tdocs). This may lead to postponing some items to the next meeting. A web conference may be used for handling some of the discussions in this AI.

R2-2001864 Summary of contributions on idle mode mobility Intel Corporation discussion Rel-16 LTE_eMTC5-Core

Proposal 1: Rel-16 non-BL UE is allowed to camp in a cell (non-standalone case) in enhanced coverage when S-criterion for normal coverage is fulfilled only if indicated by the network via broadcast signaling (FFS on whether the presence or absence of the broadcast indication enables the feature).

Proposal 2: If proposal 1 is agreed, FFS on whether the new broadcast indication described in proposal 1 is (a) applicable only for non-BL UE entering (i.e. (re)selecting) the cell or (b) all non-BL UEs in the cell.

Proposal 3: If proposal 1 is agreed, FFS on whether priority based cell reselection rather than ranking should be applied for non-BL UEs using enhanced coverage when S criteria for normal coverage is fulfilled.

R2-2000251 Clarification to idle mode mobility for non-BL UEs THALES discussion

R2-2000979 S-Criterion interpretation for non-BL UEs Ericsson discussion LTE_eMTC5-Core

R2-2001067 Enhancements to idle mode mobility for non-BL UEs Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core

R2-2001098 Non-BL UE in normal and enhanced coverage Intel Corporation discussion Rel-16 LTE_eMTC5-Core

✉ **[AT109e][415][eMTC] Idle Mode Mobility: Open issues (Intel)**
Scope: Further discussion on proposals 1, 2, and 3, and identify potential agreements
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001880
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001880 Email discussion of Idle mode mobility for non-BL UE Intel Corporation discussion Rel-16 LTE_eMTC5-Core

Proposal#1: RAN2 is requested to choose between the following 2 alternatives:

- Alternative 1: Rel-16 specification is not updated to capture whether the Rel-16 non-BL UE are allowed or not to camp in a cell (non-standalone case) on enhanced coverage mode when S criteria for normal coverage is fulfilled (i.e. UE's behavior is left up to UE implementation as for legacy non-BL UEs).
- Alternative 2: A Rel-16 UE is allowed to camp in a cell (non-standalone case) on enhanced coverage mode when S criteria for normal coverage is fulfilled. Network control is needed.

Proposal#2: Postpone the following proposals to the next meeting if Proposal 1 Alternative 2 is agreed:

- Proposal A: The network may indicate whether the fulfillment of the S-criterion for CE mode is required for all non-BL devices or whether it only applies for the non-BL UEs trying to newly camp (select or re-select) to said cell.
- Proposal B: Absolute priority rather than ranking applies for non-BL UEs using enhanced coverage when S criteria for normal coverage is fulfilled.

⇒ **No consensus on any of the alternatives.**

7.1.8.2 ETWS/CMAS in connected mode

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on submitted tdocs). This may lead to postponing some items to the next meeting. A web conference may be used for handling some of the discussions in this AI.

7.1.9 Stand-alone deployment

Enable the use of LTE control channel region for DL transmission (MPDCCH/PDSCH) to BL/CE UEs

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on the submitted tdocs). This may lead to postponing some items to the next meeting. A web conference may be used for handling some of the discussions in this AI.

R2-2001865 Summary of contributions on stand-alone deployment Nokia, Nokia Shanghai Bell discussion LTE_eMTC5-Core

Proposal 1: RAN1 further discuss and agree on the final word for running CR text relevant for cell selection behaviour in standalone cell.

Proposal 2: RAN2 further discuss and conclude whether additional changes needed related to cell reselection behaviour for non BL UE from /to standalone cell.

Proposal 3: (Potential RAN2 agreement): In standalone deployment, if a UE considers itself to be in enhanced coverage with S criteria of normal coverage fulfilled, absolute priorities for cell reselection are used (i.e. UE does not switch to ranking as it would when in enhanced coverage due to S-criteria).

Proposal 4: RAN2 further discuss on proposal 1 of [4] related to changes to be captured for TS36.304

- Nokia supports proposal 3.

R2-2000980 Cell Reselection improvement for LTE-M Standalone cells Ericsson discussion LTE_eMTC5-Core R2-1915401

R2-2001070 Remaining issue on standalone deployment Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core

R2-2001127 Remaining details for standalone LTE-M deployment Ericsson discussion LTE_eMTC5-Core Late

✉ **[AT109e][416][eMTC] Stand-alone deployment: Open issues (Nokia)**
Scope: Further discussion to address the remaining issues and identify potential agreements.
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001881
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001881 Standalone deployments – Discussion on remaining Issues Nokia, Nokia Shanghai Bell discussion LTE_eMTC5-Core

Proposal 1	The verb in [] in the text proposal of running CR should be changed to “shall”
Proposal 2	In standalone deployment, if a UE considers itself to be in enhanced coverage with S criteria of normal coverage fulfilled, absolute priorities for cell reselection are used (i.e. UE does not switch to ranking as it would when in enhanced coverage due to S-criteria).
Proposal 3	P1 from [3] and P1 from [4] are not agreed.

Agreements

- In standalone deployment, if a UE considers itself to be in enhanced coverage with S criteria of normal coverage fulfilled, absolute priorities for cell reselection are used (i.e. UE does not switch to ranking as it would when in enhanced coverage due to S-criteria).

7.1.10 Mobility Enhancements

Improving the DL RSRP and, RSRQ measurement accuracy, through use of RSS, relaxation of RRM measurements for serving cell for UEs using WUS for at least low mobility UEs

Including outcome of the email discussion [108#73][eMTC] TPs for RSS (Ericsson)

A web conference or an offline discussion may be used for handling the outcome of the email discussion in this AI.

R2-2001242 Summary of [108#73] [eMTC] TPs for RSS (Ericsson) Ericsson discussion Rel-16

- QC thinks further check is needed for the connected mode case due to the ongoing RAN1 discussion. Ericsson confirms.

✉ **[AT109e][417][eMTC] Mobility enhancements: Open issues (Ericsson)**
Scope: Further discussion to address the remaining issues and identify potential agreements.
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001882
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001882 TPs for RSS Ericsson discussion Rel-16

⇒ **We will have an email discussion after the meeting to finalize the TP.**

✉ **[109e#xx] [eMTC R16] TP for RSS (Ericsson)**
Scope: Finalize the text proposal for RSS
Intended outcome: endorsed document in R2-2001887
Deadline: 1 week

7.1.11 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of MTC with NR
This AI may not be treated during the e-meeting (decision to be made based on the submitted tdocs).

R2-2002024 Summary of Coexistence with NR ZTE discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

For NB-IoT:

Potential easy agreements:

Proposal 1-1: For NB-IoT, resource reservation configuration for NR coexistence is only provided via dedicated RRC signalling.

Proposal 1-2: For NB-IoT, resource reservation configuration for NR coexistence is provided in PhysicalConfigDedicated-NB.

Proposal 1-4: For FDD, two new Rel-16 IEs for DL and UL resource reservation configuration can be introduced.

Proposal 1-8: Introduce two UE capabilities nr-ResourceResvUL-r16 and nr-ResourceResvDL-r16 in PhyLayerParameters-NB-v16xy.

Might need further discussion:

Proposal 1-3: RAN2 needs to discuss where to define new Rel-16 IE (s) for providing resource reservation configuration, in PhysicalConfigDedicated-NB or in the extension of CarrierConfigDedicated-NB in PhysicalConfigDedicated-NB.

Proposal 1-5: For TDD, RAN2 needs to discuss whether two Rel-16 IEs for DL and UL resource reservation configuration need to be introduced for TDD. And whether DL and UL resource reservation configuration for FDD can be reused for TDD.

Proposal 1-6: RAN2 needs to choose one from the following alternatives for new IE structure:

Alt1: Separate and independent IE structures for providing FDD UL and FDD DL resource reservation configuration, moreover, same ASN.1 structure as for FDD UL can be used for TDD DL/UL (proposal in [7]) .

Alt2: Only one IE structure for providing FDD UL, FDD DL and TDD DL/UL resource reservation configuration. In the structure, only the symbol-level configuration parameter is differentiated for DL and UL (Option A in [8]).

Alt3: Separate and independent IE structures for providing UL and DL resource reservation configuration, for both TDD and FDD (Option B in [8]).

Proposal 1-7: RAN2 needs to discuss whether it needs to explicitly indicate the dependence between the value of Periodicity and value range of startPosition.

Proposal 1-9: RAN2 needs to discuss whether to introduce two additional UE capabilities for TDD. If not, whether the above UE capabilities in Proposal 1-8 can be applied to both FDD and TDD.

Proposal 1-10: Introduce two new items nr-ResourceResvUL-r16 and nr-ResourceResvDL-r16 in 36.306. RAN2 needs to discuss whether they are capabilities or IOT bits.

For eMTC:

Potential easy agreements:

Proposal 2-1: For eMTC, configurations related to resource reservation and DL subcarrier puncturing for NR coexistence are provided via dedicated RRC signalling.

Proposal 2-2: The configurations related to resource reservation and DL subcarrier puncturing for NR coexistence can be provided in PhysicalConfigDedicated.

Proposal 2-3: For FDD, two new IEs for separate and independent UL and DL resource reservation configuration can be introduced.

Proposal 2-5: A same IE structure, e.g., NR-ResourceReservationConfig-r16 can be defined for UL and DL resource reservation configuration, for both TDD and FDD.

Proposal 2-6: Separate configuration for DL subcarrier puncturing can be introduced for both FDD and TDD, e.g., ce-NR-PuncturedSubcarrierDL-r16 in PhysicalConfigDedicated.

Proposal 2-7: Introduce four UE capabilities for resource reservation in UL and DL, e.g., ce-ModeA-NR-ResourceResvUL-r16, ce-ModeA-NR-ResourceResvDL-r16, ce-ModeB-NR-ResourceResvUL-r16 and ce-ModeB-NR-ResourceResvDL-r16.

Proposal 2-8: Introduce two UE capabilities for DL subcarrier puncturing, e.g., ce-ModeA-NR-SubcarrierPuncturing-r16, and ce-ModeB-NR-SubcarrierPuncturing-r16.

Might need further discussion:

Proposal 2-4: For TDD, RAN2 needs to discuss whether two Rel-16 IEs for DL and UL resource reservation configuration need to be introduced. And whether DL and UL resource reservation configuration for FDD can be reused for TDD.

Proposal 2-9: RAN2 needs discuss whether two separate UE capability IEs for TDD and FDD need to be introduced.

Proposal 2-10: Introduce six new items ce-DL-resourceReservation-CE-ModeA-r16, ce-DL-resourceReservation-CE-ModeB-r16, ce-UL-resourceReservation-CE-ModeA-r16, ce-UL-resourceReservation-CE-ModeB-r16, ce-DL-subcarrierPuncturing CE-ModeA -r16 and ce-DL-subcarrierPuncturing CE-ModeB -r16 in 36.306. RAN2 needs to discuss whether they are capabilities or IOT bits.

- Huawei, Ericsson, Nokia, and ZTE think that dedicated RRC signalling is acceptable whereas QC thinks that this will not be efficient since ~200 bits need to be transmitted everytime UE is in connected mode.

⇒ **The discussion will continue in [AT109e][418][eMTC/NB-IoT].**

R2-2000981	LTE-M coexistence with NR => Revised in R2-2002062	Ericsson	discussion	LTE_eMTC5-Core
R2-2002062	LTE-M coexistence with NR	Ericsson	discussion	LTE_eMTC5-Core
R2-2001068	Coexistence with NR for eMTC	Huawei, HiSilicon	discussion	Rel-16 LTE_eMTC5-Core

✉ **[AT109e][418][eMTC/NB-IoT] Coexistence with NR: Open Issues (ZTE)**
Scope: Further discussion to address the remaining issues and identify potential agreements.
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001883
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001883	Summary of Coexistence with NR	ZTE	discussion	Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Potential easy agreements:
For NB-IoT:

Proposal 1-1: Resource reservation configuration for NR coexistence is only provided via dedicated RRC signalling.
Proposal 1-2: Resource reservation configuration for NR coexistence is provided in PhysicalConfigDedicated-NB.
Proposal 1-3: New Rel-16 IE (s) can be introduced in PhysicalConfigDedicated-NB for providing resource reservation configuration for NR coexistence.
Proposal 1-4: For FDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
Proposal 1-5: For TDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
Proposal 1-6: One new IE structure for resource reservation configuration for both DL and UL, and for both TDD and FDD are introduced.
Proposal 1-7: Independent definition for periodicity and start position parameters are introduced and the dependency between them can be clarified in the field description.
Proposal 1-8: Working assumption: Introduce two UE capabilities for handling resources reservation on DL or UL in PhyLayerParameters-NB-v16xy.
Proposal 1-9: Working assumption: Two UE capabilities for handling resources reservation on DL or UL in PhyLayerParameters-NB-v16xy can be applied to both FDD and TDD, e.g., with separate values for FDD or TDD.
Proposal 1-10: Working assumption: Two UE capabilities for handling resources reservation on DL or UL can be introduced into TS 36.306, e.g., section 4.3.4.

For eMTC:
Proposal 2-1: Configurations related to resource reservation and DL subcarrier puncturing for NR coexistence are provided via dedicated RRC signalling.
Proposal 2-2: The configurations related to resource reservation and DL subcarrier puncturing for NR coexistence can be provided in PhysicalConfigDedicated.
Proposal 2-3: For FDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
Proposal 2-4: For TDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
Proposal 2-5: One new IE structure for resource reservation configuration for both DL and UL, and for both TDD and FDD are introduced.
Proposal 2-6: A parameter for providing DL subcarrier puncturing configuration can be introduced in PhysicalConfigDedicated, which is for both FDD and TDD.
Proposal 2-7: Working assumption: Introduce four UE capabilities for handling resources reservation on UL and DL, and for CE mode A and CE mode B separately, in PhyLayerParameters-v16xy.
Proposal 2-8: Working assumption: Introduce two UE capabilities for handling DL subcarrier puncturing for CE mode A and CE mode B separately, in PhyLayerParameters-v16xy.
Proposal 2-9: Working assumption: Six UE capabilities mentioned in Proposal 2-7 and Proposal 2-8 for handling resources reservation or DL subcarrier puncturing can be applied to both FDD and TDD, e.g., with separate values for FDD or TDD.
Proposal 2-10: Working assumption: Six UE capabilities for handling resources reservation or DL subcarrier puncturing can be introduced into TS 36.306.

Candidates to postpone
For eMTC:
Proposal 2-1a: FFS for eMTC, whether and how configurations related to resource reservation and DL subcarrier puncturing for NR coexistence are also provided via SI, e.g, a new SIB.

- T-Mobile prefers this feature to be mandatory for NB-IoT and eMTC.

Agreements

For NB-IoT:
- Resource reservation configuration for NR coexistence is provided via dedicated RRC signaling.
- Resource reservation configuration for NR coexistence is provided in PhysicalConfigDedicated-NB.

- New Rel-16 IE (s) can be introduced in PhysicalConfigDedicated-NB for providing resource reservation configuration for NR coexistence.
- For FDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
- For TDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
- One new IE structure for resource reservation configuration for both DL and UL, and for both TDD and FDD are introduced.
- Independent definition for periodicity and start position parameters are introduced and the dependency between them can be clarified in the field description.
- Working assumption: Introduce two UE capabilities for handling resources reservation on DL or UL in PhyLayerParameters-NB-v16xy.
- Working assumption: Two UE capabilities for handling resources reservation on DL or UL in PhyLayerParameters-NB-v16xy can be applied to both FDD and TDD, e.g., with separate values for FDD or TDD.
- Working assumption: Two UE capabilities for handling resources reservation on DL or UL can be introduced into TS 36.306, e.g., section 4.3.4.

For eMTC:
- Configurations related to resource reservation and DL subcarrier puncturing for NR coexistence are provided via dedicated RRC signaling.
- The configurations related to resource reservation and DL subcarrier puncturing for NR coexistence can be provided in *PhysicalConfigDedicated*.
- For FDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
- For TDD, two independent parameters in UL and DL are needed for providing UL and DL resource reservation configuration separately.
- One new IE structure for resource reservation configuration for both DL and UL, and for both TDD and FDD are introduced.
- A parameter for providing DL subcarrier puncturing configuration can be introduced in *PhysicalConfigDedicated*, which is for both FDD and TDD.
- Working assumption: Introduce four UE capabilities for handling resources reservation on UL and DL, and for CE mode A and CE mode B separately, in PhyLayerParameters-v16xy.
- Working assumption: Introduce two UE capabilities for handling DL subcarrier puncturing for CE mode A and CE mode B separately, in PhyLayerParameters-v16xy.
- Working assumption: Six UE capabilities mentioned in Proposal 2-7 and Proposal 2-8 for handling resources reservation or DL subcarrier puncturing can be applied to both FDD and TDD, e.g., with separate values for FDD or TDD.
- Working assumption: Six UE capabilities for handling resources reservation or DL subcarrier puncturing can be introduced into TS 36.306.

- Send a LS to RAN1 to check whether it should be possible to have a common configuration for all NB-IoT carriers for resource reservation for NR coexistence. For NB-IoT and eMTC whether it is possible to optimize signalling.

✉ **[109e#xx] [NB-IoT/eMTC R16] LS to RAN1 on co-existence with NR (Qualcomm)**
Scope: LS to RAN1 to check whether it should be possible to have a common configuration for all NB-IoT carriers for resource reservation for NR coexistence and for NB-IoT and eMTC whether it is possible to optimize signalling.
Intended outcome: approved LS in R2-2001888
Deadline: 1 week

7.1.12 Connection to 5GC (eDRX, EDT, UP optimisation, RRC_INACTIVE and other MTC specific topics)

Support of eDRX in CM-IDLE, UP optimisation, and EDT for MTC and NB-IoT are treated jointly under this AI.
No documents should be submitted to AI 7.1.12. Please submit the documents to AI 7.1.12.x

R2-2002014 Summary of contributions for connection to 5GC (AI 7.1.12) Huawei discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

Proposal S1-1: When idle mode eDRX is configured and TeDRX is larger than 5.12 s, eMTC UEs in RRC_IDLE only need to monitor the paging occasions during the PTW. The UE monitors the paging occasions according to the shortest of the cell default paging cycle and the UE specific DRX (if configured).

- QC thinks the first 3 proposals are already the legacy behaviour. Huawei agrees.

Proposal S1-2: When idle mode eDRX is configured and TeDRX is equal to 5.12 s, eMTC UEs in RRC_IDLE monitor the paging occasions according to TeDRX.
Proposal S1-3: When idle mode eDRX is not configured, eMTC UEs in RRC_IDLE monitor the paging occasions according to the shortest of the cell default paging cycle and the UE specific DRX (if configured).

⇒ **The proposals above are describing the legacy behaviour and companies agree that they are applicable to 5GC.**

Proposal S1-4: When idle mode eDRX is not configured, eMTC UEs in RRC_INACTIVE monitor the paging occasions according to the shortest of the cell default paging cycle, the UE specific DRX (if configured), and the RAN paging cycle (if configured).

- QC thinks this is acceptable only if eDRX cycle values are the legacy values, i.e., excluding 5.12 sec and 10.24 sec. Huawei thinks this should be same with legacy.

Proposal S2-1: DRB resumption for EDT for eMTC UEs connected to 5GC follows the same principle as in EPC, i.e.:
- drb-ContinueROHC is provided in RRCConnectionRelease message triggering the suspension in RRC_IDLE. The flag applies to all DRBs.
- When resuming the DRBs for EDT, RRC procedure text triggers PDCP re-establishment and provides NR PDCP with the drb-ContinueROHC indication received in RRCConnectionRelease message.

Open items proposed to be further discussed in this meeting (from all sub-topics)
Proposal S1-5: Offline discussion on paging in RRC_INACTIVE for eMTC UEs configured with idle mode eDRX:
- option 1: UE monitors paging occasions (POs) during CM-IDLE PTW according to the min {UE specific DRX cycle, default DRX cycle, RAN paging cycle} and monitor paging occasions outside CM-IDLE PTW according to RAN paging cycle.
- option 2 :
  - o If extended RAN paging cycles (i.e. 5.12, 10.24 Sec) are configured, UE monitors paging occasions according to RAN paging cycle
  - o If extended RAN paging cycles (i.e. 5.12, 10.24 Sec) are not configured, UE monitors paging occasions according to the min {UE specific DRX cycle, default DRX cycle, RAN paging cycle}

Proposal S2-2: Offline discussion on remaining aspects related to DRB resumption, covering:
- full configuration
- particularities of NR PDCP

Proposal S3-1: Discuss the change in the e-mail discussion on the running eMTC 36.306 running CR or postpone to next meeting

Open items proposed to be postponed to next meeting (from all sub-topics)

Proposal S3-2: Postpone discussion on Early UE capability retrieval enhancements for eMTC/5GC.

✉ **[AT109e][419][eMTC/NB-IoT] Connection to 5GC: Open Issues (Huawei)**
Scope: Further discussion to address the remaining issues, i.e., proposals S1-5, S2-2, S3-1, and identify potential agreements.
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001885
Deadline: Tuesday, Mar 3rd 17:00 CET

R2-2001885 [AT109e][419][eMTC/NB-IoT] Connection to 5GC: Open Issues Huawei discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

Potential easy agreements
Proposal P1-1: Option 1 is feasible although it has some impact on UE power consumption.
Proposal P1-2: Option 2 is not feasible with the extended DRX cycle values in RRC_INACTIVE.
Proposal P1-3: When idle mode eDRX is configured, eMTC UEs in RRC_INACTIVE monitor the paging occasions (POs) during CM-IDLE PTW according to the min {UE specific DRX cycle, default DRX cycle, RAN paging cycle} and monitor paging occasions (POs) outside CM-IDLE PTW according to RAN paging cycle.
Proposal P2-2: PDCP Suspend is triggered at the time of suspension to RRC_IDLE for eMTC UEs connected to 5GC.
Proposal P2-3: DRB resumption for non-EDT for eMTC UEs connected to 5GC follows the same principle as in RRC_INACTIVE, i.e.:
- When resuming the DRBs for non-EDT, RRC procedure text does not trigger PDCP re-establishment.
- PDCP re-establishment and ROHC continuation for each DRB are triggered by the presence of the respective flags in RRCConnectionResume message as specified in TS 38.331 [82], clause 5.3.5.6;
Proposal P2-4: When resuming the RRC connection, the default RLC configuration and default (NR) PDCP configuration is applied to SRB1 for eMTC and NB-IoT UEs connected to 5GC.

Candidates to postpone
Proposal P2-1: Postpone discussion on full configuration with MO-EDT.
Proposal P2-5: Postpone discussion on SRB1 handling at fallback to RRC connection establishment procedure during RRC connection resumption.
Proposal P3-1: Postpone the discussion on clarification for LTE-M in TS 36.306.

7.1.12.1 Paging in RRC_INACTIVE

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting (decision to be made based on the submitted tdocs). This may lead to postponing some items to the next meeting. A web conference of an offline discussion may be used for handling some of the discussions in this AI.

R2-2000538 Page monitoring in RRC_INACTIVE state with short eDRX Qualcomm India Pvt Ltd discussion Rel-16 LTE_eMTC5-Core

R2-2000645 Discussion on paging of RRC_INACTIVE for eMTC connected to 5GC Huawei, HiSilicon, Ericsson discussion Rel-16 LTE_eMTC5-Core

R2-2001211 FFSs for supporting short eDRX in RRC_INACTIVE for eMTC in 5GC ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core

7.1.12.2 DRB resume in UP optimization

Including outcome of the email discussion [108#19][eMTC NB-IoT] When to resume DRBs in UP optimization for 5GC (Ericsson)

A web conference or an offline discussion may be used for handling the outcome of the email discussion in this AI.

R2-2000982 Report of [108#19] when to resume DRBs in UP optimization for 5GC discussion Ericsson NB_IOTenh3-Core, LTE_eMTC5-Core

Proposal 1 DRBs are resumed upon receiving RRCConnectionResume in UP optimization when connected to 5GC.

R2-2000646 SRBs and DRBs handling for NB-IoT and eMTC connected to 5GC discussion Huawei, HiSilicon Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

7.1.12.3 Other

This AI may not be treated during the e-meeting (decision to be made based on the submitted tdocs).

R2-2000311 Text proposal for 36.306 to align Cat M definition with LTE-M indicator discussion Qualcomm Incorporated Rel-16 LTE_eMTC5-Core

R2-2000536 Early UE capability retrieval enhancements for eMTC/5GC discussion Qualcomm India Pvt Ltd Rel-16 LTE_eMTC5-Core

Agreements

- DRBs are resumed upon receiving RRCConnectionResume in UP optimization when connected to 5GC.
- When idle mode eDRX is not configured, eMTC UEs in RRC_INACTIVE monitor the paging occasions according to the shortest of the cell default paging cycle, the UE specific DRX (if configured), and the RAN paging cycle (if configured).
- When idle mode eDRX is not configured, eMTC UEs in RRC_INACTIVE cannot be configured with values 5.12 sec and 10.24 sec
- DRB resumption for EDT for eMTC UEs connected to 5GC follows the same principle as in EPC, i.e.:
  - drb-ContinueROHC is provided in RRCConnectionRelease message triggering the suspension in RRC_IDLE. The flag applies to all DRBs.
  - When resuming the DRBs for EDT, RRC procedure text triggers PDCP re-establishment and provides NR PDCP with the drb-ContinueROHC indication received in RRCConnectionRelease message.

- When idle mode eDRX is configured, eMTC UEs in RRC_INACTIVE monitor the paging occasions (POs) during CM-IDLE PTW according to the min {UE specific DRX cycle, default DRX cycle, RAN paging cycle} and monitor paging occasions (POs) outside CM-IDLE PTW according to RAN paging cycle.
- PDCP Suspend is triggered at the time of suspension to RRC_IDLE for eMTC UEs connected to 5GC.
- DRB resumption for non-EDT for eMTC UEs connected to 5GC follows the same principle as in RRC_INACTIVE, i.e.:
  - When resuming the DRBs for non-EDT, RRC procedure text does not trigger PDCP re-establishment.
  - PDCP re-establishment and ROHC continuation for each DRB are triggered by the presence of the respective flags in RRCConnectionResume message as specified in TS 38.331 [82], clause 5.3.5.6;
- When resuming the RRC connection, the default RLC configuration and default (NR) PDCP configuration is applied to SRB1 for eMTC and NB-IoT UEs connected to 5GC.

7.1.13 Other

This AI may not be treated during the e-meeting (decision to be made based on the submitted tdocs).

R2-2000515 CE Mode Threshold Adjustments for non-BL and BL UE NTT DOCOMO INC. discussion Rel-16 R2-1914474

⇒ **Noted**

✉ **[AT109e][410][eMTC] CE Mode Threshold Adjustments for non-BL and BL UE (DoCoMo)**
Intended outcome: To check whether there is support, and, if so, list of proposals that are easily agreeable, almost agreeable and need further discussion. The outcome can be provided in R2-2001875
Deadline: Wednesday, Feb. 26th 18:00 CET
Schedule: Thursday, Feb. 27th 13:30 - 15:30 CET

R2-2001884 CE Mode Threshold Adjustments for non-BL and BL UE NTT DOCOMO INC.

⇒ **Rapporteur proposes to postpone the discussion.**

R2-2001396 Draft Reply LS on category M devices and NR LG Electronics UK discussion Rel-16

7.2 Additional enhancements for NB-IoT

(NB_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192313)
Time budget: 2.5 TU
Documents in this agenda item will be handled in a break out session
Some sub-items in 7.1 and 7.2 may be treated jointly.

7.2.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

R2-2000049 Reply LS on UAC for NB-IOT (S1-193592; contact: Qualcomm) SA1 LS in Rel-16 SMARTER_Ph2 To:RAN2 Cc:CT1, SA2, RAN3

⇒ **noted**

R2-2000058 Reply LS on Rel-16 NB-IoT enhancements (S2-1912763; contact: Huawei) SA2 LS in Rel-16 NB_IOTenh3 To:RAN, CT, RAN2, CT1, RAN3Cc:SA

⇒ **noted**

R2-2000064 Reply LS on 5G-S-TMSI Truncation Procedure (S2-2001248; contact: Qualcomm) SA2 LS in Rel-16 5G_CIoT To:SA3, RAN2, CT1 Cc:CT4

⇒ **noted**

R2-2000068 Reply LS on assistance indication for WUS (S2-2001578; contact: Huawei) SA2 LS in Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:CT1, RAN2, RAN3

⇒ **noted**

R2-2000072 Reply LS to SA2 on 5G-S-TMSI Truncation Procedure (S3-194482; contact: Huawei) SA3 LS in Rel-16 5G_CIoT To:SA2 Cc:RAN2, CT4, CT1, RAN3

⇒ **noted**

R2-2000088 Reply LS on assistance indication for WUS (S2-2001732; contact: Huawei) SA2 LS in Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:CT1, RAN2, RAN3

⇒ **noted**

R2-2000092 Reply LS on assistance indication for WUS (C1-199008; contact: Huawei) CT1 LS in Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:CT1 Cc:SA2, RAN2, RAN3

⇒ **noted**

R2-2002212 Reply LS on Rel-16 NB-IoT enhancements (C1-201024; contact: Ericsson) CT1 LS in Rel-16 NB_IOTenh3 To:RAN2, RAN3, SA2 Cc:CT, RAN, SA

⇒ **noted**

R2-2002249 Reply LS on updates for TS 36.300 and TS 38.300 (R3-201297; contact: Ericsson); RAN2 in To:

⇒ **noted**

R2-2002251 Reply LS on assistance indication for WUS (R3-201397; contact: Huawei); RAN2 in Cc:

⇒ **noted**

R2-2002252 Reply LS on Rel-16 NB-IoT enhancements (R3-201417; contact: Huawei); RAN2 in To:

⇒ **noted**

CRs

R2-2000647 Miscellaneous for NB-IoT and eMTC RRC CRs Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2000620 Introduction of additional enhancements for NB-IoT in TS 36.331 Huawei CR Rel-16 36.331 15.8.0 4192 - B NB_IOTenh3-Core

⇒ **Revised in R2-2001782**

✉ **[AT109e][311][NBIOT] R16 36.331 CR (Huawei)**
Status: Not Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR inR2-2001782.
Deadline: 06-03-2020, 12:00 CET

R2-2001782 Introduction of additional enhancements for NB-IoT in TS 36.331 Huawei CR Rel-16 36.331 15.8.0 4192 1 B NB_IOTenh3-Core
[CB]
=> Agreed

R2-2000304 Introduction of additional enhancements for NB-IoT Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0176 3 B NB_IOTenh3-Core R2-1916570

⇒ **Revised in R2-2001783**
=> Agreed (in R2-2000304)

✉ **[AT109e][312][NBIOT] R16 38.300 CR (Qualcomm)**
Status: Not Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001783.
Deadline: 06-03-2020, 12:00 CET

R2-2001783 Introduction of additional enhancements for NB-IoT Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0176 4 B NB_IOTenh3-Core R2-1916570
[CB]
=> Withdrawn (R2-2000304 can be agreed)

R2-2000619 Introduction of additional enhancements for NB-IoT in TS 36.300 Huawei CR Rel-16 36.300 16.0.0 1259 - B NB_IOTenh3-Core

⇒ **Revised in R2-2001784**

✉ **[AT109e][313][NBIOT] R16 36.300 CR (Huawei)**
Status: Not Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001799
Deadline: 06-03-2020, 12:00 CET

R2-2001784 Introduction of additional enhancements for NB-IoT in TS 36.300 Huawei CR Rel-16 36.300 16.0.0 1259 1 B NB_IOTenh3-Core

[CB]
=> Agreed

R2-2000621 Introduction of additional enhancements for NB-IoT in TS 36.302 Huawei CR Rel-16 36.302 15.2.0 1202 - B NB_IOTenh3-Core

⇒ **Revised in R2-2001785**

✉ **[AT109e][314][NBIOT] R16 36.302 CR (Huawei)**
Status: Not Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001785.
Deadline: 06-03-2020, 12:00 CET

R2-2001785 Introduction of additional enhancements for NB-IoT in TS 36.302 Huawei CR Rel-16 36.302 15.2.0 1202 1 B NB_IOTenh3-Core
[CB]
=> Agreed

R2-2000622 UE capabilities, TDD/FDD differentiation and 5GC applicability for NB-IoT Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

R2-2000930 Introduction of Rel-16 additional enhancements NB-IoT in TS 36.306 BlackBerry UK Limited CR Rel-16 36.306 15.7.0 1731 - B LTE_eMTC5-Core, NB_IOTenh3-Core

⇒ **Revised in R2-2001786**

✉ **[AT109e][315][NBIOT] R16 36.306 CR (Blackberry)**
Status: Not Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001786.
Deadline: 06-03-2020, 12:00 CET

R2-2001786 Introduction of Rel-16 additional enhancements NB-IoT in TS 36.306 BlackBerry UK Limited CR Rel-16 36.306 15.7.0 1731 1 B NB_IOTenh3-Core
[CB]
=> Agreed

✉ **[109e#xx][NBIOT] 36.306 CR (Blackberry)**
Scope: Capture the agreements from this meeting.
Intended outcome: endorsed CR in R2-2001813
Deadline: next meeting

R2-2000983 Running CR on 36.321 for NB-IoT Ericsson CR Rel-16 36.321 15.8.0 1466 - B NB_IOTenh3-Core

⇒ **Revised in R2-2001787**

✉ **[AT109e][316][NBIOT] R16 36.321 CR (Ericsson)**
Status: Not Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001787.
Deadline: 06-03-2020, 12:00 CET

R2-2001787 Running CR on 36.321 for NB-IoT Ericsson CR Rel-16 36.321 15.8.0 1466 1 B NB_IOTenh3-Core
=> Agreed

R2-2002090 Introduction of Rel-16 NB-IoT enhancements Nokia CR Rel-16 36.304 15.5.0 0783 - B NB_IOTenh3_ Core Late

⇒ **Revised in R2-2001788**

✉ **[AT109e][317][NBIOT] R16 36.304 CR (Nokia)**
Status: Not Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001788.
Deadline: 06-03-2020, 12:00 CET

R2-2001788 Introduction of Rel-16 NB-IoT enhancements Nokia CR Rel-16 36.304 15.5.0 0783 1 B NB_IOTenh3_ Core
=> Agreed

Withdrawn

R2-2000394 Introduction of Rel-16 additional enhancements NB-IoT: running 36.306 CR BlackBerry UK Limited draftCR Rel-16 36.306 15.7.0 B LTE_eMTC5-Core, NB_IOTenh3-Core Withdrawn

R2-2001161 Introduction of additional enhancements for NB-IoT in Rel-16 in TS36.304 Nokia Solutions & Networks (I) draftCR Rel-16 36.304 15.5.0 B NB_IOTenh4_LTE_eMTC6-Core Withdrawn

7.2.2 Mobile-terminated (MT) early data transmission (EDT)

Mobile-terminated Early Data transmission for NB-IoT is treated jointly with MTC under AI 7.1.2. Do not use this AI for any item that can be discussed jointly.

7.2.3 UE-group wake-up signal (WUS)

UE group wake Up signal for MTC and NB-IoT is treated jointly under this Agenda Item.

Including outcome of the email discussion [108#94][NB-IoT/eMTC R16] Finalise the WUS signalling (Qualcomm)

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

Reports/Summaries

R2-2000306 Report of Email Discussion 108#94 Finalise the WUS signalling Qualcomm Incorporated report Rel-16 NB_IOTenh3-Core

- QC thinks p1, 5, 6, 7, 8 have a reasonable level of consensus
- QC think p2, 3, 4 needs more discussion.
- ZTE thinks some of the proposals e.g. p1 needs a bit of work, but baseline is OK as long as there is no restriction in case further issues are found.
-

Proposal 1: For NB-IoT, RAN2 agree signaling changes proposed in Table 5 as the baseline.
Proposal 2: For NB-IoT/eMTC, RAN2 discuss paging probability threshold configuration
Proposal 3: For NB-IoT/eMTC, RAN2 discuss how to handle overlapping WUS resources.
Proposal 4: For NB-IoT, RAN 2 discuss if Rel 15 WUS is not configured and only one R16 WUS is configured then should this always be in primary position.
Proposal 5: For NB-IoT, RAN2 assume the changes proposed in Table 7, 8 and 9 as the baseline for signalling group WUS information.
Proposal 6: For NB-IoT, RAN2 use the changes proposed in Table 10 as the baseline.
Proposal 7: For eMTC, RAN2 agree to use the changes proposed in Table 12 as the baseline.
Proposal 8: For eMTC, RAN2 assume the changes proposed in Table 15, 16 and 17 as the baseline for signalling group WUS information.
Proposal 9: The baseline signalling changes, including field description, be captured in the eMTC and NB-IoT ruining CRs.

Agreements:

- For NB-IoT, RAN2 agree signaling changes proposed in Table 5 as the baseline.
- For NB-IoT, RAN2 assume the changes proposed in Table 7, 8 and 9 as the baseline for signalling group WUS information.
- For NB-IoT, RAN2 use the changes proposed in Table 10 as the baseline.
- For eMTC, RAN2 agree to use the changes proposed in Table 12 as the baseline.
- For eMTC, RAN2 assume the changes proposed in Table 15, 16 and 17 as the baseline for signalling group WUS information.

✉ **[AT109e][305][NBIOT/EMTC] WUS: Progress the FFS from Email Discussion 108#94 and Summary (QC)**
Scope: try to progress proposals 2, 3, 4 from the email discussion as well as all proposals/open issues from the summary document R2-2000308
Intended outcome: report in R2-2001789
Deadline: Thursday 27th 0900 CET

R2-2001789 [AT109e][305][NBIOT/EMTC] WUS: Progress the FFS from Email Discussion 108#94 and Summary Qualcomm Incorporated report

Proposal 1: **For eMTC and NB-IoT support the same paging probability range and granularity.**
Proposal 2: **RAN2 discuss number of code points for paging probability.**
Proposal 4: **No special handling of WUS resource overlap is specified and UE use the WUS resource corresponding to its gap capability.**
Proposal 5: **For NB-IoT, if only one R16 WUS resource is configured and no Release 15 WUS resource is configured then R16 WUS resource is always in primary location.**
Proposal 7: **Update stage 2 to explain group WUS in more detail and the text can be discussed via email using text proposed in [8] as starting point.**
Proposal 8: **RAN2 discuss if Release 15 mechanism to minimize false wake-up as baseline for Release 16.**
Proposal 9: **No other mechanism to minimize false wake-up be considered for Release 16.**
Proposal 10: **From RAN2 point of view paging escalation does not need to be mandated.**
Proposal 11: **RAN2 discuss from IOT point of view whether it is better to allow UE to support Release 16 WUS independently of Release 15 WUS.**
Proposal 12: **No other aspects from the proposals impact RAN2.**
Proposal 13: **Define WUS group selection based on the formula defined in [10].**
Proposal 14: **Email discussion on text proposal for 36.304 and use the text defined in [11] as the starting point.**
Proposal 15: **No other WUS group signalling optimisations identified.**

Agreements:

- For eMTC and NB-IoT support the same paging probability range and granularity.
- No special handling of WUS resource overlap is specified and UE use the WUS resource corresponding to its gap capability
- Update stage 2 to explain group WUS in more detail using text proposed in R2-2000639 as starting point.
- From RAN2 point of view paging escalation does not need to be mandated

Working assumption:

- For NB-IoT, if only one R16 WUS resource is configured and no Release 15 WUS resource is configured then R16 WUS resource is always in primary location
- Support of Release 16 WUS is independent to support of Release 15 WUS
- Define WUS group selection based on the formula defined in R2-2001472

FFS:
- Code points for paging probability thresholds.
- Mechanism to minimize false wake-up

✉ **[AT109e][306][NBIOT/EMTC] WUS: Finalise the signalling (QC)**
Scope: Try to finalise the signalling, based on the agreements above and potential agreements from offline #305
Intended outcome: Endorsed TP to be incorporated into the NB-IoT and eMTC CRs in R2-2001790.
Deadline: Wednesday 4th 0900 CET

R2-2001790 [AT109e][306][NBIOT/EMTC] WUS: Finalise the signalling Qualcomm Incorporated report

⇒ **Noted**

⇒ **TP is endorsed**

R2-2000308 Summary of WUS contributions to RAN2#109e. Qualcomm Incorporated report Late
- QC thinks the stage 2 should be updated by email (p1)
- Huawei thinking proposal 2 is not in line with SA2 agreements and should not be agreed. At least the release this proposal is for needs to be clarified. ZTE think SA2 have a solution for Rel-15 so we don't need to agree anything on this proposal, but for Rel-16 we need to decide. Ericsson also wonders, because we had previously sent an LS including an issue on mobility as well as CN awareness.
- Ericsson thinks p4 was already agreed to be independent.
- Thales wonders what the "last connected cell" means. QC and Ericsson think we need to discuss these 2 issues separately.

Summary Proposal 1: Update and agree stage 2 changes via email.

Summary Proposal 2: RAN2 agree [8]-P1 and companies can take contributions to RAN3

Summary Proposal 3: [FFS] How to minimise false wake-up with group WUS.

Summary Proposal 4: email discussion whether R16 WUS capability be dependent on support of R15 WUS.

Summary Proposal 5: RAN2 discuss the range of probability values to signal.

Summary Proposal 6: Companies can take contributions to RAN3 directly for S1-AP changes.

Summary Proposal 7: RAN2 discuss equation to select a WUS group from the list of WUS groups corresponding to its paging probability set (or non-paging probability set).

Summary Proposal 8: As there is no concrete proposal it is up to the sourcing company to provide details.

Summary Proposal 9: Use draft text proposal in [3] as the baseline, make changes and incorporate further agreements.

⇒ **Will discuss the above proposals as part of offline #305.**

Others

R2-2000307 Text proposal for WUS description in TS 36.304 Qualcomm Incorporated discussion

R2-2000639 Remaining issues for Rel-16 GWUS Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2000828 UE-group wake-up signal for MTC/NB-IoT Sony discussion Rel-16 NB_IOTenh3-Core R2-1915235 Withdrawn

R2-2001024 Paging probability based UE grouping Lenovo, Motorola Mobility discussion Rel-16

R2-2001025 WUS grouping for mobile UE Lenovo, Motorola Mobility discussion Rel-16

R2-2001026 Consideration on WUS configuration Lenovo, Motorola Mobility discussion Rel-16

R2-2001203 Consideration on mobility for WUSZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2001210 Formula for mapping UE to WUS group ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1915638

R2-2001472 Group WUS Ericsson discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1915801

7.2.4 Transmission in preconfigured resources

Including support for transmission in preconfigured resources in idle and/or connected mode based on SC-FDMA waveform for UEs with a valid timing advance.

Transmission in preconfigured resources for MTC and NB-IoT is treated jointly under this Agenda Item.

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

Reports/Summaries

R2-2002021 Summary of Other RRC-MAC-PHY interactions Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

- QC thinks p4, 9 are agreeable now

Proposal 1. [FFS] Which layer (RRC or MAC) maintains PUR grant (i.e., whether RRC provides PUR configuration to MAC once and MAC calculates the grant, or whether RRC calculates the grant before each PUR transmission), or whether to leave it up to UE implementation.

Proposal 2. Conditional on RRC providing PUR grant to MAC: "m" counter is maintained in RRC.

Proposal 3. Conditional on MAC receiving PUR configuration and calculating PUR grant: "m" counter is maintained in MAC. When the counter value reaches the configured max value, MAC sends indication to RRC to release PUR configuration.

Proposal 4. PUR TA timer configuration is provided to MAC when RRC receives PUR configuration from eNB.

Proposal 5. [FFS] MAC entity starts the PUR TA timer [when the MAC entity is configured with the PUR TA timer]/[when the UE moves to IDLE]/[upon first PUR transmission opportunity after the PUR configuration has been received].

Proposal 6. TA adjustment by DCI is captured in MAC specification 5.4.x.2 to include the condition "when a Timing Advance Command MAC control element is received or PDCCH indicates timing advance adjustment as specified in TS 36.212 subclauses 5.3.3.1.10 and 5.3.3.1.11".

Proposal 7. [ASN.1/CR] It's suggested to delete the "Editor's note: FFS what is the impact of PUR and the TA timer in this section" in the section "5.9 MAC Reset" in 36.321 running CR.

Proposal 8. [FFS] To confirm: TA validation procedure is captured in RRC spec.

Proposal 9. When TA validation fails due to other than expiration of TA timer, the PUR TA timer is not stopped (i.e. keeps running until expiry).

Proposal 10. When "PUR fallback indication" is received, MAC stops monitoring PDCCH in PUR response window.

Proposal 11. MAC forwards the L1 ACK or PUR fallback indication received from lower layers to the RRC.

Proposal 12. [ASN.1/CR] Adopt TP given in section 2.1 of [9] as baseline for MAC running CR in section 5.4.x.1.

Proposal 13. In RRC CR 5.3.3.3x, add "NOTE: UE actions upon reception of fallback indication from lower layers (see TS 36.213 subclause 9.1.5.3) is left up to implementation." Remove Editor's Notes.

Proposal 14. [FFS] Where to capture PUR release due to RACH initiation on a new cell.

Proposal 15. Upon reception of RRC message indicating successful PUR transmission, RRC indicates this to MAC layer.

Proposal 16. [ASN.1/CR] The PUR response window timer is restarted at the last subframe of a PUSCH transmission corresponding to the retransmission indicated by the UL grant.

Agreements:

- PUR TA timer configuration is provided to MAC when RRC receives PUR configuration from eNB.
- When TA validation fails due to other than expiration of TA timer, the PUR TA timer is not stopped (i.e. keeps running until expiry).

✉ **[AT109e][307][NBIOT] PUR RRC-MAC-PHY interactions (QC)**
Scope: Discuss and progress on the open issues and proposals in R2-2002021, excluding 4 and 9 (already agreed) and those marked as ASN.1/CR issues
Intended outcome: report with categorisation of proposals – agreeable, needs further discussion, postpone in R2-2001791
Deadline: Thursday 27th 0900 CET

R2-2001791 [AT109e][307][NBIOT] PUR RRC-MAC-PHY interactions Qualcomm Incorporated report

Potential agreements:
Proposal 3. MAC entity starts the PUR TA timer when the MAC entity is configured with the PUR TA timer.

Proposal 4. TA adjustment by DCI is captured in MAC specification 5.4.x.2 to include the condition "when a Timing Advance Command MAC control element is received or PDCCH indicates timing advance adjustment as specified in TS 36.212 [5]".

Proposal 5. RAN2 confirms TA validation procedure is captured/kept in RRC spec.

Proposal 6. When "PUR fallback indication" is received, MAC stops monitoring PDCCH in PUR response window.

Proposal 7. (Already captured in MAC CR) Upon L1 ACK indication received from lower layers, MAC indicated PUR success to the RRC.

Proposal 9. In RRC CR 5.3.3.3x, add "NOTE: UE actions upon reception of [FFS: fallback/failure] indication from lower layers (see TS 36.213 [23]) is left up to implementation." Remove Editor's Notes.

Potential agreement with quick discussion:
Proposal 1. RRC provides PUR configuration to MAC once and MAC calculates the PUR grant for each PUR occasion.

Proposal 2. "m" counter is maintained in MAC. When the counter value reaches the configured max value, MAC sends indication to RRC to release PUR configuration.

- Huawei have serious concerns about these 2 proposals and how they can work, HW and Ericsson think we need to see the CRs

Proposal 8. [FFS] Upon PUR fallback indication from lower layers, MAC indicates [PUR fallback]/[PUR failure] to the RRC.

Proposal 11. [FFS] Upon reception of RRC message indicating successful PUR transmission, RRC does not need to indicate this to MAC layer.

Need further discussion:

Proposal 10. [FFS] Where to capture PUR release due to RACH initiation on a new cell.

Agreements:

- MAC entity starts the PUR TA timer when the MAC entity is configured with the PUR TA timer.
- TA adjustment by DCI is captured in MAC specification 5.4.x.2 to include the condition "when a Timing Advance Command MAC control element is received or PDCCH indicates timing advance adjustment as specified in TS 36.212 [5]".
- RAN2 confirms TA validation procedure is captured/kept in RRC spec.
- When "PUR fallback indication" is received, MAC stops monitoring PDCCH in PUR response window.
- (Already captured in MAC CR) Upon L1 ACK indication received from lower layers, MAC indicated PUR success to the RRC.
- In RRC CR 5.3.3.3x, add "NOTE: UE actions upon reception of fallback/failure indication from lower layers (see TS 36.213 [23]) is left up to implementation." Remove Editor's Notes.
- Upon PUR fallback indication from lower layers, MAC indicates PUR fallback and PUR failure separately to the RRC.
- Upon reception of RRC message indicating successful PUR transmission, RRC does not need to indicate this to MAC layer.

Working assumptions: (Can be used as baseline for CR and revisit if there is a problem):

- RRC provides PUR configuration to MAC once and MAC calculates the PUR grant for each PUR occasion.
- "m" counter is maintained in MAC. When the counter value reaches the configured max value, MAC sends indication to RRC to release PUR configuration.

FFS:

- Where to capture PUR release due to RACH initiation on a new cell.

R2-2002028 Summary of RRC in general and L1 signalling impact to RRC (including e.g. how/when to configure PHY) Ericsson discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

The following proposals are suggested for agreement without need for extensive discussion:

Proposal 1 Similar to EDT, upon transmission using PUR, RRC configures PHY to use PUR.

Proposal 7 EDT value for timer t300 applies when UL data is included in transmission using PUR.

Proposal 8 When UL data is not included in transmission using PUR, non-EDT value applies to t300.
- ZTE wonders about the case of DL data.

Proposal 16 PUR periodicity configuration granularity is based on counts of binary multiples of HSFN, i.e. full SFN cycles (= 10.24 s). FFS on exact count.

Proposal 17 PUR periodicity includes at least values of several minutes, tens of minutes, ~hour, several hours, ~one day. FFS exact minimum and maximum values and total number of values.

Proposal 18 TA timer range and values are discussed further and agreed once TA timer start location and PUR periodicity have been agreed.

Proposal 19 The PUR time offset has the same range as PUR periodicity.
- Thales wonders if this is requested or configured time offset.

Proposal 21 For NB-IoT: The value range for PUR response timer is same as in EDT (FDD): {pp1, pp2, pp3, pp4, pp8, pp16, pp32, pp64} with upper boundary 10.24s

Proposal 22 For eMTC: The value range for PUR response timer is same as in EDT: {sf240, sf480, sf960, sf1920, sf3840, sf5760, sf7680, sf10240}.
- QC thinks these values need discussion, maybe the larger values are not needed.

Agreements:
- Similar to EDT, upon transmission using PUR, RRC configures PHY to use PUR.
- EDT value for timer t300 applies when UL data is included in transmission using PUR.
- When UL data is not included (i.e. only RRC message is included) in transmission using PUR, non-EDT value applies to t300.
- PUR periodicity includes at least values of several minutes, tens of minutes, ~hour, several hours, ~one day. FFS exact minimum and maximum values and total number of values.

✉ **[AT109e][308][NBIOT] PUR RRC in general and L1 signalling impact to RRC (Ericsson)**
Status: started
Scope: Progress the FFS not agreed above from R2-2002028
Intended outcome: Report in R2-2001792. Updated report in R2-2001796
Deadline: Monday 2nd March 1200 CET

R2-2001792 [AT109e][308][NBIOT] PUR RRC in general and L1 signalling impact to RRC report Ericsson

R2-2001796 [AT109e][308][NBIOT] updated PUR RRC in general and L1 signalling impact to RRC Ericsson report

The following rapporteur proposals should be "easy" agreements, i.e. no further discussion seems to be necessary:

Rapporteur Proposal 3 **RAN2 to confirm L1 update on repetition number is not intended to update the RRC configuration (i.e. higher layer configuration) but adjust the configuration provided by higher layers.**

- Ericsson thinks this may not be clear from RAN1 what the behaviour should be, so we might need to rethink this. QC agree it is not fully clear, but RAN1 intention was to contain in L1 specs and not impact RRC.
- LG support the proposal.
- ZTE think there may be some issues here so L1 may need to indicate to RRC.
- HW think it is OK if RAN1 just want to update the repetition number, but otherwise this doesn't work. IT depends on RAN1 intention which is not clear. QC thinks it is OK unless RRC is reconfigured.
- Nokia think the grant is maintained by MAC to needs to be updated by L1.
-

Rapporteur Proposal 5 **TA validation criterion "Serving cell changes" applies also when handover and RRC Connection Re-establishment results in RA in a new cell.**

Rapporteur Proposal 9 **TA timer range is multiple of PUR periodicities, e.g. 1,…, 8. FFS on exact values and whether offset is applied so that e.g. retransmissions are covered.**

Rapporteur Proposal 11 **For NB-IoT: The value range for PUR response timer is same as in EDT (FDD): {pp1, pp2, pp3, pp4, pp8, pp16, pp32, pp64} with upper boundary 10.24 s.**

- LG wonders if this is application layer response. HW clarifies this is like EDT and the application layer response is taken into consideration. LG wonders if we need to check with SA2 and CT1. HW thinks the stage 2 currently re-uses MO-EDT procedure.

Rapporteur Proposal 12 **For eMTC: The value range for PUR response timer is same as in EDT: {sf240, sf480, sf960, sf1920, sf3840, sf5760, sf7680, sf10240}.**

On Proposal 5 above, it should perhaps be clarified whether any changes are needed cf. the earlier agreement or if it would be enough to capture the intention e.g. in chair notes.

The following are based on majority so companies are asked to consider whether acceptable to them:

Rapporteur Proposal 7 **Working assumption: PUR periodicity configuration granularity is based on counts of binary multiples of HSFN, i.e. full SFN cycles (= 10.24 s).**

Rapporteur Proposal 8 **PUR periodicity is {hsf8, hsf16, hsf32, hsf64, hsf128, hsf256, hsf512, hsf1024, hsf2048, hsf4096, hsf8192, spareX, [FFS]}.**

Rapporteur Proposal 13 **Number of PUR grant occasions requested can be one or infinity.**

The following is proposed as working assumptions, as details may depend on other agreements (e.g. PUR periodicity)

Rapporteur Proposal 10 **Working assumption: PUR time offset has the same range as PUR periodicity. FFS further details e.g. how exact PUR start time is configured.**

The following relate to CP-PUR and the details of where and how configuration should be stored during RRC_IDLE and requires further discussion of the exact solutions:

Rapporteur Proposal 1 **RAN2 to continue discussion on e.g. how storing of PUR parameters would be split between eNB and MME and other details before agreeing on where PUR configuration is stored for CP solution.**

Rapporteur Proposal 2 **RAN2 to continue discussion on if and how eNB links CP-PUR configuration to each UE in RRC_IDLE.**

The following are left for further discussion, e.g. in the relevant running CR discussions:

Rapporteur Proposal 4 **FFS whether L1 adjustment applies only to retransmissions or also future PUR UL transmissions and where it is stored.**

Rapporteur Proposal 6 **Capture the TA criteria for RSRP changes according to the earlier RAN4 LS in the running CRs.**

Rapporteur Proposal 14 **Further details of delta configuration, e.g. if it is per parameter or per parameter group can be discussed in context of the running CRs.**

Agreements

- TA validation criterion “Serving cell changes” applies also when handover and RRC Connection Re-establishment results in RA in a new cell.
- TA timer range is multiple of PUR periodicities, e.g. 1,…, 8.
  - FFS on exact values and whether offset is applied so that e.g. retransmissions are covered.
- For NB-IoT: The value range for PUR response timer is same as in EDT (FDD): {pp1, pp2, pp3, pp4, pp8, pp16, pp32, pp64} with upper boundary 10.24 s.
- For eMTC: The value range for PUR response timer is same as in EDT: {sf240, sf480, sf960, sf1920, sf3840, sf5760, sf7680, sf10240}.

- Number of PUR grant occasions requested can be one or infinity.

Working assumptions:
- PUR periodicity configuration granularity is based on counts of binary multiples of HSFN, i.e. full SFN cycles (= 10.24 s).
- PUR periodicity is {hsf8, hsf16, hsf32, hsf64, hsf128, hsf256, hsf512, hsf1024, hsf2048, hsf4096, hsf8192, spareX, [FFS]}.
- Maximum PUR time offset range should be the same as maximum PUR periodicity. FFS further details e.g. how exact PUR start time is configured.

FFS:
- how storing of PUR parameters would be split between eNB and MME and other details before agreeing on where PUR configuration is stored for CP solution.
- if and how eNB links CP-PUR configuration to each UE in RRC_IDLE.

FFS (to ask RAN1):
- RAN2 to confirm L1 update on repetition number is not intended to update the RRC configuration (i.e. higher layer configuration) but adjust the configuration provided by higher layers.
- whether L1 adjustment applies only to retransmissions or also future PUR UL transmissions and where it is stored.

✉ **[109e#xx][NBIOT/EMTC] LS to RAN1 on PUR open issues (Ericsson)**
Scope: LS with open issues/questions to RAN1
Intended outcome: Approved LS
Deadline: 1 week

Others

R2-2000250 Remaining clarifications on PUR configuration THALES discussion

R2-2000435 T300 applicability for PUR Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2000443 TA validation based on serving cell RSRP change (related to RAN4 LSes) Sierra Wireless, S.A. discussion Rel-16 R2-1916427

R2-2000559 Security Aspects of D-PUR for control plane solution Nokia, Nokia Shanghai Bell discussion Rel-16

R2-2000640 Handling of D-PUR configuration for CP solution Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core R2-1915312

R2-2000641 [Draft] LS on handling of D-PUR configuration for the CP solution Huawei LS out Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core To:RAN WG3

R2-2000642 RRC-MAC-PHY interactions for PUR Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2000643 Signalling aspect of PUR configuration Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2000695 Remaining FFSes on RRC-MAC interaction for PUR Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2000984 PUR periodicity and UE multiplexing Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2000985 RRC-MAC interaction details and other FFSs for PUR in running MAC CR Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

R2-2001198 D-PUR reconfiguration and release for CP solution ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1914717

R2-2001200 MAC-RRC coordination for TA validation and some FFS for D-PURZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2001201 Remaining FFSs for D-PUR in 36.331 ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2001202 Remaining FFSs for D-PUR in 36.321 ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2001394 Clarification for the condition of PUR configuration request procedure LG Electronics UK discussion Rel-16

R2-2001395 Handling application response for D-PUR transmission LG Electronics UK discussion Rel-16

R2-2001397 Discussion on delivery of D-PUR configuration request LG Electronics UK discussion Rel-16 R2-1915951

R2-2001398 Paging response usign D-PUR LG Electronics UK discussion Rel-16 R2-1915952

R2-2001399 Discussion on preconfigured shared uplink resource transmission LG Electronics UK discussion Rel-16 R2-1915053

R2-2001516 Further Pre-configured UL Resources Design Considerations Sierra Wireless, S.A. discussion Rel-16

R2-2001601 Handling D-PUR configuration in RRC_CONNECTED state ASUSTeK discussion Rel-16 36.331 NB_IOTenh3-Core

R2-2001602 Remaining issues of D-PUR TA timer ASUSTeK discussion Rel-16 NB_IOTenh3-Core

7.2.5 Scheduling multiple DL/UL transport blocks

Including scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast
Scheduling multiple DL/UL transport blocks for NB-IoT is treated jointly with MTC under AI 7.1.5. Do not use this AI for any item that can be discussed jointly.

7.2.6 Network management tool enhancement

Including SON support for ANR, Random access performance and RLF report
Including outcome of the email discussion [108#95][NB-IoT] Finalise SON ANR and RLF (Huawei)
This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

Reports/Summaries

R2-2000623 Summary of [108#95][NB-IoT] Finalise SON ANR and RLF Huawei report Rel-16 NB_IOTenh3-Core

ANR

Proposal 1: The NOTE about the ANR measurement requirements is sufficient and the Editor's Note can be removed.
Proposal 2: It is left to the UE implementation whether to follow DRX or eDRX requirements for ANR measurements. Nothing needs to be specified.
Proposal 3: No need to specify additional requirements for UE using PSM.
Proposal 4: The validity timer is fixed, FFS 48 hours same as LTE.

- Ericsson thinks we should be able to configure.

Tentative Proposal 5: A time indication of when the ANR measurements were performed is included in the report. RAN2 to discuss whether a time stamp or a simple indication "immediately after going to IDLE, immediately before going to CONNECTED, in between".
Proposal 6: ANR measurements is not applicable to 5GC in Rel-16. Can be considered in Rel-17.
Proposal 7: The blackcell list size is 16 and *maxCellBlack* is used as the maximum.
Proposal 8: A maximum of two frequencies can be configured and reported for ANR measurements.

RACH/RLF

Proposal 9: The processing delay of the UE information procedure in Table 11-2-2 is set to 45 ms.
Proposal 10: The UE information procedure can only be used when AS security has been activated.

Proposal 11: RACH report is not applicable to 5GC.
Proposal 12: RLF report is not applicable to 5GC.
- ZTE thinks there is no reason to exclude 5GC.

Tentative Proposal 13: Support of RACH report is mandatory at the UE with IOT bit.
Proposal 14: Support of RLF report is optional at the UE without capability reporting
Proposal 15: The following applies to the RLF report:
a) RLF report is discarded after 48 hours if not fetched.
b) RLF report is kept during state transitions and RAT changes.
c) RLF report availability and RLF report is only provided if the current RPLMN is a PLMN that was present in the UE's EPLMN List or the RPLMN at the time of RLF detection

Proposal 16: The re-establishment cell id is also included in the RLF report.

Agreements:

ANR

- The NOTE about the ANR measurement requirements is sufficient and the Editor's Note can be removed.
- Nothing additional needs to be specified on when UE follows DRX or eDRX requirements for ANR measurements.
- No need to specify additional requirements for UE using PSM.
- The validity timer is fixed. Working assumption: 96 hours
- ANR measurements is not applicable to 5GC in Rel-16. Can be considered in Rel-17.
- The blackcell list size is 16 and *maxCellBlack* is used as the maximum.
- A maximum of two frequencies can be configured and reported for ANR measurements.

- FFS: Whether a time indication of when the ANR measurements were performed is included in the report, and whether it is a time stamp or a simple indication "immediately after going to IDLE, immediately before going to CONNECTED, in between".

RACH/RLF

- The processing delay of the UE information procedure in Table 11-2-2 is set to 45 ms.
- The UE information procedure can only be used when AS security has been activated.
- RACH report is not applicable to 5GC.
- RLF report is not applicable to 5GC.
- Support of RACH report is optional with capability reporting.
- Support of RLF report is optional at the UE without capability reporting
- RLF report is discarded after 48 hours if not fetched.
- RLF report availability and RLF report is only provided if the current RPLMN is a PLMN that was present in the UE's EPLMN List or the RPLMN at the time of RLF detection
- FFS: The re-establishment cell id is also included in the RLF report.
- FFS: RLF report is kept during state transitions and RAT changes.

Others

R2-2001027	Remaining issues on ANR reporting	Lenovo, Motorola Mobility	discussion	Rel-16

7.2.7 Improved multi-carrier operation

Including support of Msg3 quality reporting for non-anchor access.
Including signalling to indicate on a non-anchor carrier for paging a set of subframes which will contain NRS even when no paging NPDCCH is transmitted.

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

R2-2000624 NRS presence on non-anchor paging carrier Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

✉ **[AT109e][304][NBIOT R16] NRS presence on non-anchor paging carrier (Huawei)**
Status: Not Started
Scope: Discuss and review the CRs
Intended outcome: Endorsed TP for main CRs, or decision to e.g. postpone/not agree.
Deadline: Wednesday 4th 0900 CET

R2-2001808 Report of [AT109e][304][NBIOT R16] NRS presence on non-anchor paging carrier (Huawei)

⇒ **Noted**

⇒ **Introduce parameter *nrs-NonAnchorConfig* in *systemInformationBlockType2-NB* based on TP in R2-2000624 with rewording of the field description.**

nrs-NonAnchorConfig
For FDD: Indicates whether NRS is present on non-anchor paging carriers even when no paging NPDCCH is transmitted, see TS 36.211 [21], clause 10.2.6.

⇒ **Include the Text Proposal in section 5.2 of R2-2000624 for TS 36.304. Details can be revisited next meeting.**

7.2.8 Inter-RAT cell selection

Including power efficient NB-IoT mechanism which would assist idle mode inter-RAT cell selection for NB-IoT to and from LTE, LTE-MTC and GERAN

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

7.2.9 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of NB-IoT with NR

This agenda item may utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference may be used for handling some of the discussions in this AI.

R2-2000625 Coexistence with NR for NB-IoT Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

R2-2000986 NB-IoT coexistence with NR Ericsson discussion NB_IOTenh3-Core
=> Revised in R2-2002063

R2-2002063 NB-IoT coexistence with NR Ericsson discussion NB_IOTenh3-Core

R2-2001215 RAN2 impacts of coexistence between NB-IoT and NR ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core Late

7.2.10 Connection to 5GC (Other common aspects, NB-IoT specific aspects)

Common aspects for MTC and NB-IoT not listed in 7.1.12 are treated jointly under this AI.

Including outcome of the email discussion [108#96][NB-IoT/eMTC R16] Finalise details on RAI (Ericsson)

Including outcome of the email discussion [108#97][NB-IoT / eMTC] Consider how to minimize ping-pong between CN types in RRC_IDLE/RRC_INACTIVE. (Qualcomm)

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

R2-2000540 Email discussion report [108#97] for how to minimize ping-pong between CN types in RRC_IDLE/RRC_INACTIVE Qualcomm India Pvt Ltd discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

- Ericsson think there is no agreement to do something. Huawei thinks this is an optimisation with not enough support.
- Sony thinks there is a ping pong issue to solve. QC agree.

⇒ **postponed**

R2-2001474 Report - Email discussion [108#96][NB-IoT/eMTC R16] Finalise details on RAI discussion Ericsson Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1 AS RAI can be used when connected to EPC or 5GC, including when in RRC connected mode and using CP/UP optimisations, EDT, or PUR.
Proposal 2 AS RAI can be provided with any higher layer PDU transmission in the UL including the last one or with no higher layer PDU transmission in the UL.
Proposal 3 AS RAI, when triggered, should have higher priority than data.
Proposal 4 AS RAI is provided in the same MAC CE as the DL channel quality report.
Proposal 5 One of the codepoints for AS RAI implies “no indication”.
Proposal 6 AS RAI has higher priority than data when AS RAI and DL channel quality report are provided in the same MAC CE.
Proposal 7 No other MAC mechanisms are introduced to provide AS RAI.
- ZTE wonders if this also excludes RRC mechanisms. Ericsson think nothing else was proposed.

Proposal 8 Codepoints for AS RAI are allocated as follows:
Code Point 00: No RAI information
Code Point 01: no subsequent DL and UL data transmission is expected
Code Point 10: a single subsequent DL transmission is expected
Code Point 11: Reserved.
Proposal 9 RAN2 to discuss whether AS RAI should be provided in case including AS RAI would lead to data segmentation.

Agreements
- AS RAI can be used when connected to EPC or 5GC, including when in RRC connected mode and using CP/UP optimisations, EDT, or PUR.
- AS RAI can be provided with any higher layer PDU transmission in the UL including the last one or with no higher layer PDU transmission in the UL.
- AS RAI is provided in the same MAC CE as the DL channel quality report.
- One of the codepoints for AS RAI implies “no indication”.
- AS RAI has higher priority than data when AS RAI and DL channel quality report are provided in the same MAC CE.
- No other mechanisms are introduced to provide R16 AS RAI.
- Codepoints for AS RAI are allocated as follows:
  - Code Point 00: No RAI information
  - Code Point 01: no subsequent DL and UL data transmission is expected
  - Code Point 10: a single subsequent DL transmission is expected
  - Code Point 11: Reserved.

✉ **[AT109e][309][NBIOT/EMTC] RAI whether AS RAI should be provided in case including AS RAI would lead to data segmentation (Ericsson)**
Scope: Proposal 3 and 9 of R2-2001474
Intended outcome: report in R2-2001793
Deadline: Thursday 27th 0900 CET

R2-2001793 [AT109e][309][NBIOT/EMTC] RAI whether AS RAI should be provided in case including AS RAI would lead to data segmentation Ericsson report

⇒ **Revised in R2-2001797**

R2-2001797 [AT109e][309][NBIOT/EMTC] RAI whether AS RAI should be provided in case including AS RAI would lead to data segmentation Ericsson report

Proposal 1AS RAI, when triggered, should have higher priority than data if including AS RAI would not lead to data segmentation.

Proposal 2When AS RAI is triggered by upper layers but cannot be sent along with the associated MAC SDU, AS RAI is cancelled.

- Blackberry thinks the condition for not being able to send could be clearer.
- QC think p2 is not only for EDT
- Blackberry wonder if RAI needs to be cancelled or if UE can send later. Ericsson think the RAI needs to go along with what it is associated with. HW think the reason to cancel is related to the prioritization and eNB knows what to expect in DL.
-

Agreements

- AS RAI, when triggered, should have higher priority than data if including AS RAI would not lead to data segmentation.
- For EDT and PUR: When AS RAI is triggered by upper layers but cannot be sent along with the associated MAC SDU due to MAC prioritisation, AS RAI is cancelled.
  - FFS non-EDT/non-PUR case

R2-2002015 Summary of contributions for connection to 5GC (AI 7.2.10) Huawei discussion Rel-16 NB_IOTenh3-Core, LTE_eMTC5-Core

Agreements proposed to be agreed in this meeting (from all sub-topics):

Proposal S3-1: Similar as UP CIoT EPS Optimization, rrc-SuspendIndication in RRCConnectionReject can be supported for UP CIoT 5GS Optimization. No change for specification is needed.
Proposal S3-2: DL channel quality report can be supported for both NB-IoT and eMTC connected to 5GC.
Proposal S3-3: Confirm the working assumption that cause delayTolerantAccess it not applicable to 5GC.
Proposal S3-4: Confirm the working assumption that there is no need for an indication of extended Idle mode DRX support in system information for NB-IoT.
Proposal S3-5: Confirm the working assumption that there is a new IE up-EDT-5GC-r16 in SIB2-BR/SIB2-NB to indicate ng-eNB connected to 5GC supports CP MO-EDT.
Proposal S3-6: Revert the working assumption that the values ‘n’ and ‘m’ for the truncation of the 5G-S-TMSI are signalled per PLMN in SystemInformationBlockType2-NB.
Proposal S3-7: Remove the IE cp-ReestablishmentPLMNList-5GC-r16 in SystemInformationBlockType2-NB.
Proposal S3-8: For 5GC, CP re-establishment is always enabled, there is no need for an indication in system information.
Proposal S3-9: The existing capability multipleDRB-r13 is also applicable to 5GC
Proposal S3-10: PUR is supported in EPC and 5GC.
Proposal S3-11: Introduce separate indications up-PUR-5GC-r16 and cp-PUR-5GC-r16 in SIB2-BR/SIB2-NB
Proposal S3-12: Introduce separate UE capabilities pur-UP-5GC-r16 and pur-CP-5GC-r16.
Proposal S4-1: Add ab-PerRSRP-r16 parameter (same definition as SIB14-BR) in SIB25-BR.
Proposal S4-2: BL UEs or UEs in CE in RRC_CONNECTED mode performs access barring check based on the latest UAC parameters acquired prior to entering RRC_CONNECTED.

Agreements

- Similar as UP CIoT EPS Optimization, rrc-SuspendIndication in RRCConnectionReject can be supported for UP CIoT 5GS Optimization. No change for specification is needed.
- DL channel quality report can be supported for both NB-IoT and eMTC connected to 5GC.
- Confirm the working assumption that cause delayTolerantAccess it not applicable to 5GC.
- Confirm the working assumption that there is no need for an indication of extended Idle mode DRX support in system information for NB-IoT.
- Confirm the working assumption that there is a new IE cp-EDT-5GC-r16 in SIB2-BR/SIB2-NB to indicate ng-eNB connected to 5GC supports CP MO-EDT.
- Revert the working assumption that the values ‘n’ and ‘m’ for the truncation of the 5G-S-TMSI are signalled per PLMN in SystemInformationBlockType2-NB.
- Remove the IE cp-ReestablishmentPLMNList-5GC-r16 in SystemInformationBlockType2-NB.
- The existing capability multipleDRB-r13 is also applicable to 5GC
- PUR is supported in EPC and 5GC.
- Introduce separate indications up-PUR-5GC-r16 and cp-PUR-5GC-r16 in SIB2-BR/SIB2-NB
- Introduce separate UE capabilities pur-UP-5GC-r16 and pur-CP-5GC-r16.

- Add ab-PerRSRP-r16 parameter (same definition as SIB14-BR) in SIB25-BR.
- BL UEs or UEs in CE in RRC_CONNECTED mode performs access barring check based on the latest UAC parameters acquired prior to entering RRC_CONNECTED.

✉ **[AT109e][310][NBIOT] 5GC open issues in AI 7.2.10 (Huawei)**
Scope: Progress the open issues and proposals listed in R2-2002015, not already agreed.
Intended outcome: report in R2-2001794
Deadline: Thursday 27th 0900 CET

R2-2001794 [AT109e][310][NBIOT] 5GC open issues in AI 7.2.10 Huawei

⇒ **Revised in R2-2001798**

R2-2001798 [AT109e][310][NBIOT] 5GC open issues in AI 7.2.10 Huawei

Potential easy agreements

Proposal S1-1: For 5GC, CP re-establishment is always enabled and there is no need for an indication in system information.

Proposal S2-1: systemInformationBlockType25-BR follows the same system information update mechanism as SIB14-BR and does not affect the value tag.

Proposal S2-2: A new parameter *uac-ParamModification* (similar to *eab-ParamModification*) is introduced in the Paging message and in the Direct Indication Information to indicate SIB25-BR modification and scheduling.

Agreements:
- For 5GC, CP re-establishment is always enabled and there is no need for an indication in system information.
- systemInformationBlockType25-BR follows the same system information update mechanism as SIB14-BR and does not affect the value tag.
- A new parameter *uac-ParamModification* (similar to *eab-ParamModification*) is introduced in the Paging message and in the Direct Indication Information to indicate SIB25-BR modification and scheduling.

Others

R2-2000517 Remaining FFSs for connection to 5GC ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-2000539 UAC information change indication for eMTC UE connected to 5GC Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1914801

R2-2000648 Access barring for eMTC connected to 5GC Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core

R2-2000830 Mobility enhancements for Connectivity to 5GC for MTC and NB-IoT Sony discussion Rel-16 NB_IOTenh3-Core R2-1915237 Withdrawn

R2-2001014 UE redirection to a specific CN type and ping-pong behavior Sony Europe B.V. discussion NB_IOTenh3-Core

R2-2001478 AS RAI and optimization of release in EDT Ericsson discussion LTE_eMTC5-Core, NB_IOTenh3-Core Late

7.2.11 UE specific DRX

Specify support of UE specific DRX and consider expanding the current DRX range
Including outcome of the email discussion [108#98][NB-IoT] UE specific DRX (Huawei)
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponing of some items to next meeting. A web conference will be used for handling some of the discussions in this AI.

Reports/Summaries

R2-2000626 Report of email discussion [108#98][NB-IoT] UE specific DRX NB_IOTenh3-Core Late Huawei report Rel-16

⇒ **Revised to R2-2001781**

R2-2001781 Report of email discussion [108#98][NB-IoT] UE specific DRX NB_IOTenh3-Core Late Huawei report Rel-16

SIB indication is introduced to enable/disable the use of UE specific DRX for EPC.

(A：No challenging on the need, only one company wants to broadcast the minimum DRX cycle)

- Sequans and QC thinks we can't agree yet, as we have not settled the details
- QC thinks we should make the proposal conditional on whether we agree to introduce.
- China Unicom thinks we can agree and move forward
- Huawei thinks it is clear from the LS that this should be supported for EPC and 5GC and they are discussing options.
- Sequans thinks there are issues to discuss in RAN2. Huawei thinks these were discussed in the email discussion and most companies think they can be solved by eNB implementation.
- Ericsson thinks this should be supported and should be more straightforward than some claim. ZTE agree with Ericsson.
- Vodafone thinks we should standardise and would like to see issues resolved.
- Sony thinks we may need to clarify this is only for NB-IoT. Huawei thinks it is clear that this is only NB-IoT. Sony thinks it is clear that this discussion is about NB-IoT but it should be clear in any reply LS too.
- Ericsson think it is clear that we should introduce an indication as it is needed for both options provided by SA2 and is already part of the WI objectives
- Huawei think SA2 agreed to introduce for EPC and 5GS, they are just discussing the options.
- Vodafone also think SA2 instruction is clear and prefer option 2.

Indicate in the Reply LS to SA2 that both options are feasible from RAN2 point of view.

(A: Almost all companies think both options are feasible)

- Sequans thinks we can't say these are feasible without discussing all the details
- China Unicom thinks we need to reply and option 2 is their preference
- Sequans thinks there is LTE impact from option 2. QC think the LS may contain an error regarding EPC. Ericsson thinks the LS just considers how things work in NB-IoT and eMTC today, and think the intention is not to change eMTC. Vodafone thinks there is a mistake in the LS.
- Huawei think both options have impact in multiple groups and the LS has gone to them. We should reply from RAN2 perspective, and in RAN2 the impact is the indication and paging probability, so no issue that makes either option not feasible from RAN2 perspective. The issue raised by Sequans is not a RAN2 issue.
- China Telecom agree with HW.

Indicate in the Reply LS to SA2 that RAN2 has a preference for Option 2 as it can support separate value ranges for NB-IoT and WB-EUTRAN.

RAN2 to discuss the value range of NB-IoT UE specific DRX cycle.

(B: 8 out of 11 companies prefer Option 2 as it can support separate value ranges.)

- Sequans think we should also point out issues.
- Ericsson thinks there should not be MME impact with option 1. QC thinks it depends on the MME implementation. QC thinks option 1 is too limited and option 2 also means a common solution between RATs.
- Sequans think we need to discuss MME awareness. Huawei thinks this is not in RAN2 scope.
- QC thinks the NB-Iot value range has to be re-used. Huawei thinks the main objective of the UE specific DRX is latency reduction so LTE range should be used. Sequans thinks the NB-IoT range should be used. Huawei think there is no range currently for NB-IoT in CT1, so the only one to re-use is the LTE one.
- QC thinks the value range needs to be concluded before the LS is sent. HW thinks the behavior is not impacted by the range.

It is up to eNB implementation to address timely paging issue for UE specific DRX in NB-IoT.

It is up to eNB implementation to address PO overlapping issue for UE specific DRX in NB-IoT.

It is up to eNB implementation to address fractional nB value issue UE specific DRX in NB-IoT.

(B: 7 out of 11 companies think above issues are up to NW implementation)

Agreements:

- *For both option 1 and option 2, a SIB indication is needed at least for enabling/disabling the use of UE specific DRX for NB-IoT accessing EPC.*
- *Indicate in the Reply LS to SA2 that both options are feasible from RAN2 point of view.*
- *Indicate in the Reply LS to SA2 that RAN2 has a preference for Option 2.*
- *FFS value range for NB-IoT.*

Others

R2-2000627 [Draft] Reply LS to Reply LS on Rel-16 NB-IoT enhancements Huawei LS out Rel-16 NB_IOTenh3-Core To:TSG RAN, TSG CT, SA2 WG2, CT WG1, RAN WG3 Cc:TSG SA Late

✉ **[AT109e][318][NBIOT] Reply LS to Reply LS on Rel-16 NB-IoT enhancements (Huawei)**
Status: Not started
Scope: Discuss the value range + Draft the reply LS based on the agreements.
Intended outcome: Report in R2-2001804, Approved LS in R2-2001795
Deadline: 04-03-2020, 12:00 CET – Value range
Deadline: 06-03-2020, 12:00 CET – LS approved

R2-2001804 Report of [AT109e][318][NBIOT] value range of UE specific DRX in NB-IoT Huawei

⇒ **Noted**

Agreements:

- FFS: 320ms, 640ms, 1280ms, 2560ms, 5120ms and 10240ms are supported for UE specific DRX cycle in NB-IoT cell, for both EPS and 5GS.
- Reply CT1 LS to inform the values for UE specific DRX cycle in NB-IoT cell are FFS.

✉ **[109e#xx][NBIOT] UE specific DRX: DRX cycle values (Sequans)**
Scope: Identify the RAN2 issues created by shorter DRX cycles that cannot be solved.
Intended outcome: report to next meeting
Deadline: next meeting

R2-2001795 draft Reply LS on Rel-16 NB-IoT enhancements Huawei [CB]

R2-2000628 TP for Introduction of UE specific DRX for NB-IoT in 36.300 Huawei discussion Rel-16 36.300 NB_IOTenh3-Core Late

R2-2000629 TP Introduction of UE specific DRX for NB-IoT in 36.304 Huawei discussion Rel-16 36.304 NB_IOTenh3-Core Late

R2-2000630 TP for Introduction of UE specific DRX for NB-IoT in 36.306 Huawei discussion Rel-16 36.306 NB_IOTenh3-Core Late

R2-2000631 TP for Introduction of UE specific DRX for NB-IoT in 36.331 Huawei discussion Rel-16 36.331 NB_IOTenh3-Core Late

R2-2000836 Details on UE Specific DRX cycle Sony discussion Rel-16 NB_IOTenh3-Core

R2-2001629 NB-IoT UE Specific DRX - NB-IoT UE specific DRX – Options 1/2 and Fast Paging Escalation Sequans Communications discussion Rel-16 NB_IOTenh3-Core

R2-2001630 NB-IoT UE Specific DRX - Efficiency Issues Sequans Communications discussion Rel-16 NB_IOTenh3-Core R2-1916236

7.2.12 Other

Others

7.3 Even further mobility enhancement in E-UTRAN

(LTE_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-190921)
Tdoc Limitation: see 6.9 above.
No documents should be submitted to 6.9.
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for this agenda.
A web conference may be used for handling some of the discussions in this WID.

7.3.1 Organizational

Including incoming LSs and rapporteur inputs (if any)
Including outcome of email discussion [108#63][LTE Mob] Running Stage-2 CR (China Telecom)
Including DAPS part of the outcome of email discussion [108#66][LTE NR Mob] Open issues for LTE and NR mobility (Intel)
Including LTE part of the outcome of email discussion [108#45][LTE NR Mob] UE feature list for LTE and NR mobility (Intel).
A web conference is planned for this agenda item.

Noted

R2-2000024 Reply LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO (R1-1913686; contact: Intel) RAN1 LS in Rel-16 LTE_feMob-Core To:RAN2 Cc:RAN3, RAN4

⇒ **Not flagged**

⇒ **Noted**

By Web Conf

The follwowing are expected to be handled via web conference:

RRC running CR for LTE mobility (outcome of 108#35):

R2-2001129 Introduction of Even futher Mobility enhancement in E-UTRAN Ericsson India Private Limited CR Rel-16 36.331 15.8.0 4205 - B LTE_feMob-Core

⇒ **Endorsed as running CR**

Stage-2 running CR for LTE mobility (outcome of 108#63):

R2-2001653 36300 CR for LTE feMob ChinaTelecom CR Rel-16 36.300 16.0.0 1270 - B LTE_feMob

⇒ **Endorsed as running CR**

UE feature list for LTE mobility WID (for report of 108#45, see NR mobility WID):

R2-2001473 UE Capability for Rel-16 LTE even further mobility enhancement Intel Corporation CR Rel-16 36.306 15.7.0 1742 - B LTE_feMob-Core
(moved from 6.9.1)

⇒ **Noted (not discussed online), discussed as part of offline email discussion [211].**

CR finalization

✉ **[AT109e][220][LTE MOB] Stage-2 CR (China Telecom)**
Intended outcome: Agreed 36.300 CR for NR mobility

Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CR can be provided in R2-2001752**

✉ **[AT109e][221][LTE MOB] RRC CR (Ericsson)**
Intended outcome: Agreed 36.331 CR for LTE mobility
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CR can be provided in R2-2001753**

✉ **[AT109e][222][MOB] PDCP CRs for LTE and NR (Huawei)**
Intended outcome: Agreed 36.323 and 38.323 CR for LTE and NR mobility
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CRs can be provided in R2-2001750 (NR) and R2-2001754 (LTE)**

✉ **[AT109e][223][MOB] MAC CRs for LTE and NR (vivo)**
Intended outcome: Agreed 36.321 and 38.321 CR for LTE and NR mobility
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CRs can be provided in R2-2001751 (NR) and R2-2001755 (LTE)**

Withdrawn:

R2-2001579 Running 36300 CR for LTE feMob ChinaTelecom draftCR Rel-16 36.300 16.0.0 B LTE_feMob Withdrawn

R2-2000334 Running CR for Introduction of Even futher Mobility enhancement in E-UTRAN Ericsson draftCR Rel-16 36.331 15.8.0 LTE_feMob-Core Withdrawn

7.3.2 Reduction in user data interruption for dual active protocol stack (DAPS) handover

DAPS handovers for LTE and NR are treated jointly in under this AI.
No documents should be submitted to 7.3.2. Please submit to 7.3.2.x.

7.3.2.1 User plane aspects of DAPS HO

No documents should be submitted to 7.3.2.1. Please submit to 7.3.2.1.x.

7.3.2.1.1 PDCP/RLC aspects of DAPS HO

DAPS impacts to PDCP/RLC for LTE and NR are treated jointly under this AI. SDAP-specific aspects should be submitted to 6.9.2.
Including the outcome of email discussion [108#64][LTE NR Mob] Running CRs for LTE and NR PDCP on mobility (Huawei)
Including details on when/whether PDCP status reporting is triggered during DAPS procedure.
Note: Handling of EHC with DAPS to be done when the IioT WID has progressed more.
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.

By Web Conf

Report of email discussion [108#64][LTE NR Mob] Running CRs for LTE and NR PDCP on mobility (Huawei)

R2-2001646 Running CR for 38.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. CR Rel-16 38.323 15.6.0 0042 - B LTE_feMob-Core

⇒ **Endorsed as running CR**

R2-2001647 Running CR for 36.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. CR Rel-16 36.323 15.5.0 0279 - B LTE_feMob-Core

⇒ **Endorsed as running CR**

Taking output of 108#66 into account:

R2-2000730 Draft CR for 38.323 based on email discussion#66 output Huawei, HiSilicon draftCR Rel-16 38.323 15.6.0 B LTE_feMob-Core

R2-2000731 Draft CR for 36.323 based on email discussion#66 output Huawei, HiSilicon draftCR Rel-16 36.323 15.5.0 B LTE_feMob-Core

By Email

R2-2000124 PDCP status reporting in target cell at DAPS handover Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-2000128 Switch of UL data during DAPS handover with 2-step RA or RACH-less access Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-2000378 Release of the source ROHC upon the source link release vivo discussion Rel-16 LTE_feMob-Core

R2-2000379 PDCP status report for RLC UM vivo discussion Rel-16 LTE_feMob-Core

R2-2000383 Header compression after PDCP reordering vivo discussion Rel-16 LTE_feMob-Core

R2-2000384 Issue on the uplink duplicated PDCP SDUs vivo discussion Rel-16 LTE_feMob-Core

R2-2000465 Remaining issues on PDCP status report for DAPS Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

R2-2000694 PDCP Status Report for DAPS Handover ETRI discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

R2-2000707 Resetting UL PDCP SN for RLC UM in DAPS NEC discussion Rel-16 LTE_feMob-Core

R2-2000708 PDCP anchor relocation in DAPS NEC discussion Rel-16 LTE_feMob-Core

R2-2000729 Discussion on ROHC failure issue Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

R2-2000732 Draft CR for 38.323 on ROHC failure issue Huawei, HiSilicon draftCR Rel-16 38.323 15.6.0 B LTE_feMob-Core

R2-2000738 Leftover issues on DAPS PDCP Samsung discussion LTE_feMob

R2-2000896 UDC Impacts of DAPS CATT discussion Rel-16 LTE_feMob-Core

R2-2001425 Discussion of PDCP status report and UL switching for DAPS HO CMCC. discussion Rel-16 LTE_feMob-Core

R2-2001503 Need of discard indication LG Electronics Inc. discussion NR_Mob_enh-Core, LTE_feMob-Core

R2-2001504 Discussion on consecutive ROHC failure during DAPS HO LG Electronics Inc. discussion NR_Mob_enh-Core, LTE_feMob-Core

R2-2001505 Handling of stroed PDCP PDUs for DAPS LG Electronics Inc. discussion NR_Mob_enh-Core, LTE_feMob-Core

R2-2001507 Discussion on PDCP status report LG Electronics Inc. discussion NR_Mob_enh-Core, LTE_feMob-Core

R2-2001583 DAPS configuration related issues for disscussion China Telecom discussion Rel-16 LTE_feMob-Core

R2-2001639 Discussion on status reporting for UM DRB upon DAPS handover SHARP Corporation discussion Rel-16 LTE_feMob-Core

R2-2001152 Remaining open issues on DAPS HO Qualcomm Incorporated discussion

(moved from 6.9.2)R2-2000591 Open issues on Mobility Enhancement Apple discussion Rel-16 NR_Mob_enh-Core
(moved from 6.9.3)

⇒ **All of the above documents in this AI are handled in email discussion 209 – see below.**

Withdrawn:

R2-2000727 Running CR for 38.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. draftCR Rel-16 38.323 15.6.0 B LTE_feMob-Core Withdrawn

R2-2000728 Running CR for 36.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. draftCR Rel-16 36.323 15.5.0 B LTE_feMob-Core Withdrawn

7.3.2.1.2 MAC and UL transmission aspects of DAPS HO

Including the outcome of email discussion [108#65][LTE NR Mob] Running MAC CRs for LTE and NR (vivo)
Note: Handling the FFS on Msg.B details to be done when the 2-step RACH has progressed more.
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.

By Web Conf

Outcome of email discussion [108#65][LTE NR Mob] Running MAC CRs for LTE and NR (vivo)

R2-2000373 Report of EmailDisc-65 on MAC open issues for mobility enh. vivo (rapporteur) discussion Rel-16 NR_Mob_enh-Core

CRs as per outcome of email discussion [108#65][LTE NR Mob] Running MAC CRs for LTE and NR (vivo)

R2-2000371 Running 36.321 CR for LTE feMob vivo (rapporteur) CR Rel-16 36.321 15.8.0 1463 - B LTE_feMob-Core

⇒ **Endorsed as running CR**

R2-2000372 Running 38.321 CR for NR mobility enh. vivo (rapporteur) CR Rel-16 38.321 15.8.0 0687 - B NR_Mob_enh-Core

⇒ **Endorsed as running CR**

By Email

R2-2000736 The source MAC LCP procedure for DAPS handover Samsung discussion LTE_feMob

⇒ **All of the above documents in this AI are handled in email discussion 209 – see below.**

7.3.2.1.3 Summary documents for UP aspects of DAPS HO

Summary documents for Ais 7.3.2.1.1 and 7.3.2.1.2 are treated under this AI.
Summary document of 7.3.2.1.1 to be provided by NN.
Summary document of 7.3.2.1.2 to be provided by NN.

R2-2001532 Summary document for PDCP/RLC aspects of DAPS HO LG Electronics Inc. discussion NR_Mob_enh-Core, LTE_feMob-Core Late

⇒ **Noted**

Proposals in summary document:
Proposal S1_1: The PDCP status report for UM DRBs is introduced for uplink.

Proposal S2_1: The PDCP status report is triggered when releasing the source link.

Proposal S3_1: The PDCP entity decompresses the stored PDCP PDUs received from the source cell before releasing the ROHC function and security function associated with the source cell.

Proposal S7_1: Following issues are not discussed in the e-meeting.

- *Issue on the uplink duplicated PDCP SDUs*
- *Resetting of UL PDCP SN for UM DRBs*
- *Need of discard indication*
- *PDCP anchor relocation in DAPS*
- *How to handle the PDCP state variables*
- *Need of indication of DAPS handover execution to the source just before the initial UL transmission in the target or upon uplink data switching*

DISC S1_1: Discuss whether the PDCP status report for UM DRBs is introduced for downlink.

DISC S2_1: Discuss whether the PDCP status report is triggered for UM DRBs when releasing the source link.

DISC S3_1: Discuss whether it can be resolved by UE implementation that the PDCP entity decompresses the stored PDCP PDUs received from the source cell before releasing the ROHC function and security function associated with the source cell.

DISC S4_1. RAN2 decides whether the consecutive ROHC decompression failure should be resolved by UE/network implementation or not. If the consecutive ROHC decompression failure cannot be resolved by UE/network implementation, the detailed solution can be discussed by the offline discussion or email discussion.

DISC S5_1. RAN2 discuss whether two reordering functions are needed or not.

DISC S6_1. RAN2 discuss whether and what will specify UDC for DAPS HO. The offline or email discussion can be used to potentially reach an agreeable set of CR proposals.

R2-2002099 Summary of DAPS MAC vivo discussion Rel-16 LTE_feMob-Core
(moved from 7.3.2.1.2)

⇒ **Noted**

Proposals in summary document:
DISC S1_1: RAN2 to confirm the understanding that whether the LogicalChannelConfig of non-DAPS DRBs from the source MAC entity should be released during DAPS handover.

- *If yes. Whether need any further clarification in RRC.*
- *If no; The source MAC entity selects only the logical channels corresponding to DAPS DRBs when the LCP procedure is applied, and the LCHs corresponding to non-DAPS DRBs should not be considered for LCP procedure of the source MAC entity during DAPS handover*

⇒ **All of the contributions in the AIs 7.3.2.1.1 and 7.3.2.1.2 are handled in email discussion 209 (LGE)**

✉ **[AT109e][209][MOB] Closing UP issues (PDCP/RLC/MAC) and discussing remaining open items for DAPS (LGE)**
Scope:
- Agreeing on the proposals as per R2-2001532 and R2-2002099.
- Discuss open items as per R2-2001532 and R2-2002099 to seek companies feedback on open issues of UP for DAPS.

Intended outcome:

- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:

- Companies input: Wednesday, Feb. 26th 17:00 CET
- Rapporteur proposals (including CR changes): Thursday, Feb. 27th 17:00 CET
- Comments on proposals: Monday March 2nd by 12:00 CET

R2-2002165 Outcome of offline discussion 209 for closing UP issues (PDCP/RLC/MAC) and discussing remaining open items for DAPS LG Electronics Inc. (summary rapporteur)

⇒ **Noted**

Agreements [AT109e][209][MOB]

⇒ **2. The second PDCP status report is introduced for AM DRBs, and the text proposal in Annex A is used as baseline.**

⇒ **3. How to handle the stored PDCP PDUs received from the source cell when releasing the source cell is specified using NOTE in the PDCP specification.**

⇒ **4. The target cell always transmits the PDCP PDUs containing IR packet until releasing the source cell.**

⇒ **5. RAN2 do not specify two reordering functions in PDCP.**

⇒ **6. In Rel-16, DAPS HO is not supported for DRBs configured with UDC.**

⇒ **7. The LogicalChannelConfig of non-DAPS DRBs is maintained in the source MAC entity during DAPS HO if the RLC entity configured with non-DAPS performs the re-establishment upon receiving the HO command**

⇒ **Above agreements will be implemented in the PDCP CRs for DAPS**

7.3.2.2 Control plane aspects of DAPS HO

No documents should be submitted to 7.3.2.2. Please submit to 7.3.2.2.x.

7.3.2.2.1 RRC procedures during DAPS HO

Including outcome of email discussion [108#35][LTE Mob] Running RRC CR (Ericsson)
Including any remaining RRC configuration and procedural details, e.g. fallback to source cell when target cell fails, handling of source/target RRC configuration during DAPS.
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.

By Email

R2-2000125 Open issues at fallback to source cell at DAPS handover Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-2000127 RRC signalling of DAPS handover per DRB Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-2000129 Subsequent RRC procedures after DAPS handover Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-2000313 Security Key Handling for DAPS HandoverMediaTek Inc. discussion

R2-2000380 Failure handling of the non-DAPS DRB vivo discussion Rel-16 LTE_feMob-Core R2-1914704

R2-2000381 Clarification on stopping the source link failure vivo discussion Rel-16 LTE_feMob-Core

R2-2000382 Single or two RRC messages for DAPS handover vivo discussion Rel-16 LTE_feMob-Core

R2-2000467 Remaining issues on RLM after RACH for DAPS Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

R2-2000656 Non-DAPS DRB handling upon DAPS HO failure OPPO discussion Rel-16 LTE_feMob-Core

R2-2000657 Source RLF handling during DAPS HO OPPO discussion Rel-16 LTE_feMob-Core

R2-2000733 Discussion on fallback to source cell Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

R2-2000898 Remaining RRC configuration details for DAPS CATT discussion Rel-16 LTE_feMob-Core

R2-2001506 Handling of DAPS HO failure LG Electronics Inc. discussion NR_Mob_enh-Core, LTE_feMob-Core

R2-2001640 State variables of SRB PDCP for the target in NR SHARP Corporation discussion Rel-16 LTE_feMob-Core

R2-2001641 Clarification of implementation order of Reconfiguration with sync and AS Security key update procedures SHARP Corporation discussion Rel-16 LTE_feMob-Core

R2-2001642 Non-DAPS DRB handling at DAPS handover failure SHARP Corporation discussion Rel-16 LTE_feMob-Core

R2-2000126 DAPS handover without key change Ericsson discussion Rel-16 NR_Mob_enh-Core

(moved from 6.9.2)

R2-2001149 Source connection handling during DAPS HO Qualcomm Incorporated discussion

(moved from 6.9.2)

⇒ **All of the above documents in this AI are handled in email discussion 210 (Huawei)**

✉ **[AT109e][210][MOB] RRC procedural issues and remaining open items for DAPS CP (Huawei)**

Scope:

- Agreeing on the proposals as per R2-2002033 and any topics identified in 108#66 (R2-2000461).
- Discuss open items as per R2-2002033 and R2-2000461 to seek companies feedback on open issues of RRC for DAPS.

Intended outcome:

- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:

- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals (including CR changes): Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

R2-2002207 Report of [AT109e][210][MOB] RRC procedural issues and remaining open items for DAPS CP (Huawei) Huawei, HiSilicon

⇒ **Noted**

Agreements [AT109e][210][MOB]

⇒ **1: Upon DAPS handover failure, UE reverts back to the source configuration prior to the reception of the handover command (including RLC and PDCP state) for the DRB that is not configured with DAPS.**

⇒ **2: For non DAPS DRB, upon DAPS HO failure, the reverted PDCP/RLC state includes data stored in transmission and reception buffers in PDCP and RLC entities prior to the reception of the handover command.**

⇒ **3: For non DAPS DRB, upon DAPS HO failure, the reverted source configuration also includes SDAP (for NR) configuration and logical channel configuration.**

⇒ **4: If the data is reverted for non-DAPS DRBs in case of DAPS HO failure, the data stored in transmission and reception buffers should NOT be discarded.**

⇒ **5: RRC re-establishment shall not be triggered due to source link RLF after successful RA and before the release of source link.**

⇒ **7: for NR, the state variables of the target SRB PDCP should be set to the latest ones kept in the source SRB PDCP if security key is unchanged.**

⇒ **9: for SRBs and non-DAPS DRBs, the PDCP COUNT is maintained when DAPS HO without key change and also at fallback to source cell when DAPS handover is performed without key change.**

⇒ **Above agreements will be implemented in the CRs for DAPS**

⇒ **The following proposals are postponed to next meeting:**

Proposal 10: RAN2 to discuss "whether and how to specify UE reverts back source cell keys for non-DAPS DRBs"

Proposal 6: RAN2 to discuss "move the setup of SRB for target from Reconfiguration with sync section into SRB modification section" in RRC running CR.

Proposal 8: RAN2 discuss " for DAPS DRBs, the same RoHC context shall be applied for both the source and target link when DAPS handover is performed without key change".

7.3.2.2.2 UE capabilities for DAPS HO

Including UE capability coordination and remaining details of UE capability definitions .

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.

By Email

R2-2000123	Capability coordination for DAPS handover	Ericsson	discussion	Rel-16 NR_Mob_enh-Core
R2-2000537	UE capability co-ordination signalling aspects for DAPS HO	Qualcomm Inc, Google Inc, Apple Inc, MediaTek Inc, Charter Communications	discussion	Rel-16 LTE_feMob-Core R2-1914804
R2-2000654	Discussion on UE capabilities for DAPS HO	OPPO	discussion	Rel-16 LTE_feMob-Core R2-1915162
R2-2000655	Further considerations on capability coordination	OPPO	discussion	Rel-16 LTE_feMob-Core R2-1915155
R2-2000734	Discussion on SCell handling during DAPS HO	Huawei, HiSilicon	discussion	Rel-16 LTE_feMob-Core
R2-2000735	Discussion on UE capability coordination for DAPS HO	Huawei, HiSilicon	discussion	Rel-16 LTE_feMob-Core
R2-2000759	Remaining issues on capability coordination for DAPS	NEC	discussion	Rel-16 LTE_feMob-Core
R2-2000897	Further Discussion on Capability Coordination for DAPS	CATT	discussion	Rel-16 LTE_feMob-Core
R2-2001153	UE capability handling for DAPS	Nokia Italy	discussion	Rel-16
R2-2001164	Capability coordination for DAPS	Samsung Telecommunications	discussion	Rel-16 LTE_feMob-Core Late
R2-2001261	Remaining issues on UE capability coordination for DAPS HO	ZTE Corporation, Sanechips	discussion	Rel-16 LTE_feMob-Core

R2-2001539 Handling Excess of UE Capability in DAPS HO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1916210

⇒ **All of the above documents in this AI are handled in email discussion [211] (Intel)**

✉ **[AT109e][211][MOB] UE capabilities for DAPS and CHO (Intel)**
Scope:
- Agreeing on the proposals as per 108#45 outcome in R2-2000459 and R2-2002041.
- Discuss open items as per R2-2002041 to seek companies feedback on open issues of UE capabilities for DAPS.

Intended outcome:
- List of basic UE capabilities for DAPS and CHO,including basic ASN.1 structure (if possible)
- List of remaining open issues for UE capabilities (e.g. topics dependent on other WG input)
- If needed, draft LS to be sent to RAN1/4 containing RAN2 decisions on UE capabilities

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

R2-2001727 Report of [AT109e][211][MOB] UE capabilities for DAPS and CHO (Intel) Intel Corporation

⇒ **Noted**

Agreements [AT109e][211][MOB] (R2-2001727**)**

⇒ **1: Agree the capabilities (x1-1, x1-3, x2, x3) including the revisions as indicated in the table for NR. May be revised based on further inputs**

⇒ **2: Agree the capabilities (x1-1, x1-3) including the revisions as indicated in the table for LTE. May be revised based on further inputs**

⇒ **3: Intra freq DAPS can be supported for bandwidthClass B/C and above UE (e.g. bandwidthClass B/C UE, the UE supports intraF DAPS with bandwidth class A for the band against source and target). The capability intra-FreqDAPS is put under bandParameter.**

⇒ **4: For inter freq DAPS, the capability inter-FreqDAPS is specified per BC (for intra band, inter band cases). .It is put under existing CA bandcombiantion, and same as CA, the CCs in the bandcombination with UL can all be source or target PCell.**

⇒ **5: Below RAN4 capabilities are introduced as baseline, and may be revised if more inputs are received from RAN4.**
- **Per BC: AsyncDAPS, supportedNumberTAG, singleUL-Transmission;**
- **Per Band per BC: intraBandDiffSCS, intraFreq-DAPS;**

⇒ **6: Reuse CA capability supportedNumberTAG for DAPS handover.**

⇒ **7: Per Band per BC capability (intraBandDiffSCS, intraFreq-DAPS) is put in BandParameters.**

⇒ **8: Baseline is UplinkPowerSharingDAPS-HO, pdcch-BlindDetectionMCG1-UE and pdcch-BlindDetectionMCG2-UE are introduced as per BC capabilities. May be revised if more inputs are received from RAN1., .e.g. on whether pdcch-BlindDetectionMCG1-UE and pdcch-BlindDetectionMCG2-UE can be per UE as DC.**

⇒ **9: pdcch-BlindDetectionSource, pdcch-BlindDetectionTarget and supportedNumberTAG(>=2) are mandatory with capability for DAPS capable UE. FFS on intraFreqDAPS, uplinkPowerSharing and Sync-DAPS.**

⇒ **10: As agreed in RAN4, intraBandDiffSCS is different for intra/inter DAPS, i.e. separate capability.**

⇒ **11: Agree the ASN.1 part in section 7 as baseline for LTE and NR.**

⇒ **12: Source decides source configuration to be used during DAPS handover and the restriction in target; target determines the target configuration based on received source configuration to be used during DAPS HO and UE capabilities, and generates the DAPS handover command and the target node sends the DAPS handover command to the source node in the X2/Xn HANDOVER REQUEST ACKNOWLEDGE which transparently forwards it to the UE.**

⇒ **13: Same as legacy reconfiguration procedure, modification of target configuration can be sent in the same message for source release;**

⇒ **15 For LTE, the DAPS network coordination is based on source link configuration to be used during DAPS HO, UE capabilities, maxSCH-TB-BitsDL, maxSCH-TB-BitsUL, powerCoordinationInfo within HandoverPreparationInformation message;**

⇒ **16:For NR, the DAPS network coordination is based on source link configuration to be used during DAPS HO, UE capabilities, maxSCH-TB-BitsDL (to be redefined for NR), maxSCH-TB-BitsUL (to be redefined for NR), powerCoordinationInfo within HandoverPreparationInformation message; To discuss whether coordination on maxSCH-TB-BitsDL, maxSCH-TB-BitsUL are needed.**

⇒ **19: SCells are released in HO command, and not configured in HO command. To clarify this in UE capability,i.e. intra/inter-F DAPS capability indicates that the UE can only do DAPS handover with source and target PCell and no SCells. There should no other specification impact.**

⇒ **Above agreements will be implemented in the CRs for DAPS when the CRs including the capabilities are created**

⇒ **The following proposal is not discussed in Rel-16:**

Proposal 18: Scells not released (regardless of activated/deactivated) during DAPS HO shall be counted against the total number of CCs the UE can support.

⇒ **The following proposals are postponed to next meeting**

Proposal 14: Further discussion on whether same as legacy HO, in HO preparation procedure, source only provides a single source configuration to target.

Proposal 17: Consider in next meeting that to support dynamic power sharing whether the UE needs to report the PH value of Pcell of one MAC entity to the another MAC entity during DAPS HO and how.

7.3.2.2.3 Summary documents for CP aspects of DAPS HO

Summary documents for AIs 7.3.2.2.1 and 7.3.2.2.2 should be submitted under this AI.
Summary document of 7.3.2.2.1 to be provided by NN.
Summary document of 7.3.2.2.2 to be provided by NN.

R2-2002033 Summary on RRC procedures during DAPS HO Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

⇒ **Noted**

Proposals in summary document:

Agreements proposed to be agreed in this meeting (from all sub-topics)

Proposal S1_1: Upon DAPS handover failure, UE reverts back to the source configuration prior to the reception of the handover command (including RLC and PDCP state, but do not re-establish PDCP and RLC) for the DRB that is not configured with DAPS.

Proposal S1_2: For non DAPS DRB, upon DAPS HO failure, the reverted PDCP/RLC state includes data stored in transmission and reception buffers in PDCP and RLC entities prior to the reception of the handover command.

Proposal S1_3: For non DAPS DRB, upon DAPS HO failure, the reverted source configuration also includes SDAP (for NR) configuration and logical channel configuration.

Open items proposed to be further discussed in this meeting (from all sub-topics)

DISC S1_1: RAN2 to discuss "If the data is reverted for non-DAPS DRBs, the data should be discarded for UM DRBs in order to transmit/receive a new data immediately."

DISC S2_1: RRC re-establishment shall not be triggered due to source link RLF after successful RA and before the release of source link.

DISC S3_1: If the DAPS configuration is included in DRB-ToAddMod, RAN2 should then clarify if it is part of the DRB configuration (i.e. not a "one-shot" parameter) and then can be configured prior to the handover.

DISC S3_2: RAN2 should confirm whether AS security key update procedure is implemented before reconfiguration with sync procedure or not.

DISC S3_3: If reconfiguration with sync procedure is performed before AS security key update procedure, SRB PDCP entity for the target should be re-established at SRB addition/modification procedure to apply the new keys.

DISC S4_1: RAN2 discuss how to model "for NR, the state variables of the target SRB PDCP should be set to the latest ones kept in the source SRB PDCP if security key is unchanged".

DISC S4_2: RAN2 discuss " for DAPS DRBs, the same RoHC context shall be applied for both the source and target link when DAPS handover is performed without key change".

DISC S4_3: RAN2 discuss " for SRBs and non-DAPS DRBs, the PDCP COUNT is maintained when DAPS HO without key change and also at fallback to source cell when DAPS handover is performed without key change".

Proposals that can be revisited if no agreement is made based on 108#66 output

REVI S1_1: RAN2 to discuss whether to re-establish PDCP/RLC entities of non DAPS DRB in case of DAPS HO failure.

REVI S3_1: RAN2 discuss if the following solution can be adopted for source configuration change, i.e. the DAPS handover command is an RRCReconfiguration message including a container which includes the RRCReconfiguration message for the target configuration.

R2-2002041	Summary of DAPS UE capabilities for DAPS HO in AI 7.3.2.2.2 16 LTE_feMob-Core, NR_Mob_enh-Core	Intel	discussion	Rel-16
	⇒ **Revised in R2-2002101**			
R2-2002101	Summary of DAPS UE capabilities for DAPS HO in AI 7.3.2.2.2 16 LTE_feMob-Core, NR_Mob_enh-Core	Intel	discussion	Rel-16
	⇒ **Noted**			

Proposals in summary document:
Issues to be covered by other email discusions and should be treated based on email discussion report:

Proposal 1-1: The issue on intra/inter freq DAP capability should be discussed based on email discussion 108#45;

Proposal 1-2: The issue on how to capture RAN1/4 DAPS capability should be discussed based on email discussion 108#45;

Proposal 2-1: The mechanisms on capability coordination, LTE DC based or MR DC based should be discussed based on email discussion 108#66;

Proposal 2-2: The issue how to handle the case if source+target configuration exceeds the UE capability should be discussed based on email discussion 108#66;

Proposal 3-1: The issue on the handling of source configuration change should be discussed based on email discussion 108#66;

Proposal 4-1: The issue on how to handle the scells during DAPS HO should be discussed based on email discussion 108#45;

Agreements proposed to be agreed in this meeting (from all sub-topics)

Proposal S2_1: Same as legacy HO, Source decides source configuration to be used in target and the restriction in target; target determines the target configuration and generates the DAPS handover command and the target node sends the DAPS handover command to the source node in the X2/Xn HANDOVER REQUEST ACKNOWLEDGE which transparently forwards it to the UE.

Proposal S2_2: Same as legacy reconfiguration procedure, modification of target configuration can be sent in the same message for source release;

Open items proposed to be further discussed in this meeting (from all sub-topics)

DISC S1_1: Discuss in a new email discussion on the issue Mandatory/optional of DAPS capabilities;

DISC S2_1:Discuss in a new email discussion on the issue for LTE and/or NR whether/how the UE needs to report the PH value of SpCell of one MAC entity to the other MAC entity during DAPS HO;

7.3.2.3 Other aspects of DAPS HO

Including any other open aspects of DAPS HO not covered by the other agenda items (for both LTE and NR).
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. No web conference is planned for this agenda item.
Summary document of 7.3.2.3 to be provided by NN.

7.3.3 Conditional handover

Contributions on conditional handover for LTE and NR are treated jointly in under 6.9.3. Do not use this AI for any item that can be discussed jointly.

7.4 Further performance enhancement for LTE in high speed scenario

(LTE_high_speed_enh2-Core; leading WG: RAN4; REL-16; started: Jun 18; target; Sep 19; WID: RP-181482)
Time budget: 0 TU. Final CR agreements.
Only final CR update is expected for this AI and the CR agreement will be treated only over email. No web conference is planned for this agenda item.

By Email

R2-2002048 Introduction of RRC parameters and UE capabilities for enhanced high speed scenario NTT DOCOMO INC, CR Rel-16 36.331 15.8.0 4095 3 B LTE_high_speed_enh2-Core R2-1913059 Late

⇒ **Revised in R2-2002173**

R2-2002173 Introduction of RRC parameters and UE capabilities for enhanced high speed scenario NTT DOCOMO INC, CR Rel-16 36.331 15.8.0 4095 4 B LTE_high_speed_enh2-Core R2-2002048

⇒ **Agreed**

R2-2002050 Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16 CMCC, Huawei, HiSilicon, NTT DOCOMO INC. CR Rel-16 36.306 15.7.0 1712 3 B LTE_high_speed_enh2-Core R2-1913066 Late

⇒ **Revised in R2-2002174**

R2-2002174 Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16 CMCC, Huawei, HiSilicon, NTT DOCOMO INC. CR Rel-16 36.306 15.7.0 1712 4 B LTE_high_speed_enh2-Core R2-2002050

⇒ **Agreed**

⇒ **All of the above documents in this AI are handled in email discussion [204] (NTT DOCOMO)**

✉ **[AT109e][204][LTE16] Agreeable CRs for LTE High-speed performance enhancement (NTT DOCOMO)**
Scope:
- Agree to CRs in R2-2002048 and R2-2002050.

Intended outcome:
- Agreed CRs for the LTE High-speed performance enhancement WID

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 18:00 CET (one day for rapporteur to create final CR proposals)
- Final CRs provided latest on Tuesday, March 2nd by 12:00 CET (can be agreed earlier if converged)

Agreements [AT109e][204][LTE16]

⇒ **Agree to the the CRs R2-2002173 and R2-2002174**

⇒ **The WID is complete and CRs are submitted to RAN#87-e**

7.5 Other LTE Rel-16 WIs

This agenda item is to be used for LSs and documents relating to Rel-16 LTE but for which there is no existing RAN WI/SI (e.g. LSs from CT/SA requesting RAN2 action) or for which there is no allocated RAN2 time.

This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.
Summary document of 7.5 to be provided by NN.

By Email

RLOS indicator: CRs agreed in principle in RAN2#107, only CR correctness needs to be checked:

R2-2000180 Introduction of RLOS support indicator and RLOS request indicator Qualcomm Incorporated CR
Rel-16 36.331 15.8.0 4049 2 B PARLOS R2-1911503

⇒ **Agreed**

Proposal in summary document:
***Proposal S1_1:** Agree to CRs in R2-2002048, R2-2002050, R2-2000180, R2-2001410, R2-2001408, R2-2001409, R2-2002075 and R2-2002078*

⇒ **See summary document issues in AI 7.6**

7.6 LTE TEI16 enhancements

Small Technical Enhancements to LTE. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see RP-191602 endorsed at RAN#84.
Time budget: 1 TU
This agenda item will utilize a summary document to facilitate treatment of topics during the e-meeting. This may lead to postponement of some items to next meeting. A web conference may be used for some topics in this agenda item.
Summary document of 7.6 to be provided by NN.

By Email

R2-2002088 Summary of LTE contributions in AIs 7.5 and 7.6 Summary rapporteur (RAN2 vice-chair) discussion

Proposal S2_1: *Postpone discussion on LS R2-2000090 until input contributions are received in RAN2.*

⇒ **See LS in AI 6.19**

S1 AGREE: Contributions proposed for easy agreement in summary document:

Proposal in summary document:
Proposal S1_1: *Agree to CRs in R2-2002048, R2-2002050, R2-2000180, R2-2001410, R2-2001408, R2-2001409, R2-2002075 and R2-2002078*

Wideband PRG (RAN1 TEI16): CRs agreed in principle in RAN2#107bis, only CR correctness needs to be checked:

R2-2001408 Introduction of wideband PRG size Huawei, HiSilicon CR Rel-16 36.306 15.7.0 1741 - B TEI16

⇒ **Agreed**

R2-2001409 Introduction of wideband PRG size Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4220 - B TEI16

⇒ **Agreed**

UDC reconfiguration at re-establishment: CRs agreed in principle in RAN2#107bis, only CR correctness needs to be checked:

R2-2001410 UDC reconfiguration for RRC connection re-establishment case Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4221 - C TEI16

⇒ **See R2-2001745**

⇒ **Revised in R2-2001737**

R2-2001737 UDC reconfiguration for RRC connection re-establishment case Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4221 1 C TEI16 R2-2001410

⇒ **Agreed**

Non-3GPP paging correction: CR agreed in principle in RAN2#107bis, some corrections based on RRC per-merge exercise in 108#28, only CR correctness needs to be checked:

R2-2002075 Correction on non-3GPP paging Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4172 2 C LTE_5GCN_connect-Core, TEI16 R2-1916316 Late

⇒ **See R2-2001745**

⇒ **Revised in R2-2001738**

R2-2001738 Correction on non-3GPP paging Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4172 3 C LTE_5GCN_connect-Core, TEI16 R2-2002075

⇒ **Agreed**

Correction to usage of H1/H2 events: CR agreed in principle in RAN2#107bis, some corrections based on RRC per-merge exercise in 108#28, only CR correctness needs to be checked:

R2-2002078 Correction on H1 and H2 events Samsung Electronics CR Rel-16 36.331 15.8.0 4103 2 C LTE_Aerial-Core, TEI16 R2-1913989 Late

⇒ **Agreed**

⇒ **All of the above documents under S1_AGREE in this AI are handled in email discussion 205**

✉ **[AT109e][205][LTE16] Agreeing to simple LTE Rel-16 CRs (RAN2 VC)**
Scope:

- Agree to CRs in R2-2002048, R2-2002050, R2-2000180, R2-2001410, R2-2001408, R2-2001409, R2-2002075 and R2-2002078.
- If issues are found in any CR, they may be moved to discussion **206**.

Intended outcome:
- Agreeable CRs (by each CR proponent)
- Summary of discussions (by email rappporteur).

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording, Tuesday, March 3rd by 17:00 CET

R2-2001745 Report of [AT109e][205][LTE16] Agreeing to simple LTE Rel-16 CRs (RAN2 VC) Nokia (RAN2 VC)

⇨ **Noted**

Agreements [AT109e][205][LTE16]

⇒ **The CRs R2-2000180, R2-2001408, R2-2001409, R2-2001737, R2-2001738 and R2-2002078 are agreed.**

S2: Topics requiring (some) discussion in summary document:

Proposal in summary document:
Proposal S2_2: *Discuss the proposals in R2-2001165 in the next RAN2 meeting based on concrete inputs for Rel-16 capabilities, including CR proposals.*

UE capability request principles: whether to extend the usage of "request-response" – mechanism more in Rel-16 LTE?

R2-2001165 Whether to continue R15 general principle to limit UE capability size Samsung Telecommunications discussion Rel-16 TEI16

⇒ **Postponed to next RAN2 meeting (to have more concrete proposals)**

S2_DISC:
DISC S2_1: *Discuss and agree to the CRs R2-2000987 and R2-2000988 over offline (email) discussion.*

Early security activation for resume (intent agreed in RAN2#108): CR correctness needs to be checked:

R2-2000987 Early security re-activation at RRC Connection Resume Ericsson, Qualcomm Inc., LG Electronics Inc., Sierra Wireless, Turkcell CR Rel-16 36.331 15.8.0 4167 1 B TEI16 R2-1915796

⇒ **See R2-2001763**

⇒ **Revised in R2-2001731**

R2-2001731 Early security re-activation at RRC Connection Resume Ericsson, Qualcomm Inc., LG Electronics Inc., Sierra Wireless, Turkcell CR Rel-16 36.331 15.8.0 4167 2 B TEI16 R2-2000987

⇒ **Agreed**

R2-2000988 Early security re-activation at RRC Connection Resume Ericsson, Qualcomm Inc., LG Electronics Inc., Sierra Wireless, Turkcell CR Rel-16 36.306 15.7.0 1723 1 B TEI16 R2-1915797

⇒ **See R2-2001763**

⇒ **Revised in R2-2001732**

R2-2001732 Early security re-activation at RRC Connection Resume Ericsson, Qualcomm Inc., LG Electronics Inc., Sierra Wireless, Turkcell CR Rel-16 36.306 15.7.0 1723 2 B TEI16 R2-2000988

⇒ **Agreed**

⇒ **The above documents under S2_DISC in this AI are handled in email discussion 206**

✉ **[AT109e][206][LTE16] CR discussion on Rel-16 early security activation (Ericsson)**
Scope:
- Discuss the CRs R2-2000987 and R2-2000988 over offline (email) discussion to solicit opinions from companies on the proposals and CR correctness.
- Handle any CRs from discussion **205** that are deemed require further discussion

Intended outcome:
- Discuss the CRs and check for correctness and impact to other RRC CRs.
- If the CRs can be agreed, provide final CRs (by CR proponents)
- Summary of discussions (by email rappporteur)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording: Tuesday, March 3rd by 17:00 CET

R2-2001733 Report of [AT109e][206][LTE16] CR discussion on Rel-16 early security activation (Ericsson)
⇨ **Revised in R2-2001763 (to reflect late comments)**

R2-2001763 Report of [AT109e][206][LTE16] CR discussion on Rel-16 early security activation (Ericsson) R2-2001733
⇨ **Noted**

Agreements [AT109e][206][LTE16]

⇒ **For early security reactivation for EPC, DRBs are resumed upon receiving RRCConnectionResume. TS 36.331 CR is updated to reflect this.**

⇒ **The CRs R2-2001731 and R2-2001732 are agreed.**

7.7 Support of Indian Navigation Satellite System (NavIC)

(LCS_NAVIC; leading WG: RAN2; REL-16; started: Sept 19; target; March-20; WID: RP-192350)
Time budget: 0 TU Final agreement of CRs is expected
This agenda item will focus on agreeing to the final CRs for the WID and will only be treated over email. No web conference is planned for this agenda item.

The following documents will be treated by email discussion

R2-2000153 CR of TS 36.355 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated CR Rel-16 37.355 15.0.0 0247 5 B LCS_NAVIC, LCS_NAVIC-Core R2-1916406
⇨ Revised in R2-2001952

R2-2001952 CR of TS 36.355 for introducing NavIC in LTE - core part Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated CR Rel-16 37.355 15.0.0 0247 6 B LCS_NAVIC, LCS_NAVIC-Core
⇨ Revised in R2-2002238

R2-2002238 CR of TS 36.355 for introducing NavIC in LTE - core part Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm Incorporated, Saankhya Labs Private Limited, Tejas Networks Ltd.
CR Rel-16 37.355 15.0.0 0247 7 B LCS_NAVIC, LCS_NAVIC-Core
⇨ Agreed in email discussion [AT109e][607]
⇨ Coversheet update by MCC: Revision = 8
⇨ Revised in R2-2002398

R2-2002398 CR of TS 36.355 for introducing NavIC in LTE - core part Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm Incorporated, Saankhya Labs Private Limited, Tejas Networks Ltd.
CR Rel-16 37.355 15.0.0 0247 8 B LCS_NAVIC, LCS_NAVIC-Core
=> Agreed

R2-2000157 CR of TS 36.331 for introducing NavIC in LTE - core part Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated CR
Rel-16 36.331 15.8.0 4137 4 B LCS_NAVIC R2-1916407
⇨ Revised in R2-2001953

R2-2001953 CR of TS 36.331 for introducing NavIC in LTE - core part Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd., Qualcomm Incorporated CR
Rel-16 36.331 15.8.0 4137 5 B LCS_NAVIC R2-1916407
⇨ Revised in R2-2002239

R2-2002239 CR of TS 36.331 for introducing NavIC in LT - core part E Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm Incorporated, Saankhya Labs Private Limited, Tejas Networks Ltd.
CR Rel-16 36.331 15.8.0 4137 6 B LCS_NAVIC R2-1916407
⇨ Agreed in email discussion [AT109e][607]

R2-2000158 CR of TS 36.305 for introducing NavIC in LTE - core part Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.305 15.4.0 0084 3 B LCS_NAVIC R2-1916408
⇨ Revised in R2-2001954

R2-2001954 CR of TS 36.305 for introducing NavIC in LTE - core part Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.305 15.4.0 0084 4 B LCS_NAVIC R2-1916408
⇨ Revised in R2-2002240

R2-2002240 CR of TS 36.305 for introducing NavIC in LTE - core part Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm Incorporated, Saankhya Labs Private Limited, Tejas Networks Ltd.
CR Rel-16 36.305 15.4.0 0084 5 B LCS_NAVIC R2-1916408
⇨ Agreed in email discussion [AT109e][607]

⇨ Above tdocs to be agreed by email discussion:

✉ **[AT109e][607][NAVIC] NavIC CRs (Reliance Jio)**
Scope: Agree to the CRs in R2-2000153, R2-2000157, and R2-2000158. Note: Updates to the CRs will be needed to align with the output of [AT109e][601].
Intended Outcome: Agreed CRs
Deadline: Tuesday 2020-03-03 1200 CET

7.8 DL MIMO efficiency enhancements for LTE

(LTE_DL_MIMO_EE-Core; leading WG: RAN1; REL-16;target; March-20; WID: RP-182901)
Time budget: 0.5 TU
This agenda item will focus on providing the baseline CRs for the WID and will only be treated over email. No web conference is planned for this agenda item.

By Email

R2-2001031 Power headroom reporting for additional SRS Lenovo, Motorola Mobility discussion
Rel-16

⇒ **Noted**

R2-2001079 Introduction of Additional SRS Ericsson CR Rel-16 36.321 15.8.0 1461 1 B LTE_DL_MIMO_EE-Core R2-1915644
=> Revised in R2-2001721

R2-2001721 Introduction of Additional SRS Ericsson CR Rel-16 36.321 15.8.0 1461 2 B LTE_DL_MIMO_EE-Core
=> Revised in R2-2001741

R2-2001741 Introduction of Additional SRS Ericsson CR Rel-16 36.321 15.8.0 1461 3 B LTE_DL_MIMO_EE-Core
=> Agreed

R2-2001405 Introduction of DL MIMO efficiency enhancement Huawei, HiSilicon CR Rel-16 36.306 15.7.0 1740 - B LTE_DL_MIMO_EE-Core
⇨ **UE capabilities are not agreed yet in this meeting as they are pending RAN1 information**
⇨ **Endorsed as baseline**

R2-2001406 Introduction of DL MIMO efficiency enhancement Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4219 - B LTE_DL_MIMO_EE-Core
=> Revised in R2-2001735

R2-2001735 Introduction of DL MIMO efficiency enhancement Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4219 1 B LTE_DL_MIMO_EE-Core
=> Agreed

=> All of the documents in this AI are handled in email discussion 207 (Huawei)

✉ **[AT109e][207][LTE16] Agreeable CRs for DL MIMO enhancements for LTE (Huawei)**
Scope:
- Discuss CRs in R2-2001031, R2-2001079, R2-2001405 and R2-2001406
- Providing agreeable to RAN2 CRs for the WID

Intended outcome:
- Agreed CRs for the DL MIMO enhancements WID

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 18:00 CET (one day for rapporteur to create final CR proposals)
- Final CRs provided latest on Tuesday, March 3rd by 08:00 CET (can be agreed earlier if converged)

Agreements [AT109e][207][LTE16]

⇒ **The CRs R2-2001741 (36.321) and R2-2001735 (36.331) are agreed and will be submitted to RAN#87-e for approval**

⇒ **The CR R2-2001405 (36.306) is endorsed.**

⇒ **Except for UE capabilities, the WID is completed from RAN2 viewpoint.**

7.9 LTE-based 5G Terrestrial Broadcast

(LTE_terr_bcast-Core; leading WG: RAN1; REL-16; target; March-20; WID: RP-182924)
Time budget: 0.5 TU.
This agenda item will focus on providing the baseline CRs for the WID and will only be treated over email. No web conference is planned for this agenda item.

By Email

R2-2000436 Introduction of LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-16
36.331 15.8.0 4190 - B LTE_terr_bcast-Core

⇒ **Revised in R2-2001740**

R2-2001740 Introduction of LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-16
36.331 15.8.0 4190 1 B LTE_terr_bcast-Core

⇒ **Agreed**

R2-2000437 Introduction of LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-16
36.306 15.7.0 1729 - B LTE_terr_bcast-Core

⇒ **Revised in R2-2001739**

R2-2001739 Introduction of LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-16
36.306 15.7.0 1729 1 B LTE_terr_bcast-Core

⇒ **Agreed**

R2-2001407 Discussion on handling of MBSFN configuration for new numerologies Huawei, HiSilicon
discussion Rel-16 LTE_terr_bcast-Core

⇒ **Noted (treated as part of [208])**

⇒ **All of the documents in this AI are handled in email discussion 208 (Qualcomm)**

✉ **[AT109e][208][LTE R16] Agreeable CRs for LTE-based 5G Terrestrial Broadcast (Qualcomm)**
Scope:
- Discuss CRs in R2-2000436, R2-2000437 and R2-2001407
- Providing agreeable to RAN2 CRs for the WID

Intended outcome:
- Agreed CRs for the Further performance enhancement for LTE-based 5G Terrestrial Broadcast WID

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 18:00 CET (one day for rapporteur to create final CR proposals)
- Final CRs provided latest on Tuesday, March 3rd by 08:00 CET (can be agreed earlier if converged)

Agreements [AT109e][208][LTE16]

⇒ **The CRs R2-2001739 and R2-2001740 are agreed.**

8 Breakout session reports

No documents shall be submitted to this AI or its sub-AIs. It is only for at-meeting-generated contents.
Final Breakout session reports will be treated / approved by email only. NOTE that review of session reports need to take place during the meeting. Major comments at the end of the meeting may not be resolved.

✉ **[Post109e][Org] organizational (Chairman)**
Scope: Finalize email discussions after the meeting. Resolve possible unclarities after 109e, if any.
Intended outcome: Updated email discussion list. Clarifications for R2 109e meeting minutes. Update of status'es from BO sessions.
Deadline: MAR 12 1200 CET

General:

- [AT109e][000] Chairman: The status of the last email discussions from BO sessions might not have been captured correctly here.

⇒ **[AT109e][000] check and cover status of the last email discussions from BO sessions in email discussion above [Post109e][Org]**

8.1 Session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility

R2-2001661 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility Vice Chairman (Nokia) report

⇒ **[AT109e][000] Approved**

[AT109e][218][NR MOB] Stage-2 CR (Intel)

R2-2001748 Introduction of NR mobility enhancement Intel Corporation CR Rel-16 38.300 16.0.0 0172 3 B NR_Mob_enh-Core R2-2000460

⇒ **Agreed**

[AT109e][219][NR MOB] RRC CR (Intel)

R2-2001749 Introduction of NR mobility enhancement Intel Corporation CR Rel-16 38.331 15.8.0 1478 1 B NR_Mob_enh-Core R2-2001271
=> Revised in R2-2001767

R2-2001767 Introduction of NR mobility enhancement Intel Corporation CR Rel-16 38.331 15.8.0 1478 2 B NR_Mob_enh-Core
=> Agreed

⇒ **To finalize the CR, the offline discussion [219] will continue as below**

✉ **[Ext109e][219][NR MOB] RRC CR (Intel)**
Intended outcome: Agreed 38.331 CR for NR mobility (including T312, CPAC).
Final CR can be provided in R2-2001749.
Deadline: 2020-03-09 1400 CET

[AT109e][221][LTE MOB] RRC CR (Ericsson)

R2-2001753 Introduction of Even futher Mobility enhancement in E-UTRAN Ericsson India Private Limited CR Rel-16 36.331 15.8.0 4205 1 B LTE_feMob-Core R2-2001129
=> Agreed

R2-2001761 Introduction of NR Mobility enhancements Ericsson, CATT CR Rel-16 36.331 15.8.0 4234 - B NR_Mob_enh-Core
=> Agreed

⇒ **To finalize these CRs, the offline discussion [221] will continue as below**

✉ **[Ext109e][221][LTE MOB] RRC CR (Ericsson)**
Intended outcome: Agreed 36.331 CR for LTE mobility WID (including DAPS and CHO) and agreed 36.331 CR for NR mobility WID (including CPC + T312 impacts to LTE).
Final CR for LTE mobility can be provided in R2-2001753 and Final CR for NR mobility can be provided in R2-2001761
Deadline: 2020-03-09 1400 CET

[AT109e][220][LTE MOB] Stage-2 CR (China Telecom)

R2-2001752 36300 CR for LTE feMob ChinaTelecom CR Rel-16 36.300 16.0.0 1270 - B LTE_feMob R2-2001653
=> Coversheet update by MCC: Improved title wording

R2-2001899 Introduction of even further mobility enhancement in E-UTRAN ChinaTelecom CR Rel-16 36.300 16.0.0 1270 1 B LTE_feMob
=> **Agreed**

[AT109e][222][MOB] PDCP CRs for LTE and NR (Huawei)

R2-2001750 CR for 38.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. CR Rel-16 38.323 15.6.0 0042 1 B NR_Mob_enh-Core R2-2001646
⇒ **Revised in R2-2001766**

R2-2001766 CR for 38.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. CR Rel-16 38.323 15.6.0 0042 2 B NR_Mob_enh-Core
=> **Agreed**

R2-2001754 CR for 36.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. CR Rel-16 36.323 15.5.0 0279 1 B LTE_feMob-Core R2-2001647
⇒ **Revised in R2-2001765**

R2-2001765 CR for 36.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. CR Rel-16 36.323 15.5.0 0279 2 B LTE_feMob-Core R2-2001647
=> **Agreed**

⇒ **To finalize these CRs, the offline discussion [222] will continue as below**

✉ **[Ext109e][222][MOB] PDCP CRs for LTE and NR (Huawei)**
Intended outcome: Agreed 36.323 and 38.323 CR for LTE and NR mobility
Final CRs can be provided in R2-2001766 (NR) and R2-2001765 (LTE)
Deadline: 2020-03-09 1400 CET

[AT109e][223][MOB] MAC CRs for LTE and NR (vivo)

R2-2001755 Introducation of even further mobility enhancement in E-UTRAN vivo CR Rel-16 36.321 15.8.0 1463 - B LTE_feMob-Core R2-2000371
=> Revised in R2-2001769

R2-2001769 Introducation of even further mobility enhancement in E-UTRAN vivo CR Rel-16 36.321 15.8.0 1463 1 B LTE_feMob-Core
=> **Agreed**

R2-2001751 38.321 CR for NR mobility enh. vivo CR Rel-16 38.321 15.8.0 0687 - B NR_Mob_enh-Core R2-2000372
=> Revised in R2-2001768

R2-2001768 38.321 CR for NR mobility enh. vivo CR Rel-16 38.321 15.8.0 0687 1 B NR_Mob_enh-Core
=> **Agreed**

Post-meeting email discussions:

✉ **[Post109e][NR MOB] LS to RAN3 on prohibition of CPC + CHO (Nokia)**
Intended outcome: Agreed LS to RAN3 to inform them of RAN2 decision to disallow simultaneous usage of CPC and CHO for the same UE.
Final LS can be provided in R2-2001764.
Deadline: Short (1-week)

R2-2001764 LS on avoiding simultaneous CHO and CPC RAN2l LS out Rel-16 NR_Mob_enh-Core To:RAN3
=> Approved

✉ **[Post109e][NR MOB] Resolving open issues for DAPS (Intel)**
Intended outcome: Attempting to resolving remaining open issues for CPC.
Deadline: Long (until next meeting)

✉ **[Post109e][NR MOB] Resolving open issues for CHO (Nokia)**
Intended outcome: Attempting to resolving remaining open issues for CPC.
Deadline: Long (until next meeting)

✉ **[Post109e][NR MOB] Resolving open issues for CPC (CATT)**
Intended outcome: Attempting to resolving remaining open issues for CPC.
Deadline: Long (until next meeting)

8.2 Session on SRVCC, CLI, PRN, eMIMO, RACS

R2-2001662 Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS report — Vice Chairman (ZTE)

⇒ **[AT109e][000] approved**

CHANGE from main session

R2-2001692 Introduction of SRVCC from 5G to 3G — Ericsson, China Unicom — CR — Rel-16 — 38.300 16.0.0 0186 1 B SRVCC_NR_to_UMTS-Core

⇒ **[AT109e][084][R16] Revised**

R2-2002370 Introduction of SRVCC from 5G to 3G — Ericsson, China Unicom — CR — Rel-16 — 38.300 16.0.0 0186 2 B SRVCC_NR_to_UMTS-Core
- A change was needed due to a clash with a Ran3 CR.

⇒ **[AT109e][084][R16] Agreed**

[AT109e][114][PRN] RRC CR (Nokia)

R2-2001707 Introducing the support of Non-Public Networks — Nokia (Rapporteur) — CR — Rel-16 — 38.331 15.8.0 1468 1 B NG_RAN_PRN-Core
⇨ Agreed

[AT109e][115][PRN] 38.304 CR (Qualcomm)

R2-2001708 PRN Running CR for TS 38.304 — Qualcomm Incorporated — CR — Rel-16 — 38.304 15.6.0 0148 1 B NG_RAN_PRN
⇨ Agreed

[AT109e][122][PRN] LS to SA1/SA2/CT1 (Nokia)

R2-2001704 LS on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs — Nokia — LS out — Rel-16 — NG_RAN_PRN-Core — To:SA1, SA2, CT1
⇨ Noted. The discussion will continue in a 1-week email discussion

✉ **[Post109e#07][PRN] LS on CAG issues (Nokia)**
Intended outcome: Agree LS to SA1, SA2, CT1 on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs
Deadline: Short (1-week)

Post-meeting email discussions:

✉ **[Post109e#xx][EMIMO] BFR MAC CE for BFR on SpCell (Apple)**
Intended outcome: Discuss the technical details to converge on a single solution.
Deadline: Long (until the next meeting)

✉ **[Post109e#xx][PRN] Remaining open issues (Nokia)**
Intended outcome: Discuss and resolve the remaining PRN open issues.
Deadline: Long (until the next meeting)

✉ **[Post109e#07][PRN] LS on CAG issues (Nokia)**

Intended outcome: Agree LS to SA1, SA2, CT1 on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs
Deadline: Short (1-week)

8.3 Session on eMTC

R2-2001663 Report eMTC breakout session Session chair (Ericsson)report

⇒ **[AT109e][000] approved**

Comebacks

[AT109e][403][eMTC] Update 36.300 running CR (Intel)

R2-2001868 Introduction of Rel-16 eMTC additional enhancements Intel Corporation CR Rel-16 36.300 16.0.0 1267 1 B LTE_eMTC5-Core
=> Agreed

[AT109e][404][eMTC] Update 36.302 running CR (ZTE)

R2-2001869 Running 36.302 CR for R16 eMTC ZTE Corporation, Sanechips CR Rel-16 36.302 15.2.0 LTE_eMTC5-Core
=> Coversheet update by MCC: Revision = 1

R2-2001900 Introduction of additional enhancements for R16 eMTC ZTE Corporation, Sanechips CR Rel-16 36.302 15.2.0 1203 1 B LTE_eMTC5-Core
=> **Agreed**

[AT109e][405][eMTC] Update 36.304 running CR (Nokia)

R2-2001870 Introduction of Rel-16 eMTC enhancements Nokia CR Rel-16 36.304 15.5.0 0781 1 B LTE_eMTC5-Core
=> Agreed

[AT109e][406][eMTC] Update 36.306 running CR (Huawei)

R2-2001871 Introduction of additional enhancements for eMTC Huawei, HiSilicon CR Rel-16 36.306 15.7.0 1735 1 B LTE_eMTC5-Core
=> Agreed

[AT109e][407][eMTC] Update 36.321 running CR (Ericsson)

R2-2001872 Running CR on 36.321 for eMTC Ericsson CR Rel-16 36.321 15.8.0 1465 1 B LTE_eMTC5-Core
=> Agreed

[AT109e][408][eMTC] Update 36.331 running CR (Qualcomm)

R2-2001873 Introduction of Rel-16 eMTC enhancements Qualcomm Incorporated CR Rel-16 36.331 15.8.0 4191 1 B LTE_eMTC5-Core
=> Agreed

[AT109e][409][eMTC] Update 38.300 running CR (Qualcomm)

R2-2001892 Introduction of additional enhancements for eMTC Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0175 4 B LTE_eMTC5-Core
=> Withdrawn

8.4 Session on NR-U, Power Savings, NTN and 2-step RACH

R2-2001664 Session minutes for NR-U, Power Savings, NTN and 2-step RACH Session chair (InterDigital) report

⇒ **[AT109e][000] approved**

8.5 Session on Rel-15 and 16 LTE and NR positioning

R2-2001665 Report from session on Rel-15 and 16 LTE and NR positioning report Session chair (MediaTek)

⇒ **[AT109e][000] approved**

8.6 Session on SON/MDT

R2-2001666 Report from SOM/MDT session Session chair (CMCC) report

⇒ **[AT109e][000] approved**

8.7 Session on NB-IoT

R2-2001667 Report NB-IoT breakout session Session chair (Huawei) report

⇒ **revised in R2-2001814**

R2-2001814 Report NB-IoT breakout session Session chair (Huawei) report

⇒ **[AT109e][000] approved**

[AT109e][302][NBIOT R13] Handling of UE Radio Capability for Paging in NB-IoT and eMTC (Huawei)

R2-2001809 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-13 36.300 13.13.0 1260 1 F NB_IOT-Core, LTE_MTCe2_L1-Core
=> Agreed

R2-2001810 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-14 36.300 14.11.0 1261 1 A NB_IOT-Core, LTE_MTCe2_L1-Core
=> Agreed

R2-2001811 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-15 36.300 15.8.0 1262 1 A NB_IOT-Core, LTE_MTCe2_L1-Core
=> Agreed

R2-2001812 Handling of UE Radio Capability for Paging in NB-IoT and eMTC Huawei, HiSilicon CR Rel-16 36.300 16.0.0 1263 - A NB_IOT-Core, LTE_MTCe2_L1-Core
=> Agreed

[AT109e][311][NBIOT] R16 36.331 CR (Huawei)

R2-2001782 Introduction of additional enhancements for NB-IoT in TS 36.331 Huawei CR Rel-16 36.331 15.8.0 4192 1 B NB_IOTenh3-Core
=> Agreed

[AT109e][312][NBIOT] R16 38.300 CR (Qualcomm)

R2-2001783 Introduction of additional enhancements for NB-IoT Qualcomm Incorporated CR Rel-16 38.300 16.0.0 0176 4 B NB_IOTenh3-Core R2-1916570
=> Withdrawn

[AT109e][313][NBIOT] R16 36.300 CR (Huawei)

R2-2001784 Introduction of additional enhancements for NB-IoT in TS 36.300 Huawei CR Rel-16 36.300 16.0.0 1259 1 B NB_IOTenh3-Core
=> Agreed

[AT109e][314][NBIOT] R16 36.302 CR (Huawei)

R2-2001785 Introduction of additional enhancements for NB-IoT in TS 36.302 Huawei CR Rel-16 36.302 15.2.0
=> Agreed

[AT109e][315][NBIOT] R16 36.306 CR (Blackberry)

R2-2001786 Introduction of Rel-16 additional enhancements NB-IoT in TS 36.306 BlackBerry UK Limited CR Rel-16 36.306 15.7.0 1731 1 B LTE_eMTC5-Core, NB_IOTenh3-Core
=> Agreed

[AT109e][316][NBIOT] R16 36.321 CR (Ericsson)

R2-2001787 Running CR on 36.321 for NB-IoT Ericsson CR Rel-16 36.321 15.8.0 1466 1 B NB_IOTenh3-Core
=> Agreed

*[AT109e][317][NBIOT] R16 36.30**4** CR (Nokia)*

R2-2001788 Introduction of Rel-16 NB-IoT enhancements Nokia CR Rel-16 36.304 15.5.0 0783 1 B NB_IOTenh3_ Core Late
=> Agreed

[AT109e][318][NBIOT] Reply LS to Reply LS on Rel-16 NB-IoT enhancements (Huawei)

R2-2001795 [DRAFT] Reply LS on Rel-16 NB-IoT enhancements Huawei LS out Rel-16 NB_IOTenh3-Core To:SA2, CT1, RAN3, SA Cc:RAN, CT
=> Revised in R2-2001815

R2-2001815 Reply LS on Rel-16 NB-IoT enhancements RAN2 LS out Rel-16 NB_IOTenh3-Core To:SA2, CT1, RAN3, SA Cc:RAN, CT
=> Approved

8.8 Session on LTE V2X and NR V2X

R2-2001668 Report from session on LTE V2X and NR V2X Session chair (Samsung) report

⇒ **[AT109e][000] approved**

[Short] [Email discussion #701]: Offline discussion #711 (to agree 38.300/36.300/37.340 CRs) is placed into email approval (R2-2002264/R2-2002263/R2-2002265, LG)

R2-2002264 Introduction of 5G V2X with NR Sidelink LG Electronics Inc. CR Rel-16 38.300 16.0.0 0204 - B 5G_V2X_NRSL-Core
⇨ Agreed.

R2-2002263 Introduction of 5G V2X with NR Sidelink LG Electronics Inc. CR Rel-16 36.300 16.0.0 1271 - B 5G_V2X_NRSL-Core
⇨ Agreed.

R2-2002265 Introduction of 5G V2X with NR Sidelink LG Electronics Inc. CR Rel-16 37.340 16.0.0 0187 - B 5G_V2X_NRSL-Core
⇨ Agreed.

[Short] [Email discussion #702]: Offline discussion #703 (to agree 38.331/36.331 CRs) is placed into email approval (R2-2001966/R2-2001967, Huawei)

R2-2001966 Introduction of 5G V2X with NR sidelink Huawei, HiSilicon CR Rel-16 38.331 15.8.0 1493 1 B 5G_V2X_NRSL-Core
⇨ Agreed.

R2-2001967 Introduction of 5G V2X with NR Sidelink in TS 36.331 Huawei, HiSilicon CR Rel-16 36.331 15.8.0 4222 1 B 5G_V2X_NRSL-Core
⇨ Agreed.

[Short] [Email discussion #703]: Offline discussion #705 (to agree 38.321/36.321 CRs) is placed into email approval (R2-2001969/R2-2001970, LG)

R2-2002316 Introduction of 5G V2X with NR Sidelink LG Electronics Inc. CR Rel-16 38.321 15.8.0 0701 1 B 5G_V2X_NRSL-Core
⇨ Agreed.

R2-2002342 Introduction of 5G V2X with NR Sidelink LG Electronics Inc. CR Rel-16 36.321 15.8.0 1467 1 B 5G_V2X_NRSL-Core
⇨ Agreed.

[Short] [Email discussion #704]: To agree 38.322 CR (R2-2002311, Ericsson)

R2-2002311 CR for 38.322 for NR V2X Ericsson CR Rel-16 38.322 15.5.0 0030 1 B 5G_V2X_NRSL-Core
⇨ Agreed.

[Short] [Email discussion #705]: To agree 38.323 CR (R2-2002234, CATT)

R2-2002234 38.323 CR for NR V2X CATT CR Rel-16 38.323 15.6.0 0038 2 B 5G_V2X_NRSL-Core
⇨ Agreed.

[Short] [Email discussion #706]: To agree 37.324 CR (R2-2002319, Vivo)

⇨ To be continued as [Ext109e][706][V2X] R16 37.324 CR (Vivo)
⇨ Deadline: 2020-03-10 1200 CET

R2-2001874 Running CR to 37324 for 5G_V2X_NRSL vivo CR Rel-16 37.324 15.1.0 0014 - B 5G_V2X_NRSL-Core
⇨ Coversheet update by MCC: Improved title wording, clauses affected field updated.

R2-2001901 Introduction of 5G_V2X_NRSL to 37.324 vivo CR Rel-16 37.324 15.1.0 0014 1 B 5G_V2X_NRSL-Core
=> Agreed

[Short] [Email discussion #707]: To agree 38.304/36.304 CRs (R2-2002317/R2-2002318, ZTE)

R2-2002318 CR on cell selection/ reselection for NR V2X UE ZTE Corporation, Sanechips CR Rel-16 38.304 15.6.0 0151 1 B 5G_V2X_NRSL-Core
⇨ Agreed.

R2-2002317 CR on cell selection/ reselection for NR V2X UE ZTE Corporation, Sanechips CR Rel-16 36.304 15.5.0 0785 1 B 5G_V2X_NRSL-Core
⇨ Agreed.

Closing of the meeting (17:00)

The meeting was closed (via email) by the chairman at 19:08 on Friday, 6th of March.

Annex A: List of participants

RAN2#109-e participants list is at:
https://portal.3gpp.org/Home.aspx#/participantslist?MtgId=37793

Total number of participants: 382

Annex B: List of Tdocs

The list of tdocs from RAN2#109-e is attached to this report.
Total of 2414 tdoc numbers were allocated of which 2244 tdocs were made available.

Annex C: Incoming liaison statements

TDoc	Title	Source	Status	Rel	Related WIs	To	Cc	Original LS

R2-2000010	LS on agreements related to NR Positioning (R1-1913522; contact: Nokia)	RAN1	noted	Rel-16	NR_pos	RAN2, RAN3, RAN4		R1-1913522
R2-2000011	LS on UE data rate (R1-1913552; contact: Ericsson)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2		R1-1913552
R2-2000012	Reply LS on PRACH configuration conflict detection (R1-1913578; contact: CATT)	RAN1	noted	Rel-16	NR_SON_MDT	RAN3	RAN2	R1-1913578
R2-2000013	LS on XDD-FRX Differentiation (R1-1913579; contact: Qualcomm)	RAN1	not treated	Rel-15	NR_newRAT-Core	RAN2	RAN4	R1-1913579
R2-2000014	LS on NR Rel-16 TEI (R1-1913580; contact: NTT Docomo)	RAN1	noted	Rel-16	TEI16	RAN2, RAN4	RAN	R1-1913580
R2-2000015	Reply LS to RAN1&4 on UE capabilities on DAPS HO (R1-1913581; contact: Intel)	RAN1	noted	Rel-16	NR_Mob_enh-Core, LTE_feMob-Core	RAN2	RAN4	R1-1913581
R2-2000016	Response LS to RAN2 LS on SFN LSB indication in msg2/msgB (R1-1913582; contact: Qualcomm)	RAN1	noted	Rel-16	NR_unlic-Core, NR_2step_RACH-Core	RAN2		R1-1913582
R2-2000017	LS reply to RAN2 on WUS for short DRX cycle (R1-1913583; contact: CATT)	RAN1	noted	Rel-16	NR_UE_pow_sav-Core	RAN2		R1-1913583
R2-2000018	Reply LS on PHR reporting for NR-U (R1-1913584; contact: Lenovo)	RAN1	noted	Rel-16	NR_unlic-Core	RAN2		R1-1913584
R2-2000019	Reply LS on Tx switching between two uplink carriers (R1-1913585; contact: China Telecom)	RAN1	noted	Rel-16	NR_RF_FR1	RAN4	RAN2	R1-1913585
R2-2000020	Response LS on LCP Restriction for Dynamic Grant (R1-1913591; contact: Qualcomm)	RAN1	noted	Rel-16	NR_L1enh_URLLC-Core	RAN2		R1-1913591
R2-2000021	LS on signaling of Q for a serving cell in NR-U (R1-1913592; contact: Nokia)	RAN1	noted	Rel-16	NR_unlic	RAN2		R1-1913592
R2-2000022	Reply LS on mapping restriction for LCP procedure (R1-19135932; contact: Vivo)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2	SA2	R1-1913593
R2-2000023	LS on updated Rel-16 LTE and NR parameter lists (R1-1913675; contact: Qualcomm)	RAN1	noted	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core, LTE_DL_MIMO_EE-Core, LTE_terr_bcast-Core, NR_2step_RACH-Core, NR_unlic-Core, NR_IAB-Core, 5G_V2X_NRSL-Core, NR_L1enh_URLLC-Core, NR_IIOT-Core, NR_eMIMO-Core, NR_UE_pow_sav-Core, NR_pos-Core, NR_Mob_enh-Core, LTE_NR_DC_CA_e	RAN2, RAN3		R1-1913675
R2-2000024	Reply LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO (R1-1913686; contact:	RAN1	noted	Rel-16	LTE_feMob-Core	RAN2	RAN3, RAN4	R1-1913686

	Intel)							
R2-2000025	Reply LS on Sending CAG ID in NAS layer (R3-197591; contact: Ericsson)	RAN3	noted	Rel-16	NG_RAN_PRN	SA3, SA2, RAN2	CT1	R3-197591
R2-2000026	Reply LS on Fast MCG Link Recovery using SRB3 (R3-197606; contact: ZTE)	RAN3	noted	Rel-16	LTE_NR_DC_CA_enh-Core	RAN2		R3-197606
R2-2000027	LS Reply on CP Bearer Mapping for IAB (R3-197659; contact: Ericsson)	RAN3	noted	Rel-16	NR_IAB-Core	RAN2		R3-197659
R2-2000028	LS on information needed for MRO in UE RLF Report (R3-197668; contact: CATT)	RAN3	noted	Rel-16	NR_SON_MDT-Core	RAN2		R3-197668
R2-2000029	Reply LS on LS on dependencies on AS design for mobility management aspects of NTN in 5GS / LS on system level design assumptions for satellite in 5GS (R3-197699; contact: Qualcomm)	RAN3	noted	Rel-16	FS_NR_NTN_solutions, FS_5GSAT_ARCH	SA2	RAN2, CT1	R3-197699
R2-2000030	Reply LS on energy efficiency (R3-197745; contact: Orange)	RAN3	noted	Rel-16	FS_LTE_NR_data_collect	SA5	RAN2, SA	R3-197745
R2-2000031	LS to RAN2 on Sidelink UE Information (R3-197770; contact: Ericsson)	RAN3	noted	Rel-16	5G_V2X_NRSL	RAN2		R3-197770
R2-2000032	Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (R3-197775; contact: Nokia)	RAN3	noted	Rel-16	eV2XARC	SA2	RAN2	R3-197775
R2-2000033	LS on DL-AOD procedure (R3-197794; contact: Huawei)	RAN1	noted	Rel-16	NR_pos-Core	RAN2		R3-197794
R2-2000034	LS on UE capability of intraBandENDC-Support (R4-1913130; contact: Qualcomm)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2		R4-1913130
R2-2000035	Reply LS on BCS reporting for EN-DC BC (R4-1915358; contact: Huawei)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2		R4-1915358
R2-2000036	Reply LS on Tx DC location (R4-1915361; contact: Huawei)	RAN4	not treated	Rel-15	NR_newRAT-Core	RAN1, RAN2		R4-1915361
R2-2000037	Reply to LS on UE capabilities on DAPS HO (R4-1915781; contact: Qualcomm)	RAN4	noted	Rel-16	NR_Mob_enh-Core, LTE_feMob-Core	RAN2	RAN1	R4-1915781
R2-2000038	Response LS on Reference Point for Timing Related Measurements in FR2 (R4-1915801; contact: CATT, Ericsson)	RAN4	noted	Rel-16	NR_pos-Core	RAN1	RAN2, RAN3	R4-1915801
R2-2000039	Reply LS on direct SCell activation in RRC resume message (R4-1915844; contact: ZTE)	RAN4	noted	Rel-16	LTE_NR_DC_CA_enh-Core	RAN2		R4-1915844
R2-2000040	LS on the UE capability and network assistance signalling for Rel-16 NR HST RRM (R4-1915855; contact: China Mobile)	RAN4	noted	Rel-16	NR_HST	RAN2		R4-1915855
R2-2000041	LS on Requirements on positioning for UAS (S6-200269; contact: InterDigital)	SA6	not treated	Rel-17	FS_UASAPP	SA1	SA2, RAN2	S6-200269
R2-2000042	Reply LS to RAN2 on UL-SL Prioritization (R4-1915985; contact: Futurewei)	RAN4	noted	Rel-16	5G_V2X_NRSL-Core	RAN2, RAN1		R4-1915985
R2-2000043	LS on UE capabilities and RRC signalling on Tx switching period delay (R4-1916083; contact: Apple)	RAN4	noted	Rel-16	NR_RF_FR1	RAN2	RAN1	R4-1916083
R2-2000044	LS on channel raster for NR V2X UE (R4-1916146; contact: CATT)	RAN4	noted	Rel-16	5G_V2X_NRSL	RAN2	RAN1	R4-1916146
R2-2000045	LS on definition of IAB-MT	RAN4	noted	Rel-16	NR_IAB-Core	RAN2		R4-1916165

	channel bandwidth (R4-1916165; contact: Qualcomm)							
R2-2000046	LS on MPE enhancements (R4-1916183; contact: Qualcomm)	RAN4	not treated	Rel-16	NR_RF_FR2_req_enh	RAN2		R4-1916183
R2-2000047	LS on Local NR positioning in NG-RAN (RP-193262; contact: Nokia)	RAN	noted	Rel-16	FS_NR_local_pos	SA2	SA, RAN2, RAN3	RP-193262
R2-2000048	LS on 5G indicator (RP-193265; contact: Intel)	RAN	not treated	Rel-16	NR_newRAT-Core, TEI16	RAN2	SA, CT, GSMA	RP-193265
R2-2000049	Reply LS on UAC for NB-IOT (S1-193592; contact: Qualcomm)	SA1	noted	Rel-16	SMARTER_Ph2	RAN2	CT1, SA2, RAN3	S1-193592
R2-2000050	Reply LS on enhanced access control for IMS signalling (S1-193595; contact: NTT Docomo)	SA1	noted	Rel-16	TEI16	CT1	RAN2, SA	S1-193595
R2-2000051	Reply LS on NPN clarifications (S1-193605; contact: Qualcomm)	SA1	noted	Rel-16	Vertical_LAN, NG_RAN_PRN	SA2, RAN3	RAN2, SA3	S1-193605
R2-2000052	Reply LS on LS on PC5S and PC5 RRC unicast message protection (S2-1912002; contact: Qualcomm)	SA2	noted	Rel-16	eV2XARC	SA3	RAN2, CT1	S2-1912002
R2-2000053	LS on clarifying NR PC5 priority level (S2-1912003; contact: LGE)	SA2	noted	Rel-16	eV2XARC	RAN1	RAN2	S2-1912003
R2-2000054	LS OUT on Location of UEs and associated key issues (S2-1912560; contact: Thales)	SA2	noted	Rel-16	FS_5GSAT_ARCH	RAN2, RAN3, SA3-LI		S2-1912560
R2-2000055	LS on RAN sharing for NPNs (S2-1912602; contact: Qualcomm)	SA2	noted	Rel-16	Vertical_LAN	RAN2, RAN3		S2-1912602
R2-2000056	LS on category M devices and NR (S2-1912608; contact: Qualcomm)	SA2	noted	Rel-16	5G_CIoT	RAN2		S2-1912608
R2-2000057	Reply LS on sending CAG ID during resume procedure (S2-1912731; contact: Qualcomm)	SA2	noted	Rel-16	Vertical_LAN	CT1	RAN2	S2-1912731
R2-2000058	Reply LS on Rel-16 NB-IoT enhancements (S2-1912763; contact: Huawei)	SA2	noted	Rel-16	NB_IOTenh3	RAN, CT, RAN2, CT1, RAN3	SA	S2-1912763
R2-2000059	LS on the support for ECN in 5GS (S2-1912765; contact: Qualcomm)	SA2	not treated	Rel-15	5GS_Ph1	RAN2, SA4	RAN3, CT1	S2-1912765
R2-2000060	Reply LS on reference time delivery (S2-1912769; contact: Qualcomm)	SA2	noted	Rel-16	Vertical_LAN, NR_IIOT	RAN2		S2-1912769
R2-2000061	Reply LS on PC5 unicast and groupcast security protection (S2-2000971; contact: Interdigital)	SA2	noted	Rel-16	eV2XARC	SA3, CT1	RAN2	S2-2000971
R2-2000062	Reply LS on Response LS on SL RLM/RLF (S2-2000973; contact: Qualcomm)	SA2	noted	Rel-16	eV2XARC	RAN2, RAN1, CT1		S2-2000973
R2-2000063	Reply LS on SL RLF handling (S2-2000974; contact: Ericsson)	SA2	noted	Rel-16	5G_V2X_NRSL-Core, eV2XARC	RAN2		S2-2000974
R2-2000064	Reply LS on 5G-S-TMSI Truncation Procedure (S2-2001248; contact: Qualcomm)	SA2	noted	Rel-16	5G_CIoT	SA3, RAN2, CT1	CT4	S2-2001248
R2-2000065	LS reply on NPN network sharing (S2-2001398; contact: Huawei)	SA2	noted	Rel-16	Vertical_LAN	SA5	RAN2, RAN3, SA1	S2-2001398
R2-2000066	Reply LS on CMAS/ETWS and emergency services for SNPNs (S2-2001400; contact: Qualcomm)	SA2	noted	Rel-16	Vertical_LAN	RAN2	SA1, CT1	S2-2001400
R2-2000067	LS reply on CAG definition (S2-2001401; contact: Huawei)	SA2	noted	Rel-16	Vertical_LAN	SA5	RAN2, RAN3, CT4	S2-2001401

R2-2000068	Reply LS on assistance indication for WUS (S2-2001578; contact: Huawei)	SA2	noted	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	CT1, RAN2, RAN3		S2-2001578
R2-2000069	LS on Sending CAG ID (S2-2001616; contact: Ericsson)	SA2	noted	Rel-16	Vertical_LAN	CT1, RAN2, RAN3, SA3, SA		S2-2001616
R2-2000070	Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (S2-2001675; contact: Nokia)	SA2	not treated	Rel-16	eV2XARC	RAN3, RAN2		S2-2001675
R2-2000071	Reply LS to LS on AS key derivation for conditional handover (S3-194447; contact: Apple)	SA3	noted	Rel-16	NR_Mob_enh-Core, LTE_feMob-Core	RAN2	RAN3	S3-194447
R2-2000072	Reply LS to SA2 on 5G-S-TMSI Truncation Procedure (S3-194482; contact: Huawei)	SA3	noted	Rel-16	5G_CIoT	SA2	RAN2, CT4, CT1, RAN3	S3-194482
R2-2000073	Reply LS on Handling of UE radio network capabilities in 4G and 5G (S3-194488; contact: Intel)	SA3	not treated	Rel-15	TEI15, 5GS_Ph1-SEC	RAN2	SA2, RAN3	S3-194488
R2-2000074	Reply LS on Sending CAG ID in NAS layer (S3-194559; contact: Qualcomm)	SA3	noted	Rel-16	FS_Vertical_LAN_SEC	RAN3, SA2, RAN2	CT1	S3-194559
R2-2000075	LS on PC5 unicast and groupcast security protection (S3-194658; contact: Interdigital)	SA3	noted	Rel-16	eV2XARC, FS_eV2XARC, FS_eV2X_Sec	SA2	RAN3	S3-194658
R2-2000076	LS on Reply on QoE Measurement Collection (S5-197543; contact: Ericsson)	SA5	noted	Rel-16	QOED	SA4	CT1, RAN2, RAN3	S5-197543
R2-2000077	Reply on radio resource management policy (S5-197637; contact: Ericsson)	SA5	noted	Rel-16	eNRM	RAN3, RAN2		S5-197637
R2-2000078	LS on NPN network sharing (S5-197805; contact: Huawei)	SA5	noted	Rel-16	FS_OAM_NPN	SA2	RAN2, RAN3, SA1	S5-197805
R2-2000079	LS on CAG definition (S5-197806; contact: Huawei)	SA5	noted	Rel-16	FS_OAM_NPN	SA2, RAN2	RAN3, CT4	S5-197806
R2-2000080	LS on analysis of GSMA GST attributes (S5-197853; contact: China Mobile)	SA5	noted	Rel-16	MA5SLA	SA2, RAN3, I£TF	SA, SA1, SA6, RAN2, GSMA 5GJA, ETSI ISG ZSM	S5-197853
R2-2000081	LS on Requirements on positioning for UAS (S6-200269; contact: Interdigital)	SA6	withdrawn	Rel-17	FS_UASAPP	SA1	SA2, RAN2	S6-200269
R2-2000082	Reply LS to extend the scope of eV2X (SP-191379; contact: Telecom Italia)	SA	not treated	Rel-17	FS_eV2XARC_Ph2	5GAA WG4	SA2, SA1, RAN, RAN2	SP-191379
R2-2000083	Reply LS on signalling of sidelink RSRP and CSI (R1-1913693; contact: LGE)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2		R1-1913693
R2-2000084	Reply LS on additional high layer information for sidelink physical layer operations (R1-1913694; contact: LGE)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2		R1-1913694
R2-2000085	Reply LS on TX resource (re-)selection and MAC related agreements (R1-1913695; contact: LGE)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2		R1-1913695
R2-2000086	Reply LS on sidelink synchronization under multiple synchronization sources with	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2, RAN4		R1-1913696

	different timing (R1-1913696; contact: Qualcomm)							
R2-2000087	LS on 5GC assisted cell selection for accessing network slice (S2-2001728; contact: ZTE)	SA2	not treated	Rel-17	FS_eNS_Ph2	SA1, RAN2, RAN3		S2-2001728
R2-2000088	Reply LS on assistance indication for WUS (S2-2001732; contact: Huawei)	SA2	noted	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	CT1, RAN2, RAN3		S2-2001732
R2-2000089	Response LS on the “LS OUT on Location of UEs and associated key issues” (S3i200056; contact: Rogers)	SA3-LI	not treated	Rel-17	FS_5GSAT_ARCH	SA2, RAN2, RAN3		S3i200056
R2-2000090	Reply on QoE Measurement Collection (S4-200241; contact: Ericsson)	SA4	noted			SA5, CT1, RAN2	RAN3	S4-200241
R2-2000091	Reply LS on Support for ECN in 5GS (S4-200298; contact: Qualcomm)	SA4	not treated	Rel-15	5GS_Ph1	SA2	RAN2, RAN3, CT1	S4-200298
R2-2000092	Reply LS on assistance indication for WUS (C1-199008; contact: Huawei)	CT1	noted	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	CT1	SA2, RAN2, RAN3	C1-199008
R2-2000093	LS on Discussion over UE capabilities of FG2-36/2-40/2-41/2-43 (R1-1913295; contact: Huawei)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2		R1-1913295
R2-2000094	Reply LS on direct indication of ETWS/CMAS (R1-1913367; contact: Futurewei)	RAN1	noted	Rel-16	LTE_eMTC5-Core	RAN2		R1-1913367
R2-2000095	LS on explicit higher layer signalling on PUCCH resource grouping for simultaneous spatial relation updates (R1-1913423; contact: LGE)	RAN1	noted	Rel-16	NR_eMIMO-Core	RAN2		R1-1913423
R2-2000096	Reply LS on multi PDCCH-based and single PDCCH-based multi-TRP operation (R1-1913463; contact: Huawei)	RAN1	noted	Rel-16	NR_eMIMO-Core	RAN2		R1-1913463
R2-2000097	Reply LS on SL RLM/RLF (R1-1913464; contact: InterDigital)	RAN1	noted	Rel-16	5G_V2X_NRSL	RAN2		R1-1913464
R2-2000098	LS reply on CSI/SRS reporting (R1-1913480; contact: Vivo)	RAN1	noted	Rel-16	NR_UE_pow_sav-Core	RAN2	RAN4	R1-1913480
R2-2000099	LS to RAN3 for TPs endorsed in RAN1 (R1-1913506; contact: Thales)	RAN1	noted	Rel-16	FS_NR_NTN_solutions	RAN3	RAN2	R1-1913506
R2-2000434	LS on CGI reading with autonomous gaps (R4-1914782; contact: ZTE)	RAN4	noted	Rel-16	NR_RRM_enh-Core	RAN2		R4-1914782
R2-2001656	LS on the UE capability and network assistance signalling for Rel-16 NR HST demodulation (R4-1915916; contact: CMCC)	RAN4	noted	Rel-16	NR_HST	RAN2		R4-1915916
R2-2002095	Reply LS on UAV positioning (S1-201089; contact: InterDigital)	SA1	not treated			SA6	SA2, RAN1, RAN2	S1-201089
R2-2002096	Reply LS on manual CAG selection (S1-201084; contact: Qualcomm)	SA1	noted	Rel-16		CT1	RAN2, SA2	S1-201084
R2-2002097	Reply LS on need for Ethernet padding compression (S1-201085; contact: Qualcomm)	SA1	noted	Rel-16	NR_IIOT-Core	RAN2		S1-201085
R2-2002124	LS on FDD band capability signalling for uplink sharing (R4-1916180; contact: Nokia)	RAN4	not treated	Rel-16	NR_FDD_bands_varduplex	RAN2		R4-1916180
R2-2002136	Mandatory User Plane Integrity for 5G (FSAG Doc 79_002; contact: DT)	GSMA	noted			SA, RAN, CT, RAN2, SA3,		

						CT1, SA2		
R2-2002211	Reply LS on extended NAS timers for CE in 5GS (C1-200717; contact: Ericsson)	CT1	noted	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core, 5G_CIoT	RAN2	RAN3, SA2	C1-200717
R2-2002212	Reply LS on Rel-16 NB-IoT enhancements (C1-201024; contact: Ericsson)	CT1	noted	Rel-15	5G_CIoT, TEI16, NB_IOTenh3	RAN2, RA3, SA2	CT, RAN, SA	C1-201024
R2-2002213	Reply LS on sending CAG ID (C1-201027; contact: Ericsson)	CT1	not treated	Rel-16	Vertical_LAN	SA, SA2	RAN2, RAN3, SA3	C1-201027
R2-2002214	LS on suspend indication to the NAS (C1-201040; contact: Samsung)	CT1	noted	Rel-16	5G_CIoT	RAN2	SA2	C1-201040
R2-2002249	Reply LS on updates for TS 36.300 and TS 38.300 (R3-201297; contact: Ericsson)	RAN3	noted	Rel-16	NB-IoTenh3-Core, LTE_eMTC5-Core	RAN2	RAN1	R3-201297
R2-2002250	Reply LS on QoS monitoring for URLLC (R3-201372; contact: Intel)	RAN3	not treated	Rel-16	NR_SON_MDT	SA5, SA2	RAN2, SA1, CT4	R3-201372
R2-2002251	Reply LS on assistance indication for WUS (R3-201397; contact: Huawei)	RAN3	noted	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	SA2	CT1, RAN2	R3-201397
R2-2002252	Reply LS on Rel-16 NB-IoT enhancements (R3-201417; contact: Huawei)	RAN3	noted	Rel-16	NB_IOTenh3	SA2, RAN, RAN2, CT1	SA	R3-201417
R2-2002253	LS on the inter donor DU re-routing and source IP configuration (R3-201418; contact: Huawei))	RAN3	not treated	Rel-16	NR_IAB-Core	RAN2		R3-201418
R2-2002361	LS to RAN2 on NR-U related changes for 38.300 running CR (R1-2001300; contact: Qualcomm)	RAN1	not treated	Rel-16	NR_unlic-core	RAN2		R1-2001300
R2-2002362	LS on SSB index and candidate SSB index for NR-U (R1-2001357; contact: Samsung)	RAN1	not treated	Rel-16	NR_unlic-core	RAN2, RAN4		R1-2001357
R2-2002363	LS on NR-U enhancements to initial access procedures (R1-2001375; contact: Charter Communications)	RAN1	not treated	Rel-16	NR_unlic-core	RAN2		R1-2001375
R2-2002364	Reply LS on consistent Uplink LBT failure detection mechanism (R1-2001397; contact: Nokia)	RAN1	not treated	Rel-16	NR_unlic-Core	RAN2		R1-2001397

110 incoming LS, of which 88 were treated. The remaining non-treated LSin will be handled in RAN2#109bis-e.

Annex D: Outgoing liaison statements

TDoc	Title	Rel	Related WIs	To	Cc
R2-2000294	LS on power control for NR-DC	Rel-16	LTE_NR_DC_CA_enh-Core	RAN4	RAN1
R2-2001683	LS on eMIMO RRC parameters	Rel-16	NR_eMIMO-Core	RAN1	
R2-2001703	Reply LS on CAG definition	Rel-16	NG_RAN_PRN-Core	SA5	SA2, RAN3, CT4
R2-2001759	LS on TDD pattern exchange for NR-DC power control	Rel-16	LTE_NR_DC_CA_enh-Core	RAN3	
R2-2001764	LS on avoiding simultaneous CHO and CPC	Rel-16	NR_Mob_enh-Core	RAN3	
R2-2001815	Reply LS on Rel-16 NB-IoT enhancements	Rel-16	NB_IOTenh3-Core	SA2, CT1, RAN3, SA	RAN, CT
R2-2001816	LS on open PUR issues for NB-IoT/eMTC	Rel-16	NB_IOTenh3-Core, LTE_eMTC5-Core	RAN1	
R2-2001888	LS on NR coexistence	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core	RAN1	
R2-2001891	LS on RACS and signaling of UE capabilities at handover	Rel-16	RACS-RAN -Core	SA2	RAN3
R2-2001929	LS to RAN1 on Support of 2-step CFRA	Rel-16	NR_2step_RACH-Core	RAN1	
R2-2001972	Reply LS on Sideline UE information	Rel-16	5G_V2X_NRSL-Core	RAN3	
R2-2001979	LS on Sidelink UE capability for (NG)EN-DC and NE-DC	Rel-16	5G_V2X_NRSL-Core	RAN4	
R2-2001980	LS to SA3 on NR V2X Security issues	Rel-16	5G_V2X_NRSL-Core	SA3	
R2-2002138	LS to RAN1 on NR-U PRACH root sequence for 2-step RA	Rel-16	NR_2step_RACH-Core, NR_unlic-Core	RAN1	
R2-2002196	LS on random access procedure in NR-U	Rel-16	NR_unlic-Core, NR_2step_RACH-Core	RAN1	
R2-2002201	LS on DCP	Rel-16	NR_UE_pow_sav-Core	RAN1	
R2-2002204	LS to RAN1 on preamble-to-PRU mapping for 2-step CFRA	Rel-16	NR_2step_RACH-Core	RAN1	
R2-2002219	Reply LS on CGI reading with autonomous gaps	Rel-16	NR_RRM_Enh_Core	RAN4	
R2-2002221	LS on the applicability of UE capability for NE-DC	Rel-15	NR_newRAT-Core	RAN1	
R2-2002244	LS on Additional path reporting with uplink timing measurements	Rel-16	NR_pos-Core	RAN3	
R2-2002245	LS to RAN4 on measurement range and granularity	Rel-16	NR_pos-Core	RAN4	RAN1
R2-2002254	LS to RAN1 on T-delta in IAB	Rel-16	NR_IAB-Core	RAN1	RAN4
R2-2002298	LS to RAN1 on the starting point of MSGB window	Rel-16	NR_2step_RACH-Core	RAN1	
R2-2002300	LS on dropping measurement results due to LBT delays	Rel-16	NR_unlic-Core	RAN4	
R2-2002301	Reply LS on signaling of Q for a serving cell in NR-U	Rel-16	NR_unlic-Core	RAN1	
R2-2002376	Clarification of UE requirements for early measurement performance and reporting	Rel-16	LTE_NR_DC_CA_enh-Core	RAN4	
R2-2002378	Guidelines for UE capability definitions	Rel-16	TEI16	RAN1, RAN4	RAN
R2-2002381	LS on dormant BWP configuration and related operation	Rel-16	LTE_NR_DC_CA_enh-Core	RAN1	RAN4
R2-2002393	Reply LS on Information Needed for MRO in UE RLF Report	Rel-16	NR_SON_MDT-Core	RAN3	SA5
R2-2002394	LS to RAN4 on RRM relaxation in power saving	Rel-16	NR_UE_pow_sav-Core	RAN4	
R2-2002415	Reply LS on CSI-RS capabilities (FG 2-33/36/40/41/43)	Rel-16	NR_newRAT-Core, TEI16	RAN1	
R2-2002417	LS on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs	Rel-16	NG_RAN_PRN-Core	CT1, SA1, SA2	RAN3

32 outgoing LS.

Annex E: List of agreed CRs

TDoc	Title	Source	Rel	Spec	Related WIs	CR	Rev	Ca
R2-2000180	Introduction of RLOS support indicator and RLOS request indicator	Qualcomm Incorporated	Rel-16	36.331	PARLOS	4049	2	B
R2-2000238	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc	Rel-16	36.305	TEI16	0083	1	B
R2-2000240	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc	Rel-16	38.305	TEI16	0013	1	B
R2-2000302	Introduction of a second SMTC per frequency carrier in idle/inactive	Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo Inc., Samsung, Ericsson	Rel-16	38.331	TEI16	1218	3	B
R2-2000303	Introduction of a second SMTC for inter-RAT cell reselection	Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, NTT Docomo Inc., Samsung, Ericsson	Rel-16	36.331	TEI16	4114	2	B
R2-2000304	Introduction of additional enhancements for NB-IoT	Qualcomm Incorporated	Rel-16	38.300	NB_IOTenh3-Core	0176	3	B
R2-2000305	Introduction of additional enhancements for eMTC	Qualcomm Incorporated	Rel-16	38.300	LTE_eMTC5-Core	0175	3	B
R2-2000363	UE capability for IDC	vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO INC., NEC, Xiaomi Communications, Qualcomm Inc, CATT, InterDigital, China Telecom, Ericsson	Rel-16	38.306	TEI16	0229		B
R2-2000441	Introduction of Cross Link Interference (CLI) handling and Remote Interference Management (RIM)	Qualcomm Incorporated	Rel-16	38.306	NR_CLI_RIM-Core	0230		B
R2-2000575	Introduction of NR IDC Solution	Nokia, CATT, Ericsson, Huawei, InterDigital, NEC, NTT DOCOMO INC., Nokia Shanghai Bell, Qualcomm, vivo, ZTE	Rel-16	38.300	TEI16	0190		B
R2-2000581	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson	Rel-16	36.331	TEI16	4136	2	C
R2-2000651	Introduction of SRVCC from 5G to 3G	China Unicom, Huawei, HiSilicon	Rel-16	38.306	SRVCC_NR_to_UMTS-Core	0235		B
R2-2000684	Correction on SRB capability in NR-DC	MediaTek Inc.	Rel-15	38.306	NR_newRAT-Core	0236		F
R2-2000687	Correction on usage of access category 2 for UAC for RNA update	MediaTek Inc.	Rel-16	38.331	NR_newRAT-Core, TEI16	1141	2	F
R2-2000763	Introduction of provisions for late non-critical extensions	Lenovo, Motorola Mobility	Rel-15	38.331	NR_newRAT-Core	1455		F
R2-2000764	Introduction of provisions for late non-critical extensions	Lenovo, Motorola Mobility	Rel-15	36.331	LTE_eMTC4-Core, NB_IOTenh2-Core, NR_newRAT-Core, LTE_QMC_Streaming-	4199		F

					Core			
R2-2000880	Correction on SFTD frequency list in INM	Ericsson	Rel-15	38.331	NR_newRAT-Core	1461		F
R2-2001156	Correction of UE assistance information	Samsung Telecommunications	Rel-15	36.331	NR_newRAT-Core	4210		F
R2-2001187	Correction on parameter description of beamManagementSSB-CSI-RS	Huawei, HiSilicon	Rel-15	38.306	NR_newRAT-Core	0194	2	F
R2-2001216	Introduction of PPP-RTK (SSR)	Qualcomm Incorporated	Rel-16	36.331	NR_pos-Core	4215		B
R2-2001352	Introduction of additional RACH configurations for TDD FR1	NTT DOCOMO, INC.	Rel-16	38.331	NR_newRAT-Core, TEI16	1486		B
R2-2001381	CR to 38.331 on DRX coordination	Huawei, HiSilicon	Rel-16	38.331	TEI16	1489		C
R2-2001383	Support of releasing UL configuration	Huawei, HiSilicon, CMCC, China Telecom, MediaTek Inc., Vodafone, Orange, vivo, OPPO, Spreadtrum Communications, China Unicom	Rel-16	38.331	TEI16	1168	3	F
R2-2001408	Introduction of wideband PRG size	Huawei, HiSilicon	Rel-16	36.306	TEI16	1741		B
R2-2001409	Introduction of wideband PRG size	Huawei, HiSilicon	Rel-16	36.331	TEI16	4220		B
R2-2001467	Correction on autonomous RACH retransmission for SRS switching	Huawei, HiSilicon	Rel-16	38.321	TEI16	0696		F
R2-2001687	Introduction of RACS and DL RRC segmentation	MediaTek Inc., Ericsson, CATT	Rel-16	36.300	RACS-RAN-Core, TEI16	1258	1	B
R2-2001688	Introduction of RACS and DL RRC segmentation	MediaTek Inc., Ericsson, CATT	Rel-16	38.300	RACS-RAN-Core, TEI16	0187	1	B
R2-2001689	Introduction of UECapabilityInformation segmentation in TS38.331	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd, MediaTek Inc, CATT, Ericsson, Intel Corporation, Spreadtrum Communications	Rel-16	38.331	RACS-RAN-Core	1441	1	B
R2-2001690	Introduction of UECapabilityInformation segmentation in 36.331	MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO, Qualcomm Incorporated	Rel-16	36.331	RACS-RAN-Core	4189	1	B
R2-2001693	Introduction of SRVCC from 5G to 3G	Huawei, HiSilicon, China Unicom	Rel-16	38.331	SRVCC_NR_to_UMTS-Core	1446	1	B
R2-2001695	Introduction of cross link interference management	Huawei, HiSilicon, ZTE Corporation (Rapporteur)	Rel-16	37.340	NR_CLI_RIM	0182	1	B
R2-2001700	Introduction of cross link interference management	Huawei, HiSilicon	Rel-16	38.300	NR_CLI_RIM	0201	2	B
R2-2001701	Introduction of SRVCC from 5G to 3G	Ericsson, ZTE, China Unicom	Rel-16	37.340	SRVCC_NR_to_UMTS-Core	0165	3	B
R2-2001707	Introducing the support of Non-Public Networks	Nokia (Rapporteur)	Rel-16	38.331	NG_RAN_PRN-Core	1468	1	B
R2-2001722	Missing QCI to CAPC mapping	Nokia, Nokia Shanghai Bell	Rel-16	36.300	LTE_unlic-Core	1240	5	F
R2-2001723	Clarification on default configuration and SRB1 for UP-EDT and RRC_INACTIVE	Huawei, HiSilicon	Rel-15	36.331	LTE_eMTC4-Core, NB_IOTenh2-Core, LTE_5GCN_connect-Core	4104	5	F
R2-2001724	Correction on LTE early measurement	MediaTek Inc., Nokia, Nokia Shanghai Bell, Ericsson	Rel-15	36.331	LTE_euCA-Core	4195	1	F
R2-2001725	Corrections to T312 and Discovery Signals measurement	Lenovo, Motorola Mobility	Rel-15	36.331	HetNet_eMOB_LTE-Core, LTE_SC_enh_L1-Core, TEI15	4198	1	F
R2-2001726	Inclusion of Maximum Number of PDCP SDUs per TTI for DL Categories 22-26	Nokia, Nokia Shanghai Bel,l Lenovo, Motorola Mobility	Rel-15	36.306	LTE_1024QAM_DL-Core, TEI15	1736	1	F

R2-2001731	Early security re-activation at RRC Connection Resume	Ericsson, Qualcomm Inc., LG Electronics Inc., Sierra Wireless, Turkcell	Rel-16	36.331	TEI16	4167	2	B
R2-2001732	Early security re-activation at RRC Connection Resume	Ericsson, Qualcomm Inc., LG Electronics Inc., Sierra Wireless, Turkcell	Rel-16	36.306	TEI16	1723	2	B
R2-2001735	Introduction of DL MIMO efficiency enhancement	Huawei, HiSilicon	Rel-16	36.331	LTE_DL_MIMO_EE-Core	4219	1	B
R2-2001737	UDC reconfiguration for RRC connection re-establishment case	Huawei, HiSilicon	Rel-16	36.331	TEI16	4221	1	C
R2-2001738	Correction on non-3GPP paging	Huawei, HiSilicon	Rel-16	36.331	LTE_5GCN_connect-Core, TEI16	4172	3	C
R2-2001739	Introduction of LTE-based 5G terrestrial broadcast	Qualcomm Incorporated	Rel-16	36.306	LTE_terr_bcast-Core	1729	1	B
R2-2001740	Introduction of LTE-based 5G terrestrial broadcast	Qualcomm Incorporated	Rel-16	36.331	LTE_terr_bcast-Core	4190	1	B
R2-2001741	Introduction of Power headroom reporting for Additional SRS	Ericsson	Rel-16	36.321	LTE_DL_MIMO_EE-Core	1461	3	B
R2-2001748	Introduction of NR mobility enhancement	Intel Corporation	Rel-16	38.300	NR_Mob_enh-Core	0172	3	B
R2-2001753	Introduction of Even futher Mobility enhancement in E-UTRAN	Ericsson, China Telecom	Rel-16	36.331	LTE_feMob-Core	4205	1	B
R2-2001761	Introduction of NR Mobility enhancement	Ericsson, CATT	Rel-16	36.331	NR_Mob_enh-Core	4234		B
R2-2001762	Minor corrections collected by Rapporteur	Samsung Telecommunications	Rel-15	36.331	TEI15	4211	2	F
R2-2001765	Introduction of DAPS handover	Huawei, HiSilicon, Mediatek Inc.	Rel-16	36.323	LTE_feMob-Core	0279	2	B
R2-2001766	Introduction of DAPS handover	Huawei, HiSilicon, Mediatek Inc.	Rel-16	38.323	NR_Mob_enh-Core	0042	2	B
R2-2001767	Introduction of NR mobility enhancement	Intel Corporation	Rel-16	38.331	NR_Mob_enh-Core	1478	2	B
R2-2001768	Introduction NR mobility enhancement	vivo	Rel-16	38.321	NR_Mob_enh-Core	0687	2	B
R2-2001769	Introducation of even further mobility enhancement in E-UTRAN	vivo	Rel-16	36.321	LTE_feMob-Core	1463	2	B
R2-2001782	Introduction of additional enhancements for NB-IoT in TS 36.331	Huawei	Rel-16	36.331	NB_IOTenh3-Core	4192	1	B
R2-2001784	Introduction of additional enhancements for NB-IoT in TS 36.300	Huawei	Rel-16	36.300	NB_IOTenh3-Core	1259	1	B
R2-2001785	Introduction of additional enhancements for NB-IoT in TS 36.302	Huawei	Rel-16	36.302	NB_IOTenh3-Core	1202	1	B
R2-2001786	Introduction of Rel-16 additional enhancements NB-IoT in TS 36.306	BlackBerry UK Limited	Rel-16	36.306	NB_IOTenh3-Core	1731	1	B
R2-2001787	Introduction of additional enhancements for NB-IoT	Ericsson	Rel-16	36.321	NB_IOTenh3-Core	1466	1	B
R2-2001788	Introduction of Rel-16 NB-IoT enhancements	Nokia	Rel-16	36.304	NB_IOTenh3-Core	0783	1	B
R2-2001809	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	Rel-13	36.300	NB_IOT-Core, LTE_MTCe2_L1-Core	1260	1	F
R2-2001810	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	Rel-14	36.300	NB_IOT-Core, LTE_MTCe2_L1-Core	1261	1	F
R2-2001811	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	Rel-15	36.300	NB_IOT-Core, LTE_MTCe2_L1-Core	1262	1	A
R2-2001812	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	Rel-16	36.300	NB_IOT-Core, LTE_MTCe2_L1-Core	1263	1	A
R2-2001868	Introduction of Rel-16 eMTC additional enhancements	Intel Corporation	Rel-16	36.300	LTE_eMTC5-Core	1267	1	B
R2-2001870	Introduction of Rel-16 eMTC enhancements	Nokia	Rel-16	36.304	LTE_eMTC5-Core	0781	1	B
R2-2001871	Introduction of additional enhancements for eMTC	Huawei	Rel-16	36.306	LTE_eMTC5-Core	1735	1	B
R2-2001872	Introduction of further enhancements for eMTC	Ericsson	Rel-16	36.321	LTE_eMTC5-Core	1465	1	B
R2-2001873	Introduction of Rel-16 eMTC enhancements	Qualcomm Incorporated	Rel-16	36.331	LTE_eMTC5-Core	4191	1	B
R2-2001889	Correction to support of UP-EDT, CP-EDT, in eMTC TDD	Huawei	Rel-15	36.306	LTE_eMTC4-Core	1734	2	F
R2-2001893	Correction on beamSwitchTiming	vivo, Huawei,	Rel-16	38.306	NR_newRAT-Core,	0214	2	F

	values of 224 and 336	Hisilicon			TEI16			
R2-2001894	Introducing support for GNSS Integer Ambiguity Level Indications	Ericsson	Rel-16	37.355	TEI16	0252	1	B
R2-2001895	Introduction of CLI handling and RIM in TS38.331	LG Electronics Inc.	Rel-16	38.331	NR_CLI_RIM	1494	2	B
R2-2001896	Introduction of MIMO enhancements	Ericsson	Rel-16	38.331	NR_eMIMO-Core	1500	2	B
R2-2001897	Introduction of eMIMO for NR	Samsung	Rel-16	38.321	NR_eMIMO-Core	0691	2	B
R2-2001898	Introduction of PRN for TS 38.304	Qualcomm Incorporated	Rel-16	38.304	NG_RAN_PRN	0148	2	B
R2-2001899	Introduction of even further mobility enhancement in E-UTRAN	ChinaTelecom	Rel-16	36.300	LTE_feMob	1270	2	B
R2-2001900	Introduction of additional enhancements for R16 eMTC	ZTE Corporation, Sanechips	Rel-16	36.302	LTE_eMTC5-Core	1203	1	B
R2-2001901	Introduction of 5G_V2X_NRSL to 37.324	Rapporteur (vivo)	Rel-16	37.324	5G_V2X_NRSL-Core	0014	1	B
R2-2001924	Introduction of NR-U in 38.321	Ericsson	Rel-16	38.321	NR_unlic-Core	0694	1	B
R2-2001932	Corrections to the Location measurement indication procedure	Lenovo, Motorola Mobility	Rel-15	38.331	NR_newRAT-Core	1454	1	F
R2-2001940	Sensor Provide Location Information Elements Correction	Polaris Wireless	Rel-16	37.355	TEI16	0002	1	F
R2-2001956	Addition of broadcast of barometric pressure assistance data	Polaris Wireless, FirstNet, Intel, AT&T, NextNav	Rel-16	36.331	LCS_LTE_acc_enh-Core, TEI16	4026	3	C
R2-2001957	Addition of broadcast of barometric pressure assistance data	Polaris Wireless, FirstNet, Intel, AT&T, NextNav	Rel-16	37.355	LCS_LTE_acc_enh-Core, TEI16	0001	2	C
R2-2001958	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet, Polaris Wireless	Rel-16	36.331	LCS_LTE_acc_enh-Core, TEI16	4134	3	C
R2-2001960	RAN1 stage 2 agreements related to positioning	Intel Corporation	Rel-16	38.300	NR_pos-Core	0209		B
R2-2001966	Introduction of 5G V2X with NR sidelink	Huawei, HiSilicon	Rel-16	38.331	5G_V2X_NRSL-Core	1493	1	B
R2-2001967	Introduction of 5G V2X with NR Sidelink in TS 36.331	Huawei, HiSilicon	Rel-16	36.331	5G_V2X_NRSL-Core	4222	1	B
R2-2001981	Introduction of NR operation with Shared Spectrum Access in RRC	Qualcomm Incorporated	Rel-16	38.331	NR_unlic-Core	1477	2	B
R2-2001982	Introduction of NR-U to 37.340	OPPO	Rel-16	37.340	NR_unlic-Core	0183	2	B
R2-2001983	Introduction of NR operation with Shared Spectrum Access to Stage-2	Qualcomm Incorporated	Rel-16	38.300	NR_unlic-Core	0199	2	B
R2-2002003	CR for introducing MDT and SON	Huawei, Ericsson, HiSilicon	Rel-16	38.331	NR_SON_MDT-Core	1488	2	B
R2-2002005	CR on enhancements on LTE MDT and SON	Huawei, CMCC, HiSilicon	Rel-16	36.331	NR_SON_MDT-Core	4218	2	B
R2-2002006	CR to Introduce NR MDT	CMCC, Nokia, Nokia Shanghai Bell (Rapporteur)	Rel-16	37.320	NR_SON_MDT-Core	0077	2	B
R2-2002013	Introduction of NR Industrial IoT features	Nokia, Nokia Shanghai Bell	Rel-16	38.300	NR_IIOT	0203		B
R2-2002056	Correction to full configuration	Google Inc.	Rel-15	36.331	LTE_QMC_Streaming-Core	4151	3	F
R2-2002077	Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16	China Telecom, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO, Mediatek, VIVO, CATT	Rel-16	37.340	TEI16	0185		B
R2-2002078	Correction on H1 and H2 events	Samsung Electronics	Rel-16	36.331	LTE_Aerial-Core, TEI16	4103	2	C
R2-2002094	Security requirement for UE capability enquiry for LTE	Intel Corporation, NTT DoCoMo, Apple, Ericsson	Rel-15	36.331	TEI15, LTE-L23	4041	4	C
R2-2002102	PRACH prioritization parameters for MPS and MCS	Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson	Rel-16	38.331	NR_newRAT-Core, TEI16	1361	1	B
R2-2002103	PRACH prioritization procedure for MPS and MCS	Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson	Rel-16	38.321	NR_newRAT-Core, TEI16	0675	1	B
R2-2002104	NAS handling error of nas-Container for	Intel	Rel-16	38.331	TEI16, NR_newRAT-	1149	2	F

	security key derivation				Core			
R2-2002105	NAS handling error of nas-Container for security key derivation	Intel	Rel-16	36.331	TEI16, NR_newRAT-Core, LTE_5GCN_connect-Core	4099	2	F
R2-2002107	CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE	CMCC	Rel-16	38.306	ENDC_UE_PC2_TDD_TDD	0145	1	F
R2-2002111	CR for the introduction of SSR positioning support into LTE	ESA, Intel Corporation	Rel-16	36.305	NR_pos-Core	0085	1	B
R2-2002121	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc	Rel-16	37.355	TEI16	0248	1	B
R2-2002127	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331)	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1409	2	F
R2-2002129	Correction on NZP-CSI-RS-ResourceSet	ASUSTeK	Rel-15	38.331	NR_newRAT-Core	1496	1	F
R2-2002130	CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE	CMCC	Rel-16	38.331	ENDC_UE_PC2_TDD_TDD	1152	3	F
R2-2002133	Inclusion of 90MHz UE Bandwidth	VODAFONE, Sprint, Ericsson	Rel-16	38.306	NR_newRAT-Core, TEI16	0223	1	C
R2-2002141	Correction on reporting of uplink TX direct current	MediaTek Inc.	Rel-15	38.331	NR_newRAT-Core	1450	1	F
R2-2002145	Autonomous gap support for CGI reading	vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel, MediaTek, Qualcomm incorporated, ZTE Corporation, Sanechips	Rel-16	36.306	TEI16, NR_RRM_enh	1727	1	B
R2-2002147	Introducing autonomous gap in CGI reporting	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO	Rel-16	38.306	TEI16, NR_RRM_enh-Core	0226	2	B
R2-2002149	CR on overheating assistance reporting in handover case	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1484	1	F
R2-2002151	CR on the maximum stored number of deprioritisation frequencies	Huawei, HiSilicon	Rel-15	38.306	NR_newRAT-Core	0254	1	F
R2-2002154	Correction on p-maxNR-FR1 for NE-DC	Ericsson	Rel-15	38.331	NR_newRAT-Core	1460	1	F
R2-2002158	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon	Rel-16	36.306	TEI16	1732	1	B
R2-2002159	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon	Rel-16	36.331	TEI16	4200	1	B
R2-2002160	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon	Rel-16	38.306	TEI16	0243	1	B

R2-2002161	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm Incorporated, OPPO, KT, Turkcell, Verizon	Rel-16	38.331	TEI16	1465	1	B
R2-2002173	Introduction of RRC parameters and UE capabilities for enhanced high speed scenario	NTT DOCOMO INC.	Rel-16	36.331	LTE_high_speed_enh2-Core	4095	4	B
R2-2002174	Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16	CMCC, Huawei, HiSilicon, NTTDOCOMO INC.	Rel-16	36.306	LTE_high_speed_enh2	1712	4	B
R2-2002175	Introduction of NR IDC solution	vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO INC., NEC, Xiaomi Communications, Qualcomm Inc, CATT, InterDigital, China Telecom, Ericsson, Samsung	Rel-16	38.331	TEI16	1443	1	B
R2-2002176	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	Rel-16	36.331	E_FLUS	4230		B
R2-2002177	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	Rel-16	38.331	E_FLUS	1502		B
R2-2002178	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	Rel-16	36.321	E_FLUS	1464	1	B
R2-2002179	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	Rel-16	38.321	E_FLUS	0688	1	B
R2-2002180	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	Rel-16	36.306	E_FLUS	1743		B
R2-2002181	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	Rel-16	38.306	E_FLUS	0260		B
R2-2002184	CR to 38.331 on CSI-RS inter-node message	Huawei, HiSilicon	Rel-16	38.331	TEI16	1354	2	C
R2-2002189	Clarification on candidate NR frequencies for IDC in EN-DC	NTT DOCOMO, INC., Ericsson, MediaTek Inc., ZTE Corporation, Qualcomm Incorporated, Samsung	Rel-15	36.331	NR_newRAT-Core	4168	2	F
R2-2002191	Addition of broadcast TBS assistance data	NextNav, AT&T, FirstNet, Polaris Wireless	Rel-16	37.355	LCS_LTE_acc_enh-Core, TEI16	0249	1	C
R2-2002209	CR to 38.331 on support of 70MHz channel bandwidth	Huawei, HiSilicon, Vodafone	Rel-15	38.331	NR_newRAT-Core	1410	4	F
R2-2002215	Security and RRC Resume Request	Nokia (Rapporteur)	Rel-15	38.300	NR_newRAT-Core	0188	1	F
R2-2002234	38.323 CR for NR V2X	CATT	Rel-16	38.323	5G_V2X_NRSL-Core	0038	2	B
R2-2002239	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm Incorporated, Saankhya Labs Private Limited, Tejas Networks Ltd.	Rel-16	36.331	LCS_NAVIC	4137	6	B
R2-2002240	CR of TS 36.305 for introducing NavIC in LTE	Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm Incorporated, Saankhya Labs Private Limited, Tejas Networks Ltd.	Rel-16	36.305	LCS_NAVIC	0084	5	B
R2-2002243	Introduction of NR positioning	Intel Corporation	Rel-16	37.355	NR_pos-Core	0250	2	B
R2-2002255	Autonomous gap support for CGI reading	vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei,	Rel-16	36.331	TEI16	4187	2	B

		HiSilicon, Intel, Mediatek, Nokia, Qualcomm incorporated, ZTE Corporation, Sanechips						
R2-2002260	Introduction of downgraded configuration for SRS antenna switching	OPPO, Intel	Rel-16	38.331	TEI16	1433	2	B
R2-2002261	Introduction of downgraded configuration for SRS antenna switching	OPPO, Intel	Rel-16	38.306	TEI16	0258	1	B
R2-2002263	Introduction of 5G V2X with NR Sidelink	LG Electronics Inc.	Rel-16	36.300	5G_V2X_NRSL-Core	1271		B
R2-2002264	Introduction of 5G V2X with NR Sidelink	LG Electronics Inc.	Rel-16	38.300	5G_V2X_NRSL-Core	0204		B
R2-2002265	Introduction of 5G V2X with NR Sidelink	LG Electronics Inc.	Rel-16	37.340	5G_V2X_NRSL-Core	0187		B
R2-2002267	Propagation of Roaming and Access Restriction information in E-UTRAN in non-homogenous eNB deployments	R3 (Ericsson, Qualcomm)	Rel-15	36.300	NR_newRAT-Core	1272		F
R2-2002268	Propagation of Roaming and Access Restriction information in E-UTRAN in non-homogenous eNB deployments	R3 (Ericsson, Qualcomm)	Rel-16	36.300	NR_newRAT-Core	1273		A
R2-2002269	Propagation of Roaming and Access Restriction information in NG-RAN in non-homogenous NG-RAN node deployments	R3 (Ericsson, Qualcomm)	Rel-15	38.300	NR_newRAT-Core	0206		F
R2-2002270	Propagation of Roaming and Access Restriction information in NG-RAN in non-homogenous NG-RAN node deployments	R3 (Ericsson, Qualcomm)	Rel-16	38.300	NR_newRAT-Core	0207		A
R2-2002274	Correction on removal of NR-DC and NE-DC band combinations when capabilityRequestFilterCommon is absent	MediaTek Inc.	Rel-15	38.331	NR_newRAT-Core	1444	1	F
R2-2002275	Capability coordination for NE-DC	Ericsson	Rel-15	38.331	NR_newRAT-Core	1475	1	F
R2-2002278	Introducing autonomous gap in CGI reporting	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated, Intel, Nokia, Huawei, HiSilicon, China Telecom, China Unicom, NTT DOCOMO	Rel-16	38.331	NR_RRM_enh-Core	1434	2	B
R2-2002297	Miscellaneous Corrections to UE capability parameters	Intel Corporation, Lenovo, Motorola Mobility, NTT DOCOMO, INC., Samsung, Qualcomm Incorporated, Ericsson	Rel-15	38.306	NR_newRAT-Core	0255	2	F
R2-2002305	Clarification on the PLMN-IdentityInfoList	ZTE Corporation, Sanechips	Rel-15	38.331	NR_newRAT-Core	1440	2	F
R2-2002306	CR to 38.306 on support of 70MHz channel bandwidth	Huawei, HiSilicon, Vodafone	Rel-15	38.306	NR_newRAT-Core	0209	5	F
R2-2002307	Security and RRC Resume Request	Nokia (Rapporteur)	Rel-16	38.300	NR_newRAT-Core	0189	2	A
R2-2002311	CR for 38.322 for NR V2X	Ericsson	Rel-16	38.322	5G_V2X_NRSL-Core	0030	1	B
R2-2002313	Introduction of NR eURLLC	Huawei, HiSilicon	Rel-16	38.331	NR_L1enh_URLLC-Core	1487	1	B
R2-2002314	Introduction of NR eURLLC	Huawei, HiSilicon	Rel-16	38.321	NR_L1enh_URLLC-Core	0695	1	B
R2-2002315	Introduction of NR eURLLC	Huawei, HiSilicon, Nokia (TS rapporteur)	Rel-16	38.300	NR_L1enh_URLLC-Core	0200	1	B
R2-2002316	Introduction of 5G V2X with NR Sidelink	LG Electronics Inc.	Rel-16	38.321	5G_V2X_NRSL	0701	1	B
R2-2002317	CR on cell selection/ reselection for NR V2X UE	ZTE Corporation, Sanechips	Rel-16	36.304	5G_V2X_NRSL-Core	0785	1	B

R2-2002318	CR on cell selection/ reselection for NR V2X UE	ZTE Corporation, Sanechips	Rel-16	38.304	5G_V2X_NRSL-Core	0151	1	B
R2-2002320	Introduction of a new MAC subheader for MAC Ces	Samsung	Rel-16	38.321	TEI16	0703		B
R2-2002323	Correction of TS 37.340 on the support of MR-DC for IAB	Huawei, HiSilicon	Rel-16	37.340	NR_IAB-Core	0186	2	B
R2-2002326	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson, Sharp	Rel-16	38.331	TEI16	1312	3	C
R2-2002327	Introdution of EPS voice fallback enhancement	Qualcomm Incorporated	Rel-16	38.306	TEI16	0233	1	C
R2-2002332	Clarification on gap sharing configuration at handover and re-establishment	Huawei, HiSilicon	Rel-14	36.331	LTE_feMTC-Core	4212	1	F
R2-2002333	Clarification on gap sharing configuration at handover and re-establishment	Huawei, HiSilicon	Rel-15	36.331	LTE_feMTC-Core, NR_newRAT-Core	4213	1	A
R2-2002336	Support of inter-RAT handover from NR to EN-DC in TS 36.331	China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson	Rel-16	36.331	TEI16	4232		B
R2-2002337	Support of inter-RAT handover from NR to EN-DC in TS 38.331	China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson	Rel-16	38.331	TEI16	1505		B
R2-2002338	Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 38.306	China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson	Rel-16	38.306	TEI16	0261		B
R2-2002339	Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 36.306.	China Telecom, Huawei, ZTE, CATT, VIVO, Qualcomm, NTT DOCOMO, Ericsson	Rel-16	36.306	TEI16	1745		B
R2-2002341	Introduction of NR IIOT	Samsung	Rel-16	38.321	NR_IIOT-Core	0698	1	B
R2-2002342	Introduction of 5G V2X with NR Sidelink	LG Electronics Inc.	Rel-16	36.321	5G_V2X_NRSL	1467	1	B
R2-2002344	Corrections on maxMeasIdentitiesSCG-NR in MR-DC	ZTE Corporation, Sanechips, Ericsson, NEC, CATT	Rel-15	38.331	NR_newRAT-Core	1272	3	F
R2-2002346	Non-Public Networks	Nokia, China Telecom (Rapporteurs)	Rel-16	38.300	NG_RAN_PRN-Core	0195	2	B
R2-2002347	CR on fallback BC reporting	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1483	2	F
R2-2002348	Introduction of 2-step RACH	Nokia (rapporteur), Nokia Shanghai Bell	Rel-16	38.300	NR_2step_RACH-Core	0197	1	B
R2-2002349	UE capability of intra-band requirements for inter-band EN-DC/NE-DC	NTT DOCOMO, INC., Qualcomm Incorporated	Rel-15	38.331	NR_newRAT-Core	1501	1	F
R2-2002350	UE capability of intra-band requirements for inter-band EN-DC/NE-DC	NTT DOCOMO, INC., Qualcomm Incorporated	Rel-15	38.306	NR_newRAT-Core	0259	1	F
R2-2002356	Introduction of NR Industrial IoT features	Nokia, Nokia Shanghai Bell	Rel-16	36.300	NR_IIOT	1276		B
R2-2002358	36.331 CR on Integrated Access and Backhaul	Ericsson	Rel-16	36.331	NR_IAB-Core	4233		B
R2-2002359	Introduction of NR IIoT	Ericsson	Rel-16	38.331	NR_IIOT-Core, NR_L1enh_URLLC	1498	1	B
R2-2002360	Introduction of NR IIoT	Ericsson	Rel-16	36.331	NR_IIOT-Core	4228	1	B
R2-2002370	Introduction of SRVCC from 5G to 3G	Ericsson, China Unicom	Rel-16	38.300	SRVCC_NR_to_UMTS-Core	0186	2	B
R2-2002377	Miscellaneous non-controversial corrections Set V	Ericsson	Rel-15	38.331	NR_newRAT-Core	1472	2	F
R2-2002380	Introduction of 2-step RA	Ericsson	Rel-16	38.331	NR_2step_RACH-Core, NR_unlic-Core, TEI16	1499	1	B
R2-2002382	Introduction of dormant BWP operation and Async CA	OPPO	Rel-16	38.321	LTE_NR_DC_CA_enh-Core	0685	2	B

R2-2002385	Introduction of NR operation with Shared Spectrum Access in Idle/Inactive mode	Qualcomm Incorporated	Rel-16	38.304	NR_unlic-Core	0149	2	B
R2-2002387	CR for supporting UE Power Saving in TS 37.340	OPPO	Rel-16	37.340	NR_UE_pow_sav-Core	0184	2	B
R2-2002388	Introduction of Rel-16 NR UE power saving in 38.321	Huawei, Nokia, Nokia Shanghai Bell	Rel-16	38.321	NR_UE_pow_sav-Core	0699	2	B
R2-2002389	CR for 38.331 for Power Savings	MediaTek Inc.	Rel-16	38.331	NR_UE_pow_sav-Core	1469	3	B
R2-2002390	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306)	Huawei, HiSilicon	Rel-15	38.306	NR_newRAT-Core	0208	3	F
R2-2002391	CR for 36.331 for CA&DC enh	Ericsson	Rel-16	36.331	LTE_NR_DC_CA_enh-Core	4216	3	B
R2-2002392	CR for 38.331 for CA&DC enh	Ericsson	Rel-16	38.331	LTE_NR_DC_CA_enh-Core	1476	3	B
R2-2002395	Introduction of CA/DC enhancements to 37.340	vivo, Ericsson	Rel-16	37.340	LTE_NR_DC_CA_enh-Core	0188		B
R2-2002396	Introduction of on-demand SI procedure in RRC_CONNECTED	Ericsson	Rel-16	38.331	NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core	1462	2	B
R2-2002397	Introduction of on-demand SI procedure in RRC_CONNECTED	Ericsson	Rel-16	38.300	NR_unlic-Core, 5G_V2X_NRSL-Core, NR_IIOT-Core	0194	2	B
R2-2002398	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm Incorporated, Saankhya Labs Private Limited, Tejas Networks Ltd.	Rel-16	37.355	LCS_NAVIC-Core	0247	8	B
R2-2002399	Introduction of NR positioning	Intel Corporation, ESA	Rel-16	38.305	NR_pos-Core	0017	3	B
R2-2002400	Introduction of NR positioning on MAC spec	Huawei, HiSilicon	Rel-16	38.321	NR_pos-Core	0704	1	B
R2-2002401	Introduction of NR positioning	Ericsson	Rel-16	38.331	NR_pos-Core	1504	2	B
R2-2002402	Data rate for the case of single carrier standalone operation	Ericsson	Rel-15	38.306	NR_newRAT-Core	0248	2	F
R2-2002403	Correction of TS 38.304 to introduce IAB	Huawei, HiSilicon	Rel-16	38.304	NR_IAB-Core	0150	3	B
R2-2002404	Correction of TS 36.304 to introduce IAB	Huawei, HiSilicon	Rel-16	36.304	NR_IAB-Core	0784	3	B
R2-2002405	Introduction of Integrated Access and Backhaul for NR	Samsung Electronics GmbH	Rel-16	38.321	NR_IAB	0677	6	B
R2-2002406	38.331 CR on Integrated Access and Backhaul for NR	Ericsson	Rel-16	38.331	NR_IAB-Core	1471	4	B
R2-2002407	CR to 38.300 on Integrated Access and Backhaul for NR	Qualcomm	Rel-16	38.300	NR_IAB-Core	0153	8	B
R2-2002408	Introduction of NR IIOT	PDCP Rapporteur (LG Electronics Inc.)	Rel-16	38.323	NR_IIOT-Core	0039	3	B
R2-2002409	Introducing EHC in LTE PDCP	PDCP Rapporteur (LG Electronics Inc.)	Rel-16	38.323	NR_IIOT-Core	0043	3	B
R2-2002410	Introduction of UE Power Saving in NR	CATT	Rel-16	38.300	NR_UE_pow_sav-Core	0193	2	B
R2-2002411	CR for 36.300 on CA/DC enh	Ericsson	Rel-16	36.300	LTE_NR_DC_CA_enh-Core	1268	2	B
R2-2002412	CR for 38.300 for CA/DC Enhancements	Ericsson	Rel-16	38.300	LTE_NR_DC_CA_enh-Core	0198	2	B
R2-2002413	Introduction of 2-step RACH in 38.321	ZTE Corporation, Sanechips	Rel-16	38.321	NR_2step_RACH-Core, NR_unlic-Core, TEI16	0692	3	B
R2-2002414	Introduction of UE Power Saving in NR	vivo	Rel-16	38.304	NR_UE_pow_sav-Core	0145	4	B

218 Agreed CRs

Annex F: List of offline email discussions during the meeting

✉ **[AT109e][000] RAN2 109-e Organizational Main (Chairman)**
Scope: Meeting: Opening and Closing of the meeting. Comments to agenda, schedule methods etc. General things that do not fit elsewhere. Treatment of Agenda Items 1, 2 and 8.

Johan's session topics: Comments to session notes. Kick-off and management of email discussions for main session. Coordination issues.
Part 1: Intended outcome: AI1 Chairman reminders and Possibility to comment, AI2 Approval of agenda, AI2 Endorsement of RAN2 109-e Methods and Guidence
CLOSED
Part 2: Intended outcome: AI2 Approval of RAN2#108 Meeting Report
CLOSED
Part 3: Intended outcome: Approval of Reports from RAN2 Sessions,
CLOSED

✉ **[AT109e][001][NR15] Stage-2 38300 (Nokia)**
Scope: CRs above, potential other R15 38300 topic TBD
CLOSED

✉ **[AT109e][002][NR15] User Plane (Apple/Huawei)**
Scope: Treat User Plane R15 CRs, tdocs above
CLOSED

✉ **[AT109e][003][NR15] NR RRC (Ericsson)**
Scope: RRC Maintenance, Treat CR above, there may be additions to the CR during the meeting.
CLOSED

✉ **[AT109e][004][NR15] Potential Easies I (Mediatek, vivo, Huawei, ASUS)**
Scope: Treat R2-2000681, R2-2000359, R2-2001179, R2-2001178, R2-2001590. In case email discussion gets unexpectedly long, it can be split.
CLOSED

✉ **[AT109e][005][NR15] Coordination on number of measurment ID (Nokia, ZTE)**
Scope: Coordination on number of measurement ID, Treat the documents above
CLOSED

✉ **[AT109e][006][NR15] Potential easies II (Nokia, LG, Ericsson, ZTE)**
Scope: Treat the documents R2-2000858, R2-2000859, R2-2000353, R2-2000879, R2-2000880, R2-2001612
CLOSED

✉ **[AT109e][007][NR15] Potential easies III (Huawei, Lenovo, NTT Docomo)**
Scope: Treat the documents R2-2000763, R2-2000764, R2-2001324, R2-2000682, R2-2000692.
CLOSED

✉ **[AT109e][008][NR15] Cap Discussion (Ericsson, Mediatek, Huawei, NTT docomo, Qualcomm, Nokia)**
Part 1: Scope: Treat the documents R2-2001322, R2-2001224, R2-2000425, R2-2000684, R2-2001221, R2-2000165, R2-2002081, R2-2000034, R2-2001220, R2-2000011.
CLOSED
Part 2: Agreed revisions of R2-2001220 and R2-2001224
CLOSED

✉ **[AT109e][009][NR15] Miscellaneous Corr UE cap (Intel)**
Scope: Treat the CR above, items may be added to this CR during the meeting
CLOSED

✉ **[AT109e][010][NR15] Potential easies IV (Huawei)**
Scope: Treat the documents R2-2001187, R2-2001323, R2-2001314, R2-2001314, R2-2001313, R2-2001312
CLOSED

✉ **[AT109e][011][R16] LS on Guidelines for UE capability definitions (Intel/Ericsson)**
Intended outcome: Approved LS out
CLOSED

✉ **[AT109e][012][R16] LCID extension (Samsung)**
Scope: LCID extension, applicable to all R16 WIs that have need,
Part 1: Intended outcome: Report, issues and resolutions.
CLOSED
Part 2 Intended outcome: Agreed CR
CLOSED

✉ **[AT109e][013][IAB] IAB General (Qualcomm)**
Scope: WI Rapporteur email thread, Treat general items, planning etc
CLOSED (no decisions, just information sharing)

✉ **[AT109e][014][IAB] BAP 38340 (Huawei)**
Scope: Progress BAP TS, Stage-3 and implementation focus, Treat 108#51.
Intended outcome: Address Stage-3 Open issues, take this meeting's agreements into account, as they become available. Produce final agreed TS.
CLOSED

✉ **[AT109e][015][IAB] RRC CRs 38331 36331 (Ericsson)**
Scope: Progress RRC CRs.
Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.
EXTENDED

✉ **[AT109e][016][IAB] Idle CRs 38304 36304 (Huawei)**
Scope: Progress xx304 CRs
Part 1: Intended outcome: Endorsed CRs, revision with tdoc number
CLOSED
Part 2: Intended outcome: Address Open issues, take this meeting's agreements into account, CLOSED

✉ **[AT109e][017][IAB] Stage-2 37340 CR (Huawei)**
Scope: Progress Stage-2 37340 CRs
Part 1 Intended outcome: Endorsed CRs, revision with tdoc number
CLOSED
Part 2: Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.
CLOSED

✉ **[AT109e][018][IAB] Stage-2 38300 36300 CR (Qualcomm)**
Scope: Progress Stage-2 38300 38300 CRs
Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.
CLOSED

✉ **[AT109e][019][IAB] MAC CR (Samsung)**
Scope: Progress MAC CR
Intended outcome: Address Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CR.
CLOSED

✉ **[AT109e][020] ()**
CANCELED

✉ **[AT109e][021][IAB] BAP functionality (Huawei)**
Scope: Treat remaining parts to be treated from email discussion and from summary
CLOSED

✉ **[AT109e][022][IAB] User Plane Aspects (Samsung)**
Scope: Treat summary in R2-2002092
CLOSED

✉ **[AT109e][023][IAB] IP address Allocation (Samsung)**
Scope: Treat summary on IP address allocation
CLOSED

✉ **[AT109e][024][IAB] IAB MT Features (Ericsson)**
Scope: Treat summary on IAB MT Features, Progress Feature List, Treat email discussion [108#46].
CLOSED

✉ **[AT109e][025][IAB] SI Broadcast, cell Restrictions/Reservation and Barring, Initial Access, and Connection Setup (Ericsson)**
Scope: Treat summary on 6.1.5.3
CLOSED

✉ **[AT109e][026][IIOT] IIOT General (Nokia)**
Scope: WI Rapporteur email thread,
NOT USED

✉ **[AT109e][027][IIOT] CR RRC 38331 36331 (Ericsson)**
Scope: Progress RRC CRs
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

✉ **[AT109e][028][IIOT] CR PDCP 38323 36323 (LG)**
Scope: Progress PDCP CRs
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

✉ **[AT109e][029][IIOT] CR MAC 38321 (Samsung)**
Scope: Progress MAC CR
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

✉ **[AT109e][030][IIOT] CR Stage-2 38300 36300 (Nokia)**
Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
CLOSED

✉ **[AT109e][031][IIOT] IIOT UE capabilities (Nokia)**
Scope: Progress Feature List and UE capabilities, way forward.
Intended outcome: Treat email discussion [108#47] and other papers above,
CLOSED

✉ **[AT109e][032][IIOT] Accurate Reference Timing (Nokia)**
Scope: Treat summary on accurate ref timing (other papers if needed)
Intended outcome: Resolve issues, Describe Open Issues accurately.
CLOSED

- ✉ **[AT109e][033][IIOT] Scheduling Enhancements (Ericsson)**
  Scope: Treat summary on Scheduling Enhancements
  Intended outcome: Resolve issues, Describe Open Issues accurately.
  CLOSED

- ✉ **[AT109e][034][IIOT] Ethernet Header Compression (Mediatek, Huawei)**
  Scope: Treat email discussion [108#53] and summary on EHC
  Intended outcome: Resolve issues, Describe Open Issues accurately.
  CLOSED

- ✉ **[AT109e][035][IIOT] Deprioritized transmissions (CATT)**
  Scope: Treat summary on deprioritized transmissions.
  Intended outcome: Resolve issues, Describe Open Issues accurately.
  CLOSED

- ✉ **[AT109e][036][IIOT] Data Data and Data SR prioritization (Samsung)**
  Scope: Treat summary on Data Data and Data SR prioritization.
  Intended outcome: Resolve issues, Describe Open Issues accurately.
  CLOSED

- ✉ **[AT109e][037][IIOT] PDCP Duplication Enhancements (LG)**
  Scope: Treat summary on PDCP Duplication Enhancements.
  Intended outcome: Resolve issues, Describe Open Issues accurately.
  CLOSED

- ✉ **[AT109e][038][DCCA] DCCA General (Ericsson)**
  Scope: WI Rapporteur email thread,
  NOT USED

- ✉ **[AT109e][039][DCCA] UE capabilities (Huawei)**
  Scope: Progress Feature List and UE capabilities, way forward.
  CLOSED

- ✉ **[AT109e][040][DCCA] CR Stage-2 37340 (Vivo)**
  Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
  CLOSED

- ✉ **[AT109e][041][DCCA] CR Stage-2 38300 36300 (Ericsson)**
  Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
  CLOSED

- ✉ **[AT109e][042][DCCA] CR RRC 38331 36331 (Ericsson)**
  Scope: Progress CRs
  Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
  EXTENDED

- ✉ **[AT109e][043][DCCA] CR MAC (Ericsson)**
  Intended outcome: Capture agreements, also from this meeting, as they become available. Produce final agreed CRs.
  CLOSED

- ✉ **[AT109e][044][DCCA] Power Control NR DC (vivo)**
  Scope: Treat Email discussion + additional issues from the other papers to this Agenda item
  Intended outcome: Last Round: Approved LS to RAN3

CLOSED

✉ **[AT109e][045][DCCA] Early Measurements Reporting (Ericsson)**
Scope: Treat Email discussion + Summary
CLOSED

✉ **[AT109e][046][DCCA] Fast SCell Activation (Oppo)**
Scope: Treat Email discussion + Summary + LS
Part 2, Continuation:
Intended outcome: Report, Agreed Issues resolutions
Deadline: Mar 3 1200 CET

✉ **[AT109e][047][DCCA] MCG SCell and SCG Configuration with RRC Resume (ZTE)**
CANCELED

✉ **[AT109e][048][DCCA] Fast MCG Recovery (Ericsson)**
Scope: Treat summary Fast MCG Recovery
CLOSED

✉ **[AT109e][049][DCCA] Async CA (Qualcomm)**
Scope: Treat 108#57 (in case needed for discussion, can treat also additional papers).
CLOSED

✉ **[AT109e][050][R16 Other WISI] NR HST (CMCC)**
Scope: Treat documents above
Intended outcome: Focus first on LS and discussion doc. Achieve initial agreements, agree what we shall do. Treatment of CRs expected next meeting.
CLOSED

✉ **[AT109e][051][R16 Other WISI] Rec bitrate FLUS and MTSI (QC)**
Scope: Treat documents above, feel free to split into phases.
CLOSED

✉ **[AT109e][052][R16 Other WISI] UL sharing for variable-duplex FDD bands (Nokia)**
Scope: Treat documents above
CLOSED

✉ **[AT109e][053][TEI16] IPA CRs (Chairman)**
Scope: Approval of in-principle agreed CRs for AI 6.20.x
CLOSED

✉ **[AT109e][054][TEI16] DL RRC segmentation (Ericsson)**
Scope: DL RRC Segmentation, tdocs above
CLOSED

✉ **[AT109e][055][TEI16] Autonomous Gaps (vivo, ZTE)**
Scope: Autonomous gaps, tdocs above
CLOSED

✉ **[AT109e][056][TEI16] IDC (vivo)**
Scope: IDC, tdocs above
Intended outcome: Agreed CRs
CLOSED

✉ **[AT109e][057][TEI16] Additional RACH config (NTT Docomo)**
Scope: tdoc above
CLOSED

- ✉ **[AT109e][058][TEI16] Downgraded configuration SRS antenna switching (Intel Oppo)**
  Scope: tdocs above
  CLOSED

- ✉ **[AT109e][059][TEI16] One-slot periodic TRS configuration (CMCC)**
  CLOSED

- ✉ **[AT109e][060][URLLC] RRC CR (Huawei)**
  Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
  CLOSED

- ✉ **[AT109e][061][URLLC] MAC CR (Huawei)**
  Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
  CLOSED

- ✉ **[AT109e][062][URLLC] Stage-2 38300 CR (Huawei)**
  Intended outcome: Address CR Open issues, take this meeting's agreements into account, as they become available. Produce final agreed CRs.
  CLOSED

- ✉ **[AT109e][063][URLLC] L2 Parameters (Huawei)**
  Intended outcome: Treat the R2-2000780, R2-2000800, R2-2001332, R2-2001361, resolve issues, if any. Find OIs, if any.
  CLOSED

- ✉ **[AT109e][064][URLLC] MAC CEs (Ericsson)**
  Intended outcome: Treat R2-2000799, resolve issues, if any. Find OIs, if any.
  CLOSED

- ✉ **[AT109e][065][R16] R16 NR RRC coordination (Ericsson)**
  Scope: Cross WI RRC coordination, Address issues found at RRC Merge. Identify which CRs/WIs that are problematic.
  Intended outcome: Identification of and Resolution to RRC issues
  Deadline: Follows the deadlines of the respective CRs.

- ✉ **[AT109e][066][R16] R16 LTE RRC coordination (Samsung)**
  Scope: Cross WI RRC coordination, Address issues found at RRC Merge. Identify which CRs/WIs that are problematic.
  CLOSED

- ✉ **[AT109e][067][R16] L1 parameters (QC)**
  Scope: Discussion on L1 parameters, issues, consistency
  CLOSED, NOT NEEDED

- ✉ **[AT109e][068][NR15] 1-symbol PUCCH with frequency hopping (Nokia)**
  Scope: Allow check, Continue treat and discuss the documents R2-2000166, R2-2000167
  CLOSED

- ✉ **[AT109e][069][NR15] Gap Sharing (Huawei)**
  Scope: Discussion 1183, 1184,
  Intended outcome: Agreed CRs
  CLOSED

- ✉ **[AT109e][070][NR15] Unsecured UE capability handling (NTT Docomo)**
  Scope: Based on R2-2002049 determine the interest, and if possible arrive at an agreed CR
  Intended outcome: Short report or agreed CR

CLOSED

- **[AT109e][071][NR15] FR2 Fallback Combinations (MTK)**
  Scope: LS to R4 on the details according to way forward.
  Intended outcome: Approved LS
  CLOSED

- **[AT109e][072][NR15] BWCS for inter-ENDC BC with intra-ENDC BC (Huawei)**
  Intended outcome: Agreed CRs based on R2-2001318 and 1319
  CLOSED

- **[AT109e][073][NR15] NE-DC capability extensions (ZTE)**
  Intended outcome: LS to R1 to ask about applicability of 1024QAM parameter, Agreed CRs based on R2-2000487, 0488
  CLOSED

- **[AT109e][074][TEI16] EPS Voice Fallback (QC)**
  Scope: Add signalled Cabaility
  Intended outcome: Agreed CRs (all three CRs together), based on R2-2000580, R2-2000581, R2-2000582
  CLOSED

- **[AT109e][075][TEI16] NR – ENDC handover (China Telecom)**
  Scope: Progress Stage-3 CRs, Decide finally whether 38306 capability is needed.
  Intended outcome: Agreed CRs (if not 100% agreement, decide action by email)
  CLOSED

- **[AT109e][076][TEI16] Under-reporting CSI-RS capabilities (Docomo)**
  Scope: Progress the solution and CR, use solution in R2-2000683, R2-2000688, R2-2000689 as baseline. If progress is good, determine the need for, scope of an LS
  CLOSED

- **[AT109e][077][NR15] Cap Discussion II (Mediatek)**
  Scope: R2-2000684: Agree to have this CR, can polish the wording, R2-2000425, Different interpretations on current behaviour. continue discussion, make revisions.
  Intended outcome: Agreed CR (if CR not agreeable now for 0425, then a statement clarifying current behaviour to be captured in Chair notes).
  CLOSED

- **[AT109e][078][NR15] Cap Discussion III (NTT DOCOMO)**
  Scope: R2-2002080, R2-2002081, continue discussion, Different views, Something may be needed.
  CLOSED

- **[AT109e][079][NR15] Cap Discussion IV (Huawei)**
  Scope: R2-2001322, There is significant support to make a clarification, Should attempt to convince opponents. If agreeable, cover sheet need update,
  CLOSED

- **[AT109e][080][TEI16] NeedForGap capability (MTK)**
  Scope: Progress this based on agreements and papers above
  CLOSED

- **[AT109e][081][NR15] SRS Capability report for SRS only Scell (Huawei)**
  Scope: Check the scenario, refer to relevant R1 decisions. If agreeable to continue; CR agree how to signal (If scenario need deeper checking can be postponed)
  CLOSED

- ✉ **[AT109e][082][OdSIBconn] on-demand SIB in CONNECTED Functionality (Ericsson)**
  Scope: Treat and progress based on R2-2001670
  Intended outcome:
  CLOSED

- ✉ **[AT109e][083][OdSIBconn] on-demand SIB in CONNECTED CRs (Ericsson)**
  Scope: Treat and progress based on R2-2001670, Need to coordinate with NR pos CR to avoid clashes.
  CLOSED

- ✉ **[AT109e][084][R16] 38300 Review of R16 TPs/CRs from other groups (Nokia)**
  Scope: Review of TPs/CRs from other groups
  CLOSED

- ✉ **[AT109e][085][R16] 36300 Review of R16 TPs/CRs from other groups (Nokia)**
  Scope: Review of TPs/CRs from other groups
  CLOSED

- ✉ **[AT109e][086][R16] 37340 Review of R16 TPs/CRs from other groups (ZTE)**
  Scope: Review of TPs/CRs from other groups
  NOT USED

- ✉ **[AT109e][099][ASN.1] ASN.1 Plan (Ericsson/Chairman)**
  Scope: gather detail plan comments and make revision.
  Intended outcome: endorsed plan
  CANCELLED

List and status of offline email discussions

NOTE: No offline email discussions will be kicked off before Monday February 24th, 9:00 CET

- ✉ **[AT109e][101][RACS] Stage 2 CRs (Mediatek)**
  Intended outcome: Agreed 36.300 and 38.330 CRs, also taking into account proposals in R2-2000939
  Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
  Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
  Status: Closed

- ✉ **[AT109e][102][RACS] Stage 3 CRs (ZTE)**
  Intended outcome: Agreed 36.331 and 38.331 CRs
  Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
  Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
  Status: Closed

- ✉ **[AT109e][103][RACS] Optional signalling of UE capabilities at handover (Ericsson)**
  Intended outcome: Decision on proposals in R2-2001227 and possible drafting of a LS to SA2
  Deadline for companies' feedback: Monday 2020-03-02 12:00 CET
  Deadline for rapporteur's version for agreement: Tuesday 2020-03-03 12:00 CET
  Status: Closed

- ✉ **[AT109e][104][SRVCC] Stage 2 CRs (Ericsson)**
  Intended outcome: Agreed 37.340 and 38.300 CRs
  Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
  Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
  Status: Closed

- ✉ **[AT109e][105][SRVCC] RRC CR (Huawei)**

Intended outcome: Agreed 38.331 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
Status: Closed

✉ **[AT109e][106][SRVCC] 38.306 CR (China Unicom)**
Intended outcome: Agreed 38.306 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
Status: Closed

✉ **[AT109e][107][CLI] Stage 2 CRs (Huawei)**
Intended outcome: Agreed 37.340 and 38.300 CRs
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
Status: Closed

✉ **[AT109e][108][CLI] RRC CR (LG)**
Intended outcome: Agreed 38.331 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
Status: Closed

✉ **[AT109e][109][CLI] 38.306 CR (Qualcomm)**
Intended outcome: Agreed 38.306 CR
Deadline for companies' feedback: Thursday 2020-02-27 12:00 CET
Deadline for rapporteur's version for agreement: Friday 2020-02-28 12:00 CET
Status: Closed

✉ **[AT109e][110][EMIMO] RRC CR (Ericsson)**
Initial scope: Continue the discussion on RRC aspects, based on R2-2001671
Initial intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals that need further (online) discussion

Initial intermediate deadline (for companies' feedback): Tuesday 2020-02-25 20:00 CET
Initial intermediate deadline (for rapporteur's summary): Wednesday 2020-02-26 01:30 CET
Second phase scope: Continue the discussion on RRC aspects which are still open after the discussion on R2-2001677
Second phase intended outcome: summary of the offline discussion in R2-2001684:
- Set of proposals with full consensus (aim to agree to those over email) and corresponding updated CR
- Set of proposals that need further (online) discussion

Second intermediate deadline (for companies' feedback): Friday 2020-02-28 12:00 CET
Second intermediate deadline (for rapporteur's summary and updated CR): Monday 2020-03-02 12:00 CET
Final scope: Discuss the updated CR
Final intended outcome: Agreed 38.331 CR
Final deadline for companies' feedback: Wednesday 2020-03-04 12:00 CET
Final deadline for rapporteur's version for agreement: Thursday 2020-03-05 12:00 CET
Status: Closed

✉ **[AT109e][111][EMIMO] MAC CR (Samsung)**
Scope: Update the CR based on the outcome of the discussion on R2-2000660 (DL MAC CE design), R2-2001678, R2-2001685 and R2-2001686.
Intended outcome: Agreed 38.321 CR
Intermediate deadline (for companies' feedback on the endorsed baseline CR): Friday 2020-02-28 12:00 CET
Intermediate deadline (for rapporteur's updated CR): Monday 2020-03-02 12:00 CET
Final deadline for companies' feedback: Wednesday 2020-03-04 12:00 CET

Final deadline for rapporteur's version for agreement: Thursday 2020-03-05 12:00 CET
Status: Closed

✉ **[AT109e][112][EMIMO] Beam management enhancements (Samsung)**
Initial scope: Continue the discussion on beam management enhancements, based on R2-2001672
Initial intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals that need further (online) discussion

Initial intermediate deadline (for companies' feedback): Tuesday 2020-02-25 20:00 CET
Initial intermediate deadline (for rapporteur's summary): Wednesday 2020-02-26 01:30 CET
Revised scope: Continue the discussion on beam management aspects which are still open after the discussion on R2-2001678 as well as BFR MAC CE aspects listed in R2-2000227
Final intended outcome: summary of the offline discussion in R2-2001685 with e.g.:
- Set of proposals with full consensus (aim to agree to those over email) to be reflected in an updated MAC CR
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Friday 2020-02-28 12:00 CET
Final deadline (for rapporteur's summary): Monday 2020-03-02 12:00 CET
Proposed agreements in R2-2001685 indicated for email agreement and not challenged until Monday 2020-03-02 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.
Status: Closed

✉ **[AT109e][120][EMIMO] LS to RAN1 (Ericsson)**
Scope: Discuss which questions to ask RAN1 regarding RRC parameters
Intended outcome: Agreed LS to RAN1 in R2-2001683
Deadline: Wednesday 2020-03-04 12:00 CET
Status: Closed

✉ **[AT109e][121][EMIMO] DL MAC CE design (Oppo)**
Scope: Continue the discussion on DL MAC CE design aspects which are still open after the discussion on R2-2000660 as well as those listed in R2-2001551
Intended outcome: summary of the offline discussion in R2-2001686 with e.g.:
- Set of proposals with full consensus (aim to agree to those over email) to be reflected in the updated MAC CR
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting

Final deadline (for companies' feedback): Friday 2020-02-28 12:00 CET
Final deadline (for rapporteur's summary): Monday 2020-03-02 12:00 CET
Proposed agreements in R2-2001686 indicated for email agreement and not challenged until Monday 2020-03-02 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.
Status: Closed

✉ **[AT109e][113][PRN] Stage 2 CR (Nokia)**
Intended outcome: Agreed 38.300 CR, taking into account proposals in R2-2000570 and possible new agreements during the meeting.
Deadline for feedback on baseline CR and R2-2000570: Thursday 2020-02-27 12:00 CET
Deadline for feedback on further updates: Wednesday 2020-03-04 16:00 CET
Deadline for rapporteur's version for agreement: Thursday 2020-03-05 12:00 CET
Status: Closed

✉ **[AT109e][114][PRN] RRC CR (Nokia)**
Scope: Update the RRC CR, based on the progress on the remaining open issues
Intended outcome: Agreed 38.331 CR
Deadline: Thursday 2020-03-05 12:00 CET

Status: Closed

✉ **[AT109e][115][PRN] 38.304 CR (Qualcomm)**
Scope: Update the 38.304 CR, based on the progress on the remaining open issues
Intended outcome: Agreed 38.304 CR
Deadline: Thursday 2020-03-05 12:00 CET
Status: Closed

✉ **[AT109e][116][PRN] Reply LS to SA5 (Huawei)**
Scope: Discuss the wording of the reply LS to SA5. Also check whether there is a common understanding on which combinations are allowed and whether further guidance from other groups is needed
Intended outcome:
1. Agreed LS to SA5.
2. Decision on the need (and in case on the content) of an LS to other groups to clarify which combinations are possible
Deadline: Tuesday 2020-03-03 12:00 CET
Status: Closed

✉ **[AT109e][117][PRN] Cell Selection and selection aspects (Qualcomm)**
Scope: Continue the discussion on cell selection and reselection aspects, trying to conclude on proposals from R2-2001676 not concluded online.
Initial intended outcome:
- Initial set of proposals with full consensus (agreeable over email) in R2-2001680

Initial intermediate deadline (for companies' feedback): Thursday 2020-02-27 23:59 CET
Initial intermediate deadline (for rapporteur's list of proposals): Friday 2020-02-28 12:00 CET
Proposed agreements in R2-2001680 not challenged until Monday 2020-03-02 12:00 CET will be declared as agreed by the session chair.
Final intended outcome: summary of the offline discussion in R2-2001697 with e.g.:
- (Further) set of proposals with full consensus, if any (agreeable over email)
- Set of proposals with almost full consensus to discuss in the follow up conference call
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Monday 2020-03-02 23:59 CET
Final deadline (for rapporteur's summary): Tuesday 2020-03-03 12:00 CET
Proposed agreements in R2-2001697 not challenged until Tuesday 2020-03-03 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.
Status: Closed

✉ **[AT109e][118][PRN] Connected mode aspects (Nokia)**
Scope: Continue the discussion on connected mode aspects, trying to conclude on proposals from R2-2001674 not concluded online.
Initial intended outcome:
- Initial set of proposals with full consensus (agreeable over email) in R2-2001681

Initial intermediate deadline (for companies' feedback): Thursday 2020-02-27 23:59 CET
Initial intermediate deadline (for rapporteur's list of proposals): Friday 2020-02-28 12:00 CET
Proposed agreements in R2-2001681 not challenged until Monday 2020-03-02 12:00 CET will be declared as agreed by the session chair.
Final intended outcome: summary of the offline discussion in R2-2001698 with e.g.:
- (Further) set of proposals with full consensus, if any (agreeable over email)
- Set of proposals with almost full consensus to discuss in the follow up conference call
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Monday 2020-03-02 23:59 CET
Final deadline (for rapporteur's summary): Tuesday 2020-03-03 12:00 CET

Proposed agreements in R2-2001698 not challenged until Tuesday 2020-03-03 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.
Status: Closed

✉ **[AT109e][119][PRN] HRNN and Access Control aspects (ZTE)**
Scope: Discuss the proposals from R2-2001675.
Initial intended outcome:
- Initial set of proposals with full consensus (agreeable over email) in R2-2001682

Initial intermediate deadline (for companies' feedback): Thursday 2020-02-27 23:59 CET
Initial intermediate deadline (for rapporteur's list of proposals): Friday 2020-02-28 12:00 CET
Proposed agreements in R2-2001682 not challenged until Monday 2020-03-02 12:00 CET will be declared as agreed by the session chair.
Final intended outcome: summary of the offline discussion in R2-2001699 with e.g.:
- (Further) set of proposals with full consensus, if any (agreeable over email)
- Set of proposals with almost full consensus to discuss in the follow up conference call
- Set of open issues and proposals to postpone to next meeting
- Open issues that should no longer be pursued

Final deadline (for companies' feedback): Monday 2020-03-02 23:59 CET
Final deadline (for rapporteur's summary): Tuesday 2020-03-03 12:00 CET
Proposed agreements in R2-2001699 not challenged until Tuesday 2020-03-03 23:59 CET will be declared as agreed by the session chair. For the other ones, the discussion will continue online.
Status: Closed

✉ **[AT109e][122][PRN] LS to SA1/SA2/CT1 (Nokia)**
Scope: Agree questions for clarifications to SA2/CT1 on manual CAG selection and to SA1/SA2/CT1 on UAC parameters for CAG
Intended outcome: LS to SA1/SA2/CT1
Deadline: Thursday 2020-03-05 18:00 CET
Status: Closed

LTE Legacy

✉ **[AT109e][201][LTE15] Agreeing to simple LTE Rel-15 CRs (RAN2 VC)**
Scope:
- Agree to CRs in R2-2000636, R2-2000663, R2-2000680, R2-2000685, R2-2000761, R2-2002056 and R2-2001158.

Intended outcome:
- Agreeable CRs (by each CR proponent)
- Summary of discussions (by email rappporteur), including list of CRs that require further discussion in this meeting (and are moved to discussion **202**)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording: Tuesday, March 3rd by 17:00 CET (i.e. one day to provide comments to the updated CR)

⇒ **Summary in R2-2001743**

✉ **[AT109e][202][LTE15] Discuss remaining LTE Rel-15 CRs (RAN2 VC)**
Scope:
- Discuss the CRs R2-2001139, R2-2001156, R2-2001157, R2-2001508, R2-2001347 and R2-2001351 over offline (email) discussion to solicit opinions from companies on the proposals and CR correctness.
- Handle any CRs from discussion **201** that are deemed require further discussion

Intended outcome:
- Whether any of the CRs can be agreed?
- For CRs that cabn be agreed, final CRs (by CR proponents)
- Summary of discussions (by email rappporteur)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording: Tuesday, March 3rd by 17:00 CET (i.e. one day to provide comments to the updated CR)

⇒ **Summary in R2-2001744**

✉ **[AT109e][203][LTE15] LTE pre-Rel-15 CRs on CA (Nokia)**

Scope:
- Discuss the topics identified in R2-2001134
- Discuss which (if any) of the CRs R2-2001135, R2-2001136, R2-2001137, R2-2001138 are needed.
- Discuss the CRs R2-2001140, R2-2001141, R2-2001142 to determine whether the proposed interpretation is correct and how should a correction (if needed) be captured

Intended outcome:
- Set of proposals with consensus (aim to agree to those over email), including the correct interpretation to both sets of CRs (by email rappporteur)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 17:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Friday Feb 28th 17:00 CET
- Comments on the CR wording: Monday, March 2nd by 17:00 CET (i.e. one day to provide comments to the updated CR)

⇒ **Summary in R2-2001736**

LTE Rel-16

✉ **[AT109e][204][LTE16] Agreeable CRs for LTE High-speed performance enhancement (NTT DOCOMO)**

Scope:
- Agree to CRs in R2-2002048 and R2-2002050.

Intended outcome:
- Agreed CRs for the LTE High-speed performance enhancement WID

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 18:00 CET (one day for rapporteur to create final CR proposals)
- Final CRs provided latest on Tuesday, March 3rd by 12:00 CET (can be agreed earlier if converged)

✉ **[AT109e][205][LTE16] Agreeing to simple LTE Rel-16 CRs (RAN2 VC)**

Scope:
- Agree to CRs in R2-2000180, R2-2001410, R2-2001408, R2-2001409, R2-2002075 and R2-2002078.
- If issues are found in any CR, they may be moved to discussion **206**.

Intended outcome:
- Agreeable CRs (by each CR proponent)
- Summary of discussions (by email rappporteur).

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)

- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording, Tuesday, March 3rd by 17:00 CET

⇒ **Summary in R2-2001745**

✉ **[AT109e][206][LTE16] CR discussion on Rel-16 early security activation (Ericsson)**
Scope:
- Discuss the CRs R2-2000987 and R2-2000988 over offline (email) discussion to solicit opinions from companies on the proposals and CR correctness.
- Handle any CRs from discussion **205** that are deemed require further discussion

Intended outcome:
- Discuss the CRs and check for correctness and impact to other RRC CRs.
- If the CRs can be agreed, provide final CRs (by CR proponents)
- Summary of discussions (by email rappporteur)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 17:00 CET
- Rapporteur summary: Friday, Feb. 28th 17:00 CET (one day for rapporteur to make conclusions)
- Updated CRs from each CR proponent: Monday Mar. 2nd 17:00 CET
- Comments on CR wording: Tuesday, March 3rd by 17:00 CET

✉ **[AT109e][207][LTE16] Agreeable CRs for DL MIMO enhancements for LTE (Huawei)**
Scope:
- Discuss CRs in R2-2001031, R2-2001079, R2-2001405 and R2-2001406
- Providing agreeable to RAN2 CRs for the WID

Intended outcome:
- Agreed CRs for the DL MIMO enhancements WID

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 18:00 CET (one day for rapporteur to create final CR proposals)
- Final CRs provided latest on Tuesday, March 3rd by 08:00 CET (can be agreed earlier if converged)

✉ **[AT109e][208][LTE R16] Agreeable CRs for LTE-based 5G Terrestrial Broadcast (Qualcomm)**
Scope:
- Discuss CRs in R2-2000436, R2-2000437 and R2-2001407
- Providing agreeable to RAN2 CRs for the WID

Intended outcome:
- Agreed CRs for the Further performance enhancement for LTE-based 5G Terrestrial Broadcast WID

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 18:00 CET (one day for rapporteur to create final CR proposals)
- Final CRs provided latest on Tuesday, March 3rd by 08:00 CET (can be agreed earlier if converged)

LTE/NR Mobility

✉ **[AT109e][209][MOB] Closing UP issues (PDCP/RLC/MAC) and discussing remaining open items for DAPS (LGE)**
Scope:
- Agreeing on the proposals as per R2-2001532 and R2-2002099.
- Discuss open items as per R2-2001532 and R2-2002099 to seek companies feedback on open issues of UP for DAPS.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:
- Companies input: Wednesday, Feb. 26th 17:00 CET
- Rapporteur proposals (including CR changes): Thursday, Feb. 27th 17:00 CET
- Comments on proposals: Monday March 2nd by 12:00 CET

⇒ **Summary in R2-2002165**

✉ **[AT109e][210][MOB] RRC procedural issues and remaining open items for DAPS CP (Huawei)**

Scope:
- Agreeing on the proposals as per R2-2002033 and any topics identified in 108#66 (R2-2000461).
- Discuss open items as per R2-2002033 and R2-2000461 to seek companies feedback on open issues of RRC for DAPS.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals (including CR changes): Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

⇒ **Summary in R2-2002207**

✉ **[AT109e][211][MOB] UE capabilities for DAPS and CHO (Intel)**

Scope:
- Agreeing on the proposals as per 108#45 outcome in R2-2000459 and R2-2002041.
- Discuss open items as per R2-2002041 to seek companies feedback on open issues of UE capabilities for DAPS and CHO.

Intended outcome:
- List of basic UE capabilities for DAPS and CHO,including basic ASN.1 structure (if possible)
- List of remaining open issues for UE capabilities (e.g. topics dependent on other WG input)
- If needed, draft LS to be sent to RAN1/4 containing RAN2 decisions on UE capabilities

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

⇒ **Summary in R2-2001727**

✉ **[AT109e][212][MOB] CHO configuration and execution details (Intel)**

Scope:
- Agreeing on the proposals as per R2-2002040.
- Discuss open items as per R2-2002040 to seek companies feedback on open issues.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET

- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

⇒ **Summary in R2-2001728**

✉ **[AT109e][213][MOB] CHO failure handling (Nokia)**
Scope:
- Agreeing on the proposals as per R2-2002016.
- Discuss open items as per R2-2002016 to see if there are any remaining open issues for CHO failure handling.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals: Monday March 2nd by 17:00 CET

⇒ **Summary in R2-2001742**

NR Mobility

✉ **[AT109e][214][NR MOB] Finalization of T312 for fast handover failure recovery (Samsung)**
Scope:
- Agreeing on the proposals as per R2-2002070.
- Discuss open items as per R2-2002070 to seek companies feedback on open issues NR T312.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals' wording, Monday March 2nd by 17:00 CET

⇒ **Summary in R2-2002187**

✉ **[AT109e][215][NR MOB] Finalization of CPC and discussing remaining open issues (CATT)**
Scope:
- Agreeing on the proposals as per R2-2000901 (as much as possible).
- Discuss open items as per R2-2000901 to seek companies feedback on open issues for CPC.

Intended outcome:
- Proposals with consensus that can be incorporated (if needed) in the running CR(s) (aim to agree to those over email)
- List of remaining open issues that need to be pursued in next meeting (if any).
- Issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on proposals' wording, Monday March 2nd by 17:00 CET

⇒ **Summary in R2-2001747**

✉ **[AT109e][216][NR MOB] Discussion on MBB handover for NR Rel-16 (Samsung)**

Scope:
- Discuss the proposals in contributions R2-2001520, R2-2001530, R2-2001531, R2-2001540 and R2-2001543 to see if anything can be agreed (partly already discussed in RAN2#108 without reaching consensus to introduce the feature, also discussed in RAN#86 with conclusion that WG needs to decide).

Intended outcome:
- Conclusion on what (if anything) can be agreed, with set of proposals that have consensus (aim to agree to those over email)

Deadline for providing comments and for rappporteur inputs:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Friday, Feb. 28th 12:00 CET
- Comments on rapporteur proposals: Monday March 2nd by 17:00 CET

⇒ **Summary in R2-2001730**

✉ **[AT109e][217][NR MOB] Finalization of CPC and discussion on CRs (CATT)**
Scope:
- Agreeing to baseline CR(s) for CPC functionality based on latest agreements
- Capture the agreements from discussion 215 to CR

Intended outcome:
- Baseline CPC CR(s)
- Agreeable CR(s) capturing the Rel-16 CPC feature

Deadline for providing comments:
- Companies input: Thursday, Feb. 27th 8:00 CET
- Revised CR: Friday, Feb. 28th 12:00 CET
- Incorporating agreements from the email discussion 215: Tuesday March 3rd by 17:00 CET

CR finalization

✉ **[AT109e][218][NR MOB] Stage-2 CR (Intel)**
Intended outcome: Agreed 38.300 CR for NR mobility (including T312, CPAC)
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CR can be provided in R2-2001748**

✉ **[AT109e][219][NR MOB] RRC CR (Intel)**
Intended outcome: Agreed 38.331 CR for NR mobility (including T312, CPAC)
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CR can be provided in R2-2001749**

✉ **[AT109e][220][LTE MOB] Stage-2 CR (China Telecom)**
Intended outcome: Agreed 36.300 CR for NR mobility
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CR can be provided in R2-2001752**

✉ **[AT109e][221][LTE MOB] RRC CR (Ericsson)**
Intended outcome: Agreed 36.331 CR for LTE mobility WID (including DAPS and CHO) and agreed 36.331 CR for NR mobility WID (including CPC + T312 impacts to LTE)

Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-06 12:00 CET
Final Deadline for CR to be submitted to RANP: Monday 2020-03-09 14:00 CET

⇒ **Final CR for LTE mobility can be provided in R2-2001753**

⇒ **Final CR for NR mobility can be provided in R2-2001761**

✉ **[AT109e][222][MOB] PDCP CRs for LTE and NR (Huawei)**
Intended outcome: Agreed 36.323 and 38.323 CR for LTE and NR mobility
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CRs can be provided in R2-2001750 (NR) and R2-2001754 (LTE)**

✉ **[AT109e][223][MOB] MAC CRs for LTE and NR (vivo)**
Intended outcome: Agreed 36.321 and 38.321 CR for LTE and NR mobility
Deadline for companies' feedback on the CR: Wednesday 2020-03-04 12:00 CET
Deadline for rapporteur's version for agreement (only essential corrections allowed after this): Friday 2020-03-05 12:00 CET
Final Deadline for CR to be submitted to RANP: Friday 2020-03-06 10:00 CET

⇒ **Final CRs can be provided in R2-2001751 (NR) and R2-2001755 (LTE)**

✉ **[AT109e][300] RAN2 109-e Organizational NB-IoT (Session Chair)**
Status: Started
Scope: Comments to session notes. Kick-off and management of email discussions for NB-IoT session. Coordination issues. Other organisational issues and announcements.
Intended outcome: Approval of Report from NB-IoT session.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][301][NBIOT R14] Clarification on polling bit for RRCConnectionRelease (Huawei)**
Status: closed
Scope: Discuss and review the CRs
Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][302][NBIOT R13] Handling of UE Radio Capability for Paging in NB-IoT and eMTC (Huawei)**
Status: closed
Scope: Discuss and review the CRs
Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][303][NBIOT R15] System support for Wake Up Signal (Huawei)**
Status: closed
Scope: Discuss and review the CRs
Intended outcome: Agreeable CRs, or decision to e.g. postpone/not agree.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][304][NBIOT R16] NRS presence on non-anchor paging carrier (Huawei)**
Status: closed
Scope: Discuss and review the CRs
Intended outcome: Endorsed TP for main CRs, or decision to e.g. postpone/not agree.
Deadline: Wednesday 4th 0900 CET

- ✉ **[AT109e][305][NBIOT/EMTC] WUS: Progress the FFS from Email Discussion 108#94 and Summary (QC)**
  Status: closed
  Scope: try to progress proposals 2, 3, 4 from the email discussion as well as all proposals/open issues from the summary document R2-2000308
  Intended outcome: report in R2-2001789
  Deadline: Thursday 27th 0900 CET

- ✉ **[AT109e][306][NBIOT/EMTC] WUS: Finalise the signalling (QC)**
  Status: closed
  Scope: Try to finalise the signalling, based on the agreements above and potential agreements from offline #305
  Intended outcome: Endorsed TP to be incorporated into the NB-IoT and eMTC CRs in R2-2001790.
  Deadline: Wednesday 4th 0900 CET

- ✉ **[AT109e][307][NBIOT] PUR RRC-MAC-PHY interactions (QC)**
  Status: closed
  Scope: Discuss and progress on the open issues and proposals in R2-2002021, excluding 4 and 9 (already agreed) and those marked as ASN.1/CR issues
  Intended outcome: report with categorisation of proposals – agreeable, needs further discussion, postpone in R2-2001791
  Deadline: Thursday 27th 0900 CET

- ✉ **[AT109e][308][NBIOT] PUR RRC in general and L1 signalling impact to RRC (Ericsson)**
  Status: closed
  Scope: Progress the FFS not agreed above from R2-2002028
  Intended outcome: Report in R2-2001792. Updated report in R2-2001796
  Deadline: Monday 2nd March 1200 CET

- ✉ **[AT109e][309][NBIOT/EMTC] RAI whether AS RAI should be provided in case including AS RAI would lead to data segmentation (Ericsson)**
  Status: closed
  Scope: Proposal 3 and 9 of R2-2001474
  Intended outcome: report in R2-2001793
  Deadline: Thursday 27th 0900 CET

- ✉ **[AT109e][310][NBIOT] 5GC open issues in AI 7.2.10 (Huawei)**
  Status: closed
  Scope: Progress the open issues and proposals listed in R2-2002015, not already agreed.
  Intended outcome: report in R2-2001794
  Deadline: Thursday 27th 0900 CET

- ✉ **[AT109e][311][NBIOT] R16 36.331 CR (Huawei)**
  Status: Started
  Scope: Discuss and review the CR
  Intended outcome: Agreeable CR in R2-2001782.
  Deadline: 06-03-2020, 12:00 CET

- ✉ **[AT109e][312][NBIOT] R16 38.300 CR (Qualcomm)**
  Status: Started
  Scope: Discuss and review the CR
  Intended outcome: Agreeable CR in R2-2001783.
  Deadline: 06-03-2020, 12:00 CET

- ✉ **[AT109e][313][NBIOT] R16 36.300 CR (Huawei)**
  Status: Started
  Scope: Discuss and review the CR
  Intended outcome: Agreeable CR in R2-2001784

Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][314][NBIOT] R16 36.302 CR (Huawei)**
Status: Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001785.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][315][NBIOT] R16 36.306 CR (Blackberry)**
Status: Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001786.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][316][NBIOT] R16 36.321 CR (Ericsson)**
Status: Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001787.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][317][NBIOT] R16 36.304 CR (Nokia)**
Status: Started
Scope: Discuss and review the CR
Intended outcome: Agreeable CR in R2-2001788.
Deadline: 06-03-2020, 12:00 CET

✉ **[AT109e][318][NBIOT] Reply LS to Reply LS on Rel-16 NB-IoT enhancements (Huawei)**
Status: started
Scope: Discuss the value range + Draft the reply LS based on the agreements.
Intended outcome: Report in R2-2001804, Approved LS in R2-2001795
Deadline: 04-03-2020, 12:00 CET – Value range
Deadline: 06-03-2020, 12:00 CET – LS approved

✉ **[AT109e][400][eMTC/NB-IoT] Organizational Emre's session**
Scope:
- Share plans for the e-meeting and make announcements
- Share status of email discussions
- Share meeting minutes and agreements for review and endorsement

Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][401][eMTC] Correction for relaxed monitoring for BL and CE UE (Ericsson)**
Intended outcome: To check whether there is support, and, if so, agreeable CR. The outcome can be provided in R2-2001866
Deadline: Wednesday, Feb. 26th 18:00 CET
Schedule: Thursday, Feb. 27th 13:30 - 15:30 CET
Status: Closed

✉ **[AT109e][402][eMTC] Correction to support of UP-EDT, CP-EDT, in eMTC TDD (Huawei)**
Intended outcome: To check whether there is support, and, if so, agreeable CR. The outcome can be provided in R2-2001867
Deadline: Friday, Mar 6th, 12:00 CET
Status: Closed

✉ **[AT109e][403][eMTC] Update 36.300 running CR (Intel)**
Scope: Update 36.300 running CR, i.e., address the open issues and include the agreements from this meeting.

Intended outcome: Agreeable CR in R2-2001868
Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][404][eMTC] Update 36.302 running CR (ZTE)**
Scope: Update 36.302 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001869
Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][405][eMTC] Update 36.304 running CR (Nokia)**
Scope: Update 36.304 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001870
Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][406][eMTC] Update 36.306 running CR (Huawei)**
Scope: Update 36.306 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001871
Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][407][eMTC] Update 36.321 running CR (Ericsson)**
Scope: Update 36.321 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001872
Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][408][eMTC] Update 36.331 running CR (Qualcomm)**
Scope: Update 36.331 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001873
Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][409][eMTC] Update 38.300 running CR (Qualcomm)**
Scope: Update 38.300 running CR, i.e., address the open issues and include the agreements from this meeting.
Intended outcome: Agreeable CR in R2-2001874
Deadline: Friday, Mar 6th 12:00 CET
Status: Started

✉ **[AT109e][410][eMTC] CE Mode Threshold Adjustments for non-BL and BL UE (DoCoMo)**
Intended outcome: To check whether there is support, and, if so, list of proposals that are easily agreeable, almost agreeable and need further discussion. The outcome can be provided in R2-2001875
Deadline: Wednesday, Feb. 26th 18:00 CET
Schedule: Thursday, Feb. 27th 13:30 - 15:30 CET
Status: Closed

✉ **[AT109e][411][eMTC/NB-IoT] MT-EDT: Open issues (Huawei)**
Scope: Further discussion to address the remaining issues and identify potential agreements.

Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001876
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][412][eMTC/NB-IoT] Scheduling multiple TBs: Open issues (Ericsson)**
Scope: Further discussion on proposals 3, 4, 6, and 10 and identify potential agreements
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001877
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][413][eMTC] Quality report: Open issues (Qualcomm)**
Scope: Further discussion on proposal 2 from R2-2000309 and proposals 2 and 4 from R2-2001863 and 10 and identify potential agreements
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001878
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][414][eMTC] MPDCH performance imp: Open issues (Qualcomm)**
Scope: Further discussion on proposals 1 and 2 and identify potential agreements
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001879
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][415][eMTC] Idle Mode Mobility: Open issues (Intel)**
Scope: Further discussion on proposals 1, 2, and 3, and identify potential agreements
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001880
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][416][eMTC] Stand-alone deployment: Open issues (Nokia)**
Scope: Further discussion to address the remaining issues and identify potential agreements..
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001881
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][417][eMTC] Mobility enhancements: Open issues (Ericsson)**
Scope: Further discussion to address the remaining issues and identify potential agreements.
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001882
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][418][eMTC/NB-IoT] Coexistence with NR: Open Issues (ZTE)**
Scope: Further discussion to address the remaining issues and identify potential agreements.

Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001883
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

✉ **[AT109e][419][eMTC/NB-IoT] Connection to 5GC: Open Issues (Huawei)**
Scope: Further discussion to address the remaining issues, i.e., proposals S1-5, S2-2, S3-1, and identify potential agreements.
Intended outcome: Report with a list of proposals categorized as agreeable, need further discussion, postpone. The outcome can be provided in R2-2001885
Deadline: Tuesday, Mar 3rd 17:00 CET
Schedule: Wednesday, Mar 4th, 06:30 - 07:30 CET
Status: Closed

NR-U

✉ **[AT109e][501][NR-U] UP Open Issues for RACH and UL LBT (InterDigital)**
Scope:
- Identify/Summarize all remaining open issues related to RACH and UL LBT from submitted papers in 6.2.2.1 and 6.2.2.2 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Wednesday, Feb. 26th 15:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 3:00 CET (one day for rapporteur to make conclusions)
- Comments on proposals' wording, Friday, Feb. 28th by 18:00 CET

✉ **[AT109e][502][NR-U] UP open issues for CG and Others AI (OPPO)**
Scope:
- Identify/Summarize all remaining open issues related to CG and Other AI from submitted papers in 6.2.2.3 and 6.2.2.4 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Thursday, Feb. 27th 3:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 17:00 CET
- Comments on proposals' wording, Monday March 2nd by 10:00 CET

✉ **[AT109e][503][NR-U] CP open issues (Qualcomm)**
Scope:
- Identify/Summarize all remaining open issues related to Mobility and Others from AI 6.2.3.1 and 6.2.3.2 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 4:00 CET (one day for rapporteur to make conclusions)
- Comments on proposals' wording, Friday, Feb. 28th by 20:00 CET

✉ **[AT109e][509][NR-U] LS response to RAN1 (Qualcomm)**
Scope: LS response to RAN1 on MIB signalling of Q
Intended outcome: LS to be sent to RAN1 and approval by email from session chair
Deadline: Friday, February 28th

✉ **[AT109e][510][NR-U] RRC Running CR (Qualcomm)**
Scope: updated running CR with agreements from week1
Intended outcome Phase 1: agreeable CR to be used as baseline to capture further agreements from week2
Deadline: Friday, Feb. 28th
Intended outcome Phase 2: agreeable CR for plenary approval
Deadline: Friday, March 6th (with possibility to extend to March 10th)

✉ **[AT109e][511][NR-U] 37.340 Running CR (Oppo)**
Scope: updated running CR with agreements and review for final plenary submission
Intended outcome: email approval of CR for plenary submission
Deadline: Wednesday, March 4th

✉ **[AT109e][512][NR-U] 38.300 Running CR (Qualcomm)**
Scope: updated running CR with agreements and review for final plenary submission
Intended outcome: email approval of CR for plenary submission
Deadline: Friday, March 6th

✉ **[AT109e][513][NR-U] 38.304 Running CR (Qualcomm)**
Scope: updated running CR with agreements and review for final plenary submission
Intended outcome: email approval of CR for plenary submission
Deadline: Friday, March 6th

✉ **[AT109e][514][NR-U] 38.321 Running CR (Ericsson)**
Scope: updated running CR with agreements and review for final plenary submission
Intended outcome: email approval of CR for plenary submission
Deadline: Friday, March 6th (with possibility to extend to March 10th)
NOTE: updated version will be triggered after some week2 agreements

Power Saving

✉ **[AT109e][504][PowSav] PDCCH related open issues (CATT)**
Scope:
- Identify/Summarize all remaining open issues related to PDCCH-based power saving signal from AI 6.11.2 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Wednesday, Feb. 26th 17:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 17:00 CET (one day for rapporteur to make conclusions)
- Comments on proposals' wording, Monday, March 2nd by 12:00 CET

✉ **[AT109e][505][PowSav] UE assistance open issues (Qualcomm)**

Scope:
- Identify/Summarize all remaining open issues related to UE assistance open issues from AI 6.11.3 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Wednesday , Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 6:00 CET (one day for rapporteur to make conclusions)
- Comments on proposals' wording: Monday, March 2nd by 17:00 CET

✉ **[AT109e][506][PowSav] RRM relaxation (Huawei)**

Scope:
- Identify/Summarize all remaining open issues related to RRM relaxation from AI 6.11.4 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Wednesday, Feb. 26th 18:00 CET
- Rapporteur proposals: Thursday, Feb. 27th 6:00 CET (one day for rapporteur to make conclusions)
- Comments on proposals' wording, Monday, March 2nd by 17:00 CET

✉ **[AT109e][515][PowSav] 38.304 Running CR (Vivo)**

Scope: updated running CR with agreements from week1 and week2
Intended outcome Phase 1: agreeable CR to be used as baseline to capture further agreements from week2
Deadline: Friday, Feb. 28th
Intended outcome Phase 2: approved CR for plenary submission
Deadline: Friday, March 6th (with possibility to extend to March 10th)

✉ **[AT109e][516][PowSav] RRC Running CR (Mediatek)**

Scope: updated running CR with agreements from week1 and week2
Intended outcome Phase 1: agreeable CR to be used as baseline to capture further agreements from week2
Deadline: Friday, Feb. 28th
Intended outcome Phase 2: approved CR for plenary submission
Deadline: Friday, March 6th (with possibility to extend to March 10th)

✉ **[AT109e][517][PowSav] 37.340 Running CR (Oppo)**

Scope: updated running CR with agreements and review for final plenary submission
Intended outcome: email approval of CR for plenary submission
Deadline: Wednesday, March 4th

✉ **[AT109e][518][PowSav] 38.300 Running CR (CATT)**

Scope: updated running CR with agreements and review for final plenary submission
Intended outcome: email approval of CR for plenary submission
Deadline: Friday, March 6th

✉ **[AT109e][519][PowSav] 38.321 Running CR (Huawei)**

Scope: updated running CR with agreements from week1 and week2
Intended outcome Phase 1: agreeable CR to be used as baseline to capture further agreements from week2
Deadline: Friday, Feb. 28th
Intended outcome Phase 2: approved CR for plenary submission
Deadline: Friday, March 6th (with possibility to extend to March 10th)

✉ **[AT109e][523][PowSav] LS to RAN1 (Huawei)**
Scope: updated of R2-2001617 capturing agreements related to MAC-PHY modelling and also question to confirm CSI/L1-RSRP reporting.
Intended outcome: email approval
Deadline: Friday, Feb. 28th

✉ **[AT109e][524][PowSav] LS to RAN4 (Vivo)**
Scope: LS to RAN4 or RAN2 agreements related to RRM
Intended outcome: email approval
Deadline: March 5th

2-step RACH

✉ **[AT109e][507][2-step RA] UP open issues (ZTE)**
Scope:
- Identify/Summarize all remaining open issues related to UP open issues from AI 6.13.2 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Thursday, Feb. 27th 18:00 CET
- Rapporteur proposals: Friday, Feb. 28th 18:00 CET (one day for rapporteur to make conclusions)
- Comments on proposals' wording, Tuesday, March 3rd by 08:00 CET

✉ **[AT109e][508][2-step RA] CP open issues (Ericsson)**
Scope:
- Identify/Summarize all remaining open issues related to CP open issues f4rom AI 6.13.3 and related CP issues in 6.13.4 and seek companies feedback on the need to solve the critical issue and preferred solutions.

Intended outcome:
- Set of proposals with full consensus (aim to agree to those over email)
- Set of proposals with almost full consensus and easy to agree
- Set of open issues and proposals to postpone to next meeting.
- Open issues that should no longer be pursued

Deadline for providing comments:
- Companies input: Thursday, Feb. 27th 18:00 CET
- Rapporteur proposals: Friday, Feb. 28th 18:00 CET (one day for rapporteur to make conclusions)
- Comments on proposals' wording, Tuesday, March 3rd by 08:00 CET

✉ **[AT109e][520][2-step RA] RRC Running CR (Ericsson)**
Scope: updated running CR with agreements from week1 and week2
Intended outcome Phase 1: agreeable CR to be used as baseline to capture further agreements from week2
Deadline: Friday, Feb. 28th
Intended outcome Phase 2: approved CR for plenary submission
Deadline: Friday, March 6th (with possibility to extend to March 10th)

✉ **[AT109e][521][2-step RA] 38.300 Running CR (Nokia)**
Scope: updated running CR with agreements and review for final plenary submission
Intended outcome: email approval of CR for plenary submission
Deadline: Friday, March 6th

✉ **[AT109e][522][2-step RA] 38.321 Running CR (ZTE)**
Scope: updated running CR with agreements from week1 and week2
Intended outcome Phase 1: agreeable CR to be used as baseline to capture further agreements from week2
Deadline: Friday, Feb. 28th
Intended outcome Phase 2: approved CR for plenary submission
Deadline: Friday, March 6th (with possibility to extend to March 10th)

NOTE: deadlines are meant to allow at least all regions to have one day to comment (other than weekend) and also give rapporteurs time to update their proposals before the meeting)

✉ **[AT109e][525][2-step RA] LS to RAN1 on 2-step CFRA (Ericsson)**
Intended outcome: approve LS to RAN1 on the identified options for preamble-to-PRU mapping for 2-step CFRA
Deadline: Friday March 6th

✉ **[AT109e][600][POS] Organizational Nathan - Positioning (MediaTek)**
Status: Started
Scope: Organisational discussions and announcements, as needed throughout the meeting weeks
Intended Outcome: Approval of report from positioning session
Deadline: Friday 2020-03-06 1200 CET

✉ **[AT109e][601][POS] Harmonise posSIB numbering across CRs (Intel)**
Status: Concluded
Scope: Align posSIB numbering between the following CRs:
- R2-2001333 (38.331 running CR)
- R2-2001216 (36.331 CR to introduce PPP-RTK)
- R2-2001255 (38.331 CR to introduce on-demand SI request in connected mode)
- R2-2001230 (37.355 CR to introduce PPP-RTK)
- R2-2001234 (TPs to 37.355 to introduce UE-based DL positioning)
- R2-2000006 (37.355 CR to introduce barometric pressure broadcast)
- R2-2000188 (36.331 CR to introduce barometric pressure broadcast)
- R2-2000396 (36.331 CR to introduce TBS AD broadcast)
- R2-2000426 (37.355 CR to introduce TBS AD broadcast)
- R2-2000153 (37.355 CR to introduce NavIC)
- R2-2000157 (36.331 CR to introduce NavIC)

Intended Outcome: Agreed document listing the posSIB numbers, for reference by individual CR authors
Deadline: Thursday 2020-02-27 1200 CET

✉ **[AT109e][602][NR TEI] BDS B1C signal CRs (CATT)**
Status: Concluded
Scope: Agree to the CRs in R2-2000238, R2-2000239, and R2-2000240
Intended Outcome: Agreed CRs
Deadline: Wednesday 2020-02-26 1200 CET

✉ **[AT109e][603][NR TEI] GNSS integer ambiguity level indication CR (Ericsson)**
Status: Concluded
Scope: Agree to the CR in R2-2001256
Intended Outcome: Agreed CR

Deadline: Wednesday 2020-02-26 1200 CET

✉ **[AT109e][604][LTE TEI] Broadcast of barometric pressure assistance data CRs (Polaris)**
Status: Concluded
Scope: Agree to the CRs in R2-2000006 and R2-2000188. Note: Updates to the CRs will be needed to align with the output of [AT109e][601].
Intended Outcome: Agreed CRs
Deadline: Tuesday 2020-03-03 1200 CET

✉ **[AT109e][605][LTE TEI] Barometric pressure sensor bias CR (Polaris)**
Status: Concluded
Scope: Agree to the CR in R2-2000007
Intended Outcome: Agreed CR
Deadline: Wednesday 2020-02-26 1200 CET

✉ **[AT109e][606][LTE TEI] Broadcast of TBS assistance data CRs (NextNav)**
Status: Concluded
Scope: Agree to the CRs in R2-2000396 and R2-2000426. Note: Updates to the CRs will be needed to align with the output of [AT109e][601].
Intended Outcome: Agreed CRs
Deadline: Tuesday 2020-03-03 1200 CET

✉ **[AT109e][607][NAVIC] NavIC CRs (Reliance Jio)**
Status: Concluded
Scope: Agree to the CRs in R2-2000153, R2-2000157, and R2-2000158. Note: Updates to the CRs will be needed to align with the output of [AT109e][601].
Intended Outcome: Agreed CRs
Deadline: Tuesday 2020-03-03 1200 CET

✉ **[AT109e][608][POS] Corrections to location measurement indication (Lenovo)**
Status: Concluded
Scope: Update the CR from R2-2000762
Intended outcome: Agreed CR in R2-2001932
Deadline: Wednesday 2020-03-04 1200 CET

✉ **[AT109e][609][POS] Reply LS to R2-2000010 (Nokia)**
Status: Concluded
Scope: Reply to R2-2000010 indicating if the working assumption is feasible
Intended outcome: Agreeable draft LS in R2-2001933
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][610][POS] Revision of running CR to 38.305 (Intel)**
Status: Concluded
Scope: Update the CR from R2-2000473
Intended outcome: Agreeable CR taking into account decisions of this meeting, in R2-2001934
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][611][POS] Support of non-periodic SRS cases (Huawei)**
Status: Concluded
Scope: Progress the discussion of semi-persistent and aperiodic SRS for positioning
Intended outcome: Summary of agreements on support of aperiodic SRS including triggering by gNB or LMF, and progress towards design of a MAC CE for SP activation/deactivation. Summary in R2-2001935.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][612][POS] Spatial relationship configuration (Huawei)**

Status: Concluded
Scope: Progress the discussion of spatial relationship determination and configuration for positioning
Intended outcome: Summary of agreements on how the spatial relationship is determined for UL-involved cases and how SSB configuration is signalled. Summary in R2-2001936.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][613][POS] PPP-RTK CR to 36.331 (Qualcomm)**
Status: Concluded
Scope: Update the CR in R2-2001216
Intended outcome: Agreeable CR in R2-2001937
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][614][POS] Running CR to 38.331 on positioning (Ericsson)**
Status: Concluded
Scope: Update the CR in R2-2002112
Intended outcome: Agreeable CR in R2-2001938
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][615][POS] Update RAN1 parameters part of 37.355 CR (Intel)**
Status: Concluded
Scope: Update the aspects of the running CR related to RAN1 parameters
Intended outcome: Agreeable draft CR that can be merged with the other running CRs. Updated draft CR in R2-2001941, report in R2-2001959.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][616][POS] 37.355 running CR merge (Intel)**
Status: Superseded by discussion #627
Scope: Merge the 37.355 running CRs.
Intended outcome: Agreeable updated CR in R2-2001942
Deadline: Thursday 2020-03-05 1200 CET

✉ **[AT109e][617][POS] Single positioning method (Ericsson)**
Status: Concluded
Scope: Discuss the possible restructuring of 37.355 to use a single NR positioning method.
Intended outcome: Summary of discussion and potential agreements. Summary in R2-2001943.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][618][POS] Supported frequency/band list (Intel)**
Status: Concluded
Scope: Determine if it is needed to provide a supported frequency list or band list to the LMF.
Intended outcome: Summary of agreements on use cases, band vs. frequency list, and what is needed to provide to the LMF. Summary in R2-2001944.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][619][POS] Draft LS to RAN3 on uplink additional path reporting (Ericsson)**
Status: Concluded
Scope: Draft an LS to RAN3 in accordance with the agreements on additional path reporting.
Intended outcome: LS recommending to RAN3 that they include additional path reporting in NRPPa. Draft LS in R2-2001945.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][620][POS] Text proposal for merge into 37.355 CR (Ericsson)**
Status: Concluded
Scope: Develop a text proposal reflecting the agreements on additional path reporting.
Intended outcome: Agreeable TP in R2-2001946, to be merged into 37.355, including number of additional paths.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][621][POS] Open issues on broadcast assistance data (CATT)**
Status: Concluded
Scope: Discuss the following issues on broadcast assistance data:
- whether to have a separate positioning system information area ID or reuse the existing area ID;
- whether to support the UE including GNSS ID/SBAS ID in the on-demand SI request;
- whether to include segment number in NRPPa metadata.

Intended outcome: Summary of agreements on the identified issues. Summary in R2-2001950.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][622][POS] Uplink capability for positioning (Huawei)**
Status: Concluded
Scope: Determine if LPP needs to contain delivery of uplink capability, and if so what the contents should be.
Intended outcome: Summary of agreements on whether/what UL capability is needed at LMF. Summary in R2-2001947.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][623][POS] LS to RAN4 on measurement range and granularity (Intel)**
Status: Concluded
Scope: Draft an LS to RAN4 requesting their input on the range and granularity for measurements as needed in the running CR to 37.355.
Intended outcome: Draft LS in R2-2001948 to RAN4 (Cc: RAN1) providing our measurements from the running CR and asking for range and granularity.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][624][POS] Open issues on UE-based downlink positioning assistance data (Qualcomm)**
Status: Concluded
Scope: Discuss the open issues and update the related text proposal on UE-based downlink positioning.
Intended outcome: Updated TP reflecting agreement where possible on the open issues:
(a) whether beamwidth information can be provided in the assistance data in Rel-16 or should be deferred to e.g. Rel-17;
(b) whether to support LCS-to-GCS translation parameter for the spatial direction information;
(c) whether to include RTD drift rate in the assistance data;
(d) whether to include RTD per DL-PRS Resource.
Updated TP in R2-2001949.
Deadline: Wednesday 2020-03-04 1300 CET

✉ **[AT109e][625][POS] Final check of running CR to 38.305 (Intel)**
Status: Started
Scope: Finalise checking of the running CR to 38.305
Intended outcome: Agreed CR in R2-2002241
Deadline: Friday 2020-03-06 1200 CET

✉ **[AT109e][626][POS] Final check of running CR to 38.331 (Ericsson)**
Status: Started
Scope: Finalise checking of the running CR to 38.331
Intended outcome: Agreed CR in R2-2002242
Deadline: Friday 2020-03-06 1200 CET

✉ **[AT109e][627][POS] Final check of running CR to 37.355 (Intel)**
Status: Started
Scope: Finalise checking of the running CR to 37.355
Intended outcome: Agreed CR in R2-2002243

Deadline: Friday 2020-03-06 1200 CET

✉ **[AT109e][628][POS] MAC CE design for activation/deactivation of SP SRS for positioning (Huawei)**
Status: Started
Scope: Agree on a design for the MAC CE to activate/deactivate semi-persistent SRS for positioning
Intended outcome: Agreed CR in R2-2002246, based on R2-2002330
Deadline: Friday 2020-03-06 1200 CET

✉ **[AT109e][629][POS] 38.300 CR for RAN1 agreements (Intel)**
Status: Started
Scope: Capture the RAN1 agreements related to positioning that affect 38.300
Intended outcome: Agreed CR in R2-2001960
Deadline: Friday 2020-03-06 1200 CET

✉ **[AT109e][801][SON/MDT]Running 38.331 to introduce SON/MDT (Huawei, Ericsson)**
Intended outcome: agreed CR
Check at 2020-03-06 23:00. If no consensus is achieved for cross RAT RLF report case. We use the current structure in the running CR in R2-2002003.
Deadline: 2020-03-10 CET

✉ **[AT109e][801][SON/MDT]Running 36.331 to introduce SON/MDT (Huawei)**
Intended outcome: agreed CR in R2-2002001
Deadline: 2020-03-06 CET

✉ **[AT109e][803][MDT]MDT open issues (Huawei)**
Intended outcome: email discussion report in R2-2001991
Deadline: CET 23:00, 2020/02/28

✉ **[AT109e][804][SON/MDT]SON open issues (Ericsson)**
Intended outcome: email discussion report in R2-2001992
Deadline: CET 23:00, 2020/02/28

✉ **[AT109e][805][SON/MDT]L2 open issues (CMCC)**
Intended outcome: email discussion report in R2-2001993
Deadline: CET 23:00, 2020/02/28

✉ **[AT109e][814][SON/MDT]Running 38.314 (CMCC)**
Intended outcome: agreed CR/TS in in R2-2002000
Deadline: 2020-03-10 CET

✉ **[AT109e][855][SON/MDT]LS to RAN3 (CATT)**
Intended outcome: approved LS in R2-2002004
Indicate that RLF report for MRO should be handled in RAN3
Send LS to RAN3 cc SA5 to inform our progress
Agreed CRs should be attached
Deadline: 2020-03-11 CET

✉ **[AT109e][866][SON/MDT]Introduce SON in 38.300 (Nokia)**
Intended outcome: endorsable CR in R2-2001996
Deadline: 20200305 06:30 CET

✉ **[AT109e][899][SON/MDT]Running 37.320 to introduce MDT (CMCC)**
Intended outcome: agreed CR in R2-2002002
Deadline: 2020-03-10 CET

Annex G: Email Approvals

Short email discussion for RAN Plenary, Extended from R2 109e (R16 CRs)

Please request TDoc numbers for the following email discussions from MCC if not already allocated

- ✉ **[Ext109e][219][NR MOB] RRC CR (Intel)**
  Intended outcome: Agreed 38.331 CR for NR mobility (including T312, CPAC).
  Final CR can be provided in R2-2001749.
  Deadline: 2020-03-09 1400 CET
  => The CR is agreed in R2-2001767
  CLOSED

- ✉ **[Ext109e][221][LTE MOB] RRC CR (Ericsson)**
  Intended outcome: Agreed 36.331 CR for LTE mobility WID (including DAPS and CHO) and agreed 36.331 CR for NR mobility WID (including CPC + T312 impacts to LTE).
  Final CR for LTE mobility can be provided in R2-2001753 and Final CR for NR mobility can be provided in R2-2001761
  Deadline: 2020-03-09 1400 CET
  => The CRs are agreed in R2-2001753 and R2-2001761
  CLOSED

- ✉ **[Ext109e][222][MOB] PDCP CRs for LTE and NR (Huawei)**
  Intended outcome: Agreed 36.323 and 38.323 CR for LTE and NR mobility
  Final CRs can be provided in R2-2001766 (NR) and R2-2001765 (LTE)
  Deadline: 2020-03-09 1400 CET
  => The CRs are agreed in R2-2001765 and R2-2001766
  CLOSED

- ✉ **[Ext109e][311][NBIOT] R16 36.331 CR (Huawei)**
  Intended outcome: Agreed CR in R2-2001782
  Deadline: 2020-03-10 1200 CET
  => The CR is agreed in R2-2001782
  CLOSED

- ✉ **[Ext109e][312][NBIOT] R16 38.300 CR (Qualcomm)**
  Intended outcome: Agreed CR in R2-2001783
  Deadline: 2020-03-10 1200 CET
  => The CR is agreed in R2-2000304
  CLOSED

- ✉ **[Ext109e][313][NBIOT] R16 36.300 CR (Huawei)**
  Intended outcome: Agreed CR in R2-2001784
  Deadline: 2020-03-10 1200 CET
  => The CR is agreed in R2-2001784
  CLOSED

- ✉ **[Ext109e][314][NBIOT] R16 36.302 CR (Huawei)**
  Intended outcome: Agreed CR in R2-2001785
  Deadline: 2020-03-10 1200 CET
  => The CR is agreed in R2-2001785
  CLOSED

- ✉ **[Ext109e][315][NBIOT] R16 36.306 CR (Blackberry)**
  Intended outcome: Agreed CR in R2-2001786

Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001786
CLOSED

✉ **[Ext109e][316][NBIOT] R16 36.321 CR (Ericsson)**
Intended outcome: Agreed CR in R2-2001787
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001787
CLOSED

✉ **[Ext109e][317][NBIOT] R16 36.304 CR (Nokia)**
Intended outcome: Agreed CR in R2-2001788
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001788
CLOSED

✉ **[Ext109e][403][eMTC] R16 36.300 CR (Intel)**
Intended outcome: Agreed CR in R2-2001868
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001868
CLOSED

✉ **[Ext109e][404][eMTC] R16 36.302 CR (ZTE)**
Intended outcome: Agreed CR in R2-2001869
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001869
CLOSED

✉ **[Ext109e][405][eMTC] R16 36.304 CR (Nokia)**
Intended outcome: Agreed CR in R2-2001870
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001870
CLOSED

✉ **[Ext109e][406][eMTC] R16 36.306 CR (Huawei)**
Intended outcome: Agreed CR in R2-2001871
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001871
CLOSED

✉ **[Ext109e][407][eMTC] R16 36.321 CR (Ericsson)**
Intended outcome: Agreed CR in R2-2001872
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001872
CLOSED

✉ **[Ext109e][408][eMTC] R16 36.331 CR (Qualcomm)**
Intended outcome: Agreed CR in R2-2001873
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001873
CLOSED

✉ **[Ext109e][409][eMTC] R16 38.300 CR (Qualcomm)**
Intended outcome: Agreed CR in R2-2002319
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2000305
CLOSED

✉ **[Ext109e][706][V2X] R16 37.324 CR (Vivo)**
Intended outcome: Agreed CR in R2-2001874
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001901
CLOSED

✉ **[Ext109e][015][IAB] RRC CRs 38331 36331 (Ericsson)**
Intended outcome: Agreed CRs
Deadline: 2020-03-10 1200 CET
=> The CRs are agreed in R2-2002357 and R2-2002358
CLOSED

✉ **[Ext109e][042][DCCA] CR RRC 38331 36331 (Ericsson)**
Intended outcome: Agreed CRs
Deadline: 2020-03-10 1200 CET
=> The CRs are agreed in R2-2002391 and R2-2002392
CLOSED

✉ **[Ext109e][072][NR15] BWCS for inter-ENDC BC with intra-ENDC BC (Huawei)**
Intended outcome: Revision of R2-2002128, Agreed CRs
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2002390
CLOSED

✉ **[Ext109e] [510][NR-U] Running RRC CR for NR Shared Spectrum (Qualcomm)**
Intended outcome: Agreed CRs
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001920
CLOSED

✉ **[Ext109e] [512][NR-U] Running Stage-2 CR for NR-U (Qualcomm)**
Intended outcome: Agreed CRs
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001922
CLOSED

✉ **[Ext109e][513][NR-U]Running Idle/Inactive CR for NR-U (Qualcomm)**
Intended outcome: Agreed CRs
Deadline: 2020-03-07 1200 CET
=> The CR is agreed in R2-2002385
CLOSED

✉ **[Ext109e][514][NR-U] 38.321 Running CR (Ericsson)**
Intended outcome: Agreed CRs
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2001924
CLOSED

✉ **[Ext109e][515][PowSav] 38.304 Running CR (Vivo)**
Intended outcome: Agreed CRs
Deadline: 2020-03-07 1200 CET
=> The CR is agreed in R2-2002302
CLOSED

✉ **[Ext109e][516][PowSav] RRC Running CR (Mediatek)**
Intended outcome: Agreed CRs
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2002389
CLOSED

✉ **[Ext109e][625][POS] Final check of running CR to 38.305 (Intel)**
Intended outcome: Agreed CR in R2-2002241
Deadline: Tuesday 2020-03-10 1200 CET
=> The CR is agreed in R2-2002241
CLOSED

✉ **[Ext109e][626][POS] Final check of running CR to 38.331 (Ericsson)**
Intended outcome: Agreed CR in R2-2002247
Deadline: Tuesday 2020-03-10 1200 CET
=> The CR is agreed in R2-2002247
CLOSED

✉ **[Ext109e][627][POS] Final check of running CR to 37.355 (Intel)**
Intended outcome: Agreed CR in R2-2002243
Deadline: Tuesday 2020-03-10 1200 CET
=> The CR is agreed in R2-2002243
CLOSED

✉ **[Ext109e][629][POS] 38.300 CR for RAN1 agreements (Intel)**
Intended outcome: Agreed CR in R2-2001960
Deadline: Tuesday 2020-03-10 1200 CET
=> The CR is agreed in R2-2001960
CLOSED

✉ **[Ext109e][899][SON/MDT]Running 37.320 to introduce MDT (CMCC)**
Intended outcome: agreed CR in R2-2002002
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2002002
CLOSED

✉ **[Ext109e][814][SON/MDT]Running 38.314 (CMCC)**
Intended outcome: agreed CR/TS in in R2-2002000
Deadline: 2020-03-10 1200 CET
=> The CR is agreed in R2-2002000
CLOSED

✉ **[Ext109e][801][SON/MDT]Running 38.331 to introduce SON/MDT (Huawei, Ericsson)**
Intended outcome: agreed CR
Check at 2020-03-06 23:00. If no consensus is achieved for cross RAT RLF report case. We use the current structure in the running CR in R2-2002003.
Deadline: 2020-03-10 CET
Sessionchair: Further clean-up and potentially corrections to some detailed reports contents or functions may apply in case critical issues are found
=> The CR is agreed in R2-2002003
CLOSED

✉ **[Ext109e][801][SON/MDT]Running 36.331 to introduce SON/MDT (Huawei)**
Intended outcome: agreed CR in R2-2002001
Deadline: 2020-03-06 CET
=> The CR is agreed in R2-2002005
CLOSED

✉ **[Ext109e][855][SON/MDT]LS to RAN3 (CATT)**
Intended outcome: approved LS in R2-2002004
Indicate that RLF report for MRO should be handled in RAN3
Send LS to RAN3 cc SA5 to inform our progress
Agreed CRs should be attached
Deadline: 2020-03-11 CET

=> The LS is approved in R2-2002393
CLOSED

Short email discussions not for RP (1 weeks): Deadline Thursday, 2020-03-12, 23:59 Pacific Time (unless stated)

Please request TDoc numbers for the following email discussions from MCC if not already allocated

- ✉ **[Post109e#01][Org] organizational (Chairman)**
  Scope: Finalize tdoc status after email discussions after the meeting, if needed. Resolve possible unclarities after 109e, if any. Initial additional email discussions if needed (e.g. for next meeting)
  Intended outcome: Updated email discussion list. Clarifications to be captured in R2 109e meeting minutes
  CLOSED

- ✉ **[Post109e#02][NR MOB] LS to RAN3 on prohibition of CPC + CHO (Nokia)**
  Intended outcome: Agreed LS to RAN3 to inform them of RAN2 decision to disallow simultaneous usage of CPC and CHO for the same UE.
  Final LS can be provided in R2-2001764
  => The LS is approved in R2-2001764
  CLOSED

- ✉ **[Post109e#03] [NBIOT/EMTC] LS to RAN1 on PUR open issues (Ericsson)**
  Scope: LS with open issues/questions to RAN1
  Intended outcome: Approved LS in R2-2001816
  => The LS is approved in R2-2001816
  CLOSED

- ✉ **[Post109e#04][NB-IoT/eMTC R16] Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and eMTC (Blackberry)**
  Scope: Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and eMTC
  Intended outcome: endorsed document in R2-2001886
  => The report is endorsed in R2-2001886.
  CLOSED

- ✉ **[Post109e#05][eMTC R16] TP for RSS (Ericsson)**
  Scope: Finalize the text proposal for RSS
  Intended outcome: endorsed document in R2-2001887
  => Changed into an email discussion for the next meeting
  CLOSED

- ✉ **[Post109e#06] [NB-IoT/eMTC R16] LS to RAN1 on co-existence with NR (Qualcomm)**
  Scope: LS to RAN1 to check whether it should be possible to have a common configuration for all NB-IoT carriers for resource reservation for NR coexistence and for NB-IoT and eMTC whether it is possible to optimize signalling.
  Intended outcome: approved LS in R2-2001888
  Deadline: March 18
  => The LS is approved in R2-2001888.
  CLOSED

- ✉ **[Post109e#07][PRN] LS on CAG issues (Nokia)**
  Intended outcome: Agree LS to SA1, SA2, CT1 on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs

=> The LS is approved in R2-2002417.
CLOSED

✉ **[Post109e#08][R16 ASN1] ASN.1 review Plan (Ericsson/Samsung)**
Intended outcome: endorsed plan, definition of additional email discussions, e.g. per WI open issues discussion.
=> The plan is endorsed as baseline in R2-2001709.
CLOSED

✉ **[Post109e#09][DCCA] LS on Power Control NR DC (vivo)**
Scope: LS to RAN3, see discussion and decisions
Intended outcome: Approved LS
=> The LS is approved in R2-2001759
CLOSED

✉ **[Post109e#10][TEI16] Reply LS on CSI-RS capabilities (FG 2-33/36/40/41/43) (NTT DOCOMO, INC)**
Scope: Reply LS out to R1, based on discussion [AT109e][076][TEI16]
Intended outcome: Approved LS out
=> The LS is approved in R2-2002415
CLOSED

Next meeting (long) discussions: Deadline 2020-04-08 23:59 Pacific Time (unless stated)

TDoc numbers for the following email discussions may be requested via 3GU tool

✉ **[Post109e#05][eMTC R16] TP for RSS (Ericsson)**
Scope: Finalize the text proposal for RSS
Intended outcome: Agreeable TP, or a report if not agreeable.

✉ **[Post109e#11][MOB] Resolving open issues for DAPS (Intel)**
Intended outcome: Attempting to resolving remaining open issues for DAPS.

✉ **[Post109e#12][MOB] Resolving open issues for CHO (Nokia)**
Intended outcome: Attempting to resolving remaining open issues for CHO.

✉ **[Post109e#13][NR MOB] Resolving open issues for CPC (CATT)**
Intended outcome: Attempting to resolving remaining open issues for CPC.

✉ **[Post109e#14][NBIOT] 36.306 CR (Blackberry)**
Scope: Capture the agreements from this meeting.
Intended outcome: endorsed CR in R2-2001813

✉ **[Post109e#15][NBIOT] UE specific DRX: DRX cycle values (Sequans)**
Scope: Identify the RAN2 issues created by shorter DRX cycles that cannot be solved.
Intended outcome: report to next meeting

✉ **[Post109e#16] [eMTC R16] 36.306 CR (Huawei)**
Scope: Capture the agreements from this meeting
Intended outcome: endorsed CR in R2-2001890

✉ **[Post109e#17][EMIMO] BFR MAC CE for BFR on SpCell (Apple)**
Intended outcome: Discuss the technical details to converge on a single solution.

- ✉ **[Post109e#18][PRN] Remaining open issues (Nokia)**
  Intended outcome: Discuss and resolve the remaining PRN open issues.

- ✉ **[Post109e#19][V2X] Remaining RLC issue (Ericsson)**
  Intended outcome: Discuss Question 4 raised in R2-2001976. Note the discussion should be only for RLC UM

- ✉ **[Post109e#20][V2X] Remaining UE capability issues (OPPO)**
  Intended outcome: Discuss the essential issues raised in R2-2002023 (including L1/2/3 capabilities)

- ✉ **[Post109e#21][V2X] Remaining MAC issues (LG)**
  Intended outcome: Discuss essential level 2 issues which are required for Rel-16 V2X completion

- ✉ **[Post109e#22][V2X] MAC impacts from new RAN1 agreements (LG)**
  Intended outcome: Discuss MAC specification impacts from new RAN1 agreements

- ✉ **[Post109e#23][V2X] Remaining RLM/RLF issue (Interdigital)**
  Intended outcome: Discuss the need, technical challenges and details of HARQ feedback based TX sided RLM/RLF

- ✉ **[Post109e#24][NR15] Clarification of capabilities with NR-DC and NE-DC (Ericsson)**
  Scope: Based on R2-2001082, find an acceptable CR, Check whether more places need update.
  Intended outcome: Agreeable CR

- ✉ **[Post109e#25][NR15] SRS Capability report for SRS only Scell (Huawei)**
  Scope: Check the understanding on legacy behaviors and figure out an agreeable CR to fix the problem, ref R2-2002036 and [AT109e][081]
  Intended outcome: Agreeable CR (if possible)

- ✉ **[Post109e#26][IAB] IP address allocation (Samsung)**
  Scope: NSA case, following recovery from RLF, R3 should decide what is required, R2 should look at signalling solution (which message etc). Take R3 decisions and outcomes into consideration.
  Intended outcome: Report, possibly agreeable TP

- ✉ **[Post109e#27][DCCA] Fast MCG recovery (Ericsson)**
  Scope: Referring to R2-2002226, a) SN change during the fast MCG recovery in an email discussion to the next meeting, b) the supported MR-DC handover scenarios for the fast MCG recovery.
  Intended outcome: Report, pave the way for agreements

- ✉ **[Post109e#28][TEI16] Enhanced capability for UP Integrity Protection (DT)**
  This email discussion is expected to start after RP#87e and scope may be updated then.
  Scope: Enhanced capability for UP Integrity Protection. Gather comments on interest, feasibility, and possible solution direction, blocking aspects if any, considering R2-2002136, R2-2000906, R2-2000605.
  Intended outcome: Report.

- ✉ **[Post109e#29][OdSIBconn] Open Issues (Ericsson)**
  Scope: Address Open issues of On demand System Information in Connected
  Intended outcome: Report, and agreeable CR

- ✉ **[Post109e#30][NR/Pos] Non-periodic SRS for positioning (Huawei)**
  Scope: Discuss the proposals from R2-2001935.
  Intended outcome: Summary for next meeting

- ✉ **[Post109e#31][NR/Pos] Details of spatial relation for positioning (Huawei)**
  Scope: Continue the discussion from R2-2001936 and resolve open issues.
  Intended outcome: Summary for next meeting

- ✉ **[Post109e#32][NBIOT/EMTC] Finalise the 36.304 Text for WUS (Nokia)**
  Scope: Develop and finalise the 36.304 WUS text based on previous inputs and agreements.
  Intended outcome: Agreeable TP

- ✉ **[Post109e#33][R16 Other] UL TX Switching – NR-FR1 (China Telecom)**
  Scope: Progress CRs as far as possible taking into account progress in R4 and R1.
  Intended outcome: Report, and if possible agreeable CRs

- ✉ **[Post109e#34][EMIMO] RRC Open Issues (Samsung)**
  Intended outcome 2: Open Issues list with RRC impact (April 1)

- ✉ **[Post109e#35][IAB] RRC Open Issues (Ericsson)**
  Scope: Progress RRC Open Issues. Including Establishment of the F1-C-over-LTE/X2 path. See also Open Issue list distributed by WI rapporteur. Removal of Editor's Notes.
  Intended outcome: Solutions, agreeable CR//TP.
  Intended outcome 2: Open Issues list with RRC impact (April 1)

- ✉ **[Post109e#36][IAB] RLF Handling Open Issues (Qualcomm)**
  Scope: Progress RLF handling Open Issues. See also Open Issue list distributed by WI rapporteur. In particular, RLF notification for IAB-node in ENDC, and Reestablishment at former descendant nodes (SA only).
  Intended outcome: Solutions, agreeable CR//TP.

- ✉ **[Post109e#37][DCCA] RRC open Issues (Ericsson)**
  Scope: WI RRC review Resolve FFSs that don't require major technical discussion (like need codes). Ensure that all agreements are captured properly
  Intended outcome: Agreeable CR (deadline as above)
  Intended outcome 2: Open Issues list with RRC impact (April 1)

- ✉ **[Post109e#38][NR-U] RRC open issues (Qualcomm)**
  Address known stage-3 remaining open issues from 109e for 38.331 and update E-UTRAN (36.331) with relevant agreements and any open issues that need to be discussed
  Capture identified NEW, if any, stage-3 corrections/issues. Issues that have already been discussed and not pursued should not be brought up again.
  Intended outcome: Agreable proposals. CR for 38.331 addressing open issues and CR for 36.331 (including editorials received offline) (Deadline above)
  Intended outcome 2: Open Issues list with RRC impact (April 1)

- ✉ **[Post109e#39][NR-U] MAC open issues (Ericsson)**
  Address known stage-3 remaining open issues from 109e
  Capture identified NEW, if any, stage-3 corrections/issues. Issues that have already been discussed and not pursued should not be brought up again.
  Intended outcome: CR for 38.321 addressing open issues (including editorials received offline)

- ✉ **[Post109e#40][NR-U] UE capabilities (Qualcomm, Vivo)**
  Discuss RAN2 related UE capabilities for NR-U (Qualcomm)
  Intended outcome: Set of agreeable proposals (Qualcomm). Running CR for 38.306 capturing the potential agreements will be provided by Vivo

- ✉ **[Post109e#41][PowSav] DCP open issues (InterDigital, Huawei)**

Address known stage-3 remaining open issues from 109e (section 3.1 of R2-2002383 except UE capabilities). Capture identified NEW, if any, stage-3 corrections/issues. Issues that have already been discussed and not pursued should not be brought up again.
Intended outcome: Set of agreeable proposals (InterDigital). CR for 38.321 will be provided by Huawei (including editorials received offline)

- **[Post109e#42][PowSav] UE capabilities (Intel)**
  Discuss RAN2 related UE capabilities for Power Saving
  Intended outcome: Set of agreeable proposals. Running CR capturing the potential agreements can be provided by Intel

- **[Post109e#43][PowSav] UE Assistance and RRC open issues (Mediatek)**
  Address known stage-3 remaining open issues from 109e including (section 3.2 of R2-2002383 except UE capabilities)
  Capture identified NEW, if any, stage-3 corrections/issues. Issues that have already been discussed and not pursued should not be brought up again.
  Intended outcome: Set of agreeable proposals and CR for 38.331 addressing open issues (including editorials received offline) (Deadline above)
  Intended outcome 2: Open Issues list with RRC impact (April 1)

- **[Post109e#44][PowSav] RRM open issues (CATT, Vivo)**
  Address known stage-3 remaining open issues from 109e. NOTE: EMR will not be treated and it is left up to RAN4 (section 3.3 of R2-2002383 except UE capabilities) (CATT)
  Capture identified NEW, if any, stage-3 corrections/issues. Issues that have already been discussed and not pursued should not be brought up again.
  Intended outcome: Set of agreeable proposals (CATT). CR for 38.304 will be provided by Vivo (including editorials received offline)

- **[Post109e#45][NBIOT/EMTC] WUS open issues (Ericsson)**
  Address known remaining open issues from 109e
  Capture identified NEW, if any, issues. Issues that have already been discussed and not pursued should not be brought up again.
  Intended outcome: Report and proposals addressing open issues

- **[Post109e#46][NBIOT/EMTC] PUR open issues (Huawei)**
  Address known remaining open issues from 109e
  Capture identified NEW, if any, issues. Issues that have already been discussed and not pursued should not be brought up again.
  Intended outcome: Report and proposals addressing open issues

- **[Post109e#47][NBIOT/EMTC] Connection to 5GC open issues (Qualcomm)**
  Scope: Address known remaining open issues from 109e
  Capture identified NEW, if any, issues. Issues that have already been discussed and not pursued should not be brought up again.
  Intended outcome: Report and proposals addressing open issues

- **[Post109e#48]**
  CANCELLED

- **[Post109e#49][NR15] SN MN Measurement Coordination (Huawei)**
  Scope: Based on discussion on R2-2002344, whether the SN needs to involve the MN for any SCell addition/removal or whether the update could be delayed (and in which case)
  Expected outcome: Agreeable CR to 37.340

- **[Post109e#50][IIOT] Remaining issues intra-UE prioritization (Nokia)**
  Scope: Discuss and conclude the remaining issues of intra-UE prioritization
  Intended outcome: Report and Draft CR if possible

- ✉ **[Post109e#51][ASN.1] RRC ASN.1 review NR and NRLTE common issues (Ericsson/Samsung)**
  Scope: See separate instructions
  Intended outcome: ASN.1 review file (CR) with RIL issues.

- ✉ **[Post109e#52][ASN.1] RRC ASN.1 review LTE specific (Samsung)**
  Scope: See separate instructions
  Intended outcome: ASN.1 review file (CR) with RIL issues.

Annex H: History

Document history		
Date	**TSG RAN WG2 Tdoc**	**Subject**
15.03.2020		First draft version
17.04.2020		Second draft version, includes updates the post-meeting email discussion outcomes
19.04.2020	R2-2002501	Submitted to RAN2#109bis-e for approval.

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APPENDIX F

TDoc	Title	Source	TDoc Status	Reservation date	Uploaded
R2-2000000	Remaining Issues of UL PDCP Packet Average Queuing Delay Measurement	Qualcomm Incorporated	available	2020-02-11 01:12:58	2020-02-12 02:13:40
R2-2000001	Remaining issues of UE Location Information	Qualcomm Incorporated	available	2020-02-11 01:17:52	2020-02-12 02:13:40
R2-2000002	Cross-system RLF report	Qualcomm Incorporated	available	2020-02-11 01:22:21	2020-02-12 02:13:40
R2-2000003	Access Control about NPN	CATT	noted	2020-02-11 01:23:32	2020-02-14 04:00:58
R2-2000004	Idle and Inactive Open Issues for NPN	CATT	noted	2020-02-11 01:28:35	2020-02-14 04:00:58
R2-2000005	Connected Mode Open Issues for NPN	CATT	noted	2020-02-11 01:30:55	2020-02-14 04:00:58
R2-2000006	Addition of broadcast of barometric pressure assistance data	Polaris Wireless, FirstNet,	revised	2020-02-11 01:37:41	2020-02-11 23:37:09
R2-2000007	Sensor Provide Location Information Elements	Polaris	revised	2020-02-11 02:13:33	2020-02-11 23:37:09
R2-2000008	Agenda for RAN2#109-e	Chairman	approved	2020-02-11 04:26:34	2020-02-23 23:51:09
R2-2000009	RAN2#108 Meeting Report	MCC	approved	2020-02-11 04:26:34	2020-02-24 00:21:42
R2-2000010	LS on agreements related to NR Positioning (R1-1913522; contact: Nokia)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:57
R2-2000011	LS on UE data rate (R1-1913552; contact: Ericsson)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000012	Reply LS on PRACH configuration conflict detection (R1-1913578; contact: CATT)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000013	LS on XDD-FRX Differentiation (R1-1913579; contact: Qualcomm)	RAN1	available	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000014	LS on NR Rel-16 TEI (R1-1913580; contact: NTT	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000015	Reply LS to RAN1&4 on UE capabilities on DAPS HO (R1-1913581; contact: Intel)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000016	Response LS to RAN2 LS on SFN LSB indication in msg2/msgB (R1-1913582; contact: Qualcomm)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000017	LS reply to RAN2 on WUS for short DRX cycle (R1-1913583; contact: CATT)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000018	Reply LS on PHR reporting for NR-U (R1-1913584; contact: Lenovo)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000019	Reply LS on Tx switching between two uplink carriers (R1-1913585; contact: China Telecom)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000020	Response LS on LCP Restriction for Dynamic Grant (R1-1913591; contact: Qualcomm)	RAN1	noted	2020-02-11 04:26:34	2020-02-11 04:30:53
R2-2000021	LS on signaling of Q for a serving cell in NR-U (R1-1913592; contact: Nokia)	RAN1	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000022	Reply LS on mapping restriction for LCP procedure (R1-19135932; contact: Vivo)	RAN1	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000023	LS on updated Rel-16 LTE and NR parameter lists (R1-1913675; contact: Qualcomm)	RAN1	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000024	Reply LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO (R1-	RAN1	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000025	Reply LS on Sending CAG ID in NAS layer (R3-197591; contact: Ericsson)	RAN3	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000026	Reply LS on Fast MCG Link Recovery using SRB3 (R3-197606; contact: ZTE)	RAN3	noted	2020-02-11 04:26:35	2020-02-11 04:30:53

R2-2000027	LS Reply on CP Bearer Mapping for IAB (R3-197659; contact: Ericsson)	RAN3	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000028	LS on information needed for MRO in UE RLF Report (R3-197668; contact: CATT)	RAN3	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000029	Reply LS on LS on dependencies on AS design for mobility management aspects of NTN in 5GS / LS on system level design assumptions for satellite in 5GS (R3-197699; contact: Qualcomm)	RAN3	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000030	Reply LS on energy efficiency (R3-197745; contact:	RAN3	noted	2020-02-11 04:26:35	2020-02-11 04:30:53
R2-2000031	LS to RAN2 on Sidelink UE Information (R3-197770; contact: Ericsson)	RAN3	noted	2020-02-11 04:26:36	2020-02-11 04:30:53
R2-2000032	Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (R3-197775; contact: Nokia)	RAN3	noted	2020-02-11 04:26:36	2020-02-11 04:30:53
R2-2000033	LS on DL-AOD procedure (R3-197794; contact:	RAN1	noted	2020-02-11 04:26:36	2020-02-11 04:30:53
R2-2000034	LS on UE capability of intraBandENDC-Support (R4-1913130; contact: Qualcomm)	RAN4	noted	2020-02-11 04:26:36	2020-02-11 04:30:53
R2-2000035	Reply LS on BCS reporting for EN-DC BC (R4-1915358; contact: Huawei)	RAN4	noted	2020-02-11 04:26:36	2020-02-11 04:30:54
R2-2000036	Reply LS on Tx DC location (R4-1915361; contact:	RAN4	available	2020-02-11 04:26:36	2020-02-11 04:30:54
R2-2000037	Reply to LS on UE capabilities on DAPS HO (R4-1915781; contact: Qualcomm)	RAN4	noted	2020-02-11 04:26:36	2020-02-11 04:30:54
R2-2000038	Response LS on Reference Point for Timing Related Measurements in FR2 (R4-1915801; contact: CATT,	RAN4	noted	2020-02-11 04:26:36	2020-02-11 04:30:54
R2-2000039	Reply LS on direct SCell activation in RRC resume message (R4-1915844; contact: ZTE)	RAN4	noted	2020-02-11 04:26:36	2020-02-11 04:30:54
R2-2000040	LS on the UE capability and network assistance signalling for Rel-16 NR HST RRM (R4-1915855;	RAN4	noted	2020-02-11 04:26:36	2020-02-11 04:30:54
R2-2000041	LS on Requirements on positioning for UAS (S6-200269; contact: InterDigital)	SA6	available	2020-02-11 04:26:36	2020-02-11 04:30:54
R2-2000042	Reply LS to RAN2 on UL-SL Prioritization (R4-1915985; contact: Futurewei)	RAN4	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000043	LS on UE capabilities and RRC signalling on Tx switching period delay (R4-1916083; contact: Apple)	RAN4	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000044	LS on channel raster for NR V2X UE (R4-1916146; contact: CATT)	RAN4	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000045	LS on definition of IAB-MT channel bandwidth (R4-1916165; contact: Qualcomm)	RAN4	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000046	LS on MPE enhancements (R4-1916183; contact:	RAN4	available	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000047	LS on Local NR positioning in NG-RAN (RP-193262; contact: Nokia)	RAN	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000048	LS on 5G indicator (RP-193265; contact: Intel)	RAN	available	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000049	Reply LS on UAC for NB-IOT (S1-193592; contact: Qualcomm)	SA1	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000050	Reply LS on enhanced access control for IMS signalling (S1-193595; contact: NTT Docomo)	SA1	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000051	Reply LS on NPN clarifications (S1-193605; contact: Qualcomm)	SA1	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000052	Reply LS on LS on PC5S and PC5 RRC unicast message protection (S2-1912002; contact:	SA2	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000053	LS on clarifying NR PC5 priority level (S2-1912003; contact: LGE)	SA2	noted	2020-02-11 04:26:37	2020-02-11 04:30:54
R2-2000054	LS OUT on Location of UEs and associated key issues (S2-1912560; contact: Thales)	SA2	noted	2020-02-11 04:26:37	2020-02-11 04:30:55
R2-2000055	LS on RAN sharing for NPNs (S2-1912602; contact: Qualcomm)	SA2	noted	2020-02-11 04:26:37	2020-02-11 04:30:55
R2-2000056	LS on category M devices and NR (S2-1912608; contact: Qualcomm)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000057	Reply LS on sending CAG ID during resume procedure (S2-1912731; contact: Qualcomm)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000058	Reply LS on Rel-16 NB-IoT enhancements (S2-1912763; contact: Huawei)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000059	LS on the support for ECN in 5GS (S2-1912765; contact: Qualcomm)	SA2	available	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000060	Reply LS on reference time delivery (S2-1912769; contact: Qualcomm)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55

R2-2000061	Reply LS on PC5 unicast and groupcast security protection (S2-2000971; contact: Interdigital)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000062	Reply LS on Response LS on SL RLM/RLF (S2-2000973; contact: Qualcomm)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000063	Reply LS on SL RLF handling (S2-2000974; contact: Ericsson)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000064	Reply LS on 5G-S-TMSI Truncation Procedure (S2-2001248; contact: Qualcomm)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000065	LS reply on NPN network sharing (S2-2001398; contact: Huawei)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000066	Reply LS on CMAS/ETWS and emergency services for SNPNs (S2-2001400; contact: Qualcomm)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000067	LS reply on CAG definition (S2-2001401; contact:	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000068	Reply LS on assistance indication for WUS (S2-2001578; contact: Huawei)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000069	LS on Sending CAG ID (S2-2001616; contact: Ericsson)	SA2	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000070	Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (S2-2001675; contact: Nokia)	SA2	available	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000071	Reply LS to LS on AS key derivation for conditional handover (S3-194447; contact: Apple)	SA3	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000072	Reply LS to SA2 on 5G-S-TMSI Truncation Procedure (S3-194482; contact: Huawei)	SA3	noted	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000073	Reply LS on Handling of UE radio network capabilities in 4G and 5G (S3-194488; contact: Intel)	SA3	available	2020-02-11 04:26:38	2020-02-11 04:30:55
R2-2000074	Reply LS on Sending CAG ID in NAS layer (S3-194559; contact: Qualcomm)	SA3	noted	2020-02-11 04:26:39	2020-02-11 04:30:55
R2-2000075	LS on PC5 unicast and groupcast security protection (S3-194658; contact: Interdigital)	SA3	noted	2020-02-11 04:26:39	2020-02-11 04:30:55
R2-2000076	LS on Reply on QoE Measurement Collection (S5-197543; contact: Ericsson)	SA5	noted	2020-02-11 04:26:39	2020-02-11 04:30:55
R2-2000077	Reply on radio resource management policy (S5-197637; contact: Ericsson)	SA5	noted	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000078	LS on NPN network sharing (S5-197805; contact:	SA5	noted	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000079	LS on CAG definition (S5-197806; contact: Huawei)	SA5	noted	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000080	LS on analysis of GSMA GST attributes (S5-197853; contact: China Mobile)	SA5	noted	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000081	LS on Requirements on positioning for UAS (S6-200269; contact: Interdigital)	SA6	withdrawn	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000082	Reply LS to extend the scope of eV2X (SP-191379; contact: Telecom Italia)	SA	available	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000083	Reply LS on signalling of sidelink RSRP and CSI (R1-1913693; contact: LGE)	RAN1	noted	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000084	Reply LS on additional high layer information for sidelink physical layer operations (R1-1913694;	RAN1	noted	2020-02-11 04:26:39	2020-02-11 04:30:56
R2-2000085	Reply LS on TX resource (re-)selection and MAC related agreements (R1-1913695; contact: LGE)	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000086	Reply LS on sidelink synchronization under multiple synchronization sources with different timing (R1-1913696; contact: Qualcomm)	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000087	LS on 5GC assisted cell selection for accessing network slice (S2-2001728; contact: ZTE)	SA2	available	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000088	Reply LS on assistance indication for WUS (S2-2001732; contact: Huawei)	SA2	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000089	Response LS on the “LS OUT on Location of UEs and associated key issues” (S3i200056; contact: Rogers)	SA3-LI	available	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000090	Reply on QoE Measurement Collection (S4-200241; contact: Ericsson)	SA4	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000091	Reply LS on Support for ECN in 5GS (S4-200298; contact: Qualcomm)	SA4	available	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000092	Reply LS on assistance indication for WUS (C1-199008; contact: Huawei)	CT1	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000093	LS on Discussion over UE capabilities of FG2-36/2-40/2-41/2-43 (R1-1913295; contact: Huawei)	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:56

R2-2000094	Reply LS on direct indication of ETWS/CMAS (R1-1913367; contact: Futurewei)	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000095	LS on explicit higher layer signalling on PUCCH resource grouping for simultaneous spatial relation updates (R1-1913423; contact: LGE)	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000096	Reply LS on multi PDCCH-based and single PDCCH-based multi-TRP operation (R1-1913463;	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:56
R2-2000097	Reply LS on SL RLM/RLF (R1-1913464; contact:	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:57
R2-2000098	LS reply on CSI/SRS reporting (R1-1913480; contact:	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:57
R2-2000099	LS to RAN3 for TPs endorsed in RAN1 (R1-1913506; contact: Thales)	RAN1	noted	2020-02-11 04:26:40	2020-02-11 04:30:57
R2-2000100	Discussion on logged MDT	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000101	Corrections for CEF and RLF Report	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000102	Failure Indication about SCG	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000103	Correction and Open Issues of UL Delay	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000104	Analysis about MRO Issues Request by RAN3	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000105	Corrections for RACH Records Structure	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000106	Corrections for the Content of RACH Records	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000107	Draft Reply LS on Information Needed for MRO in UE RLF Report	CATT	available	2020-02-11 05:11:49	2020-02-14 04:00:58
R2-2000108	LTE / NR Spectrum sharing in Band 40/n40 for LTE-NR	Reliance Jio	withdrawn	2020-02-11 06:29:16	
R2-2000109	[108#57] Async CA (QC) - Report on Email Discussion	Qualcomm Incorporated	noted	2020-02-11 06:55:51	2020-02-14 02:51:28
R2-2000110	Remaining Issues on Propagation Delay	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000111	Remaining issues for multiple CG configurations	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000112	Discussion on the processing order of ROHC and	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000113	Remaining Issues of EHC	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000114	Remaining Issues on Autonomous Transmission	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000115	Remaining issues for intra-UE multiplexing and prioritization	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000116	MAC CE priorities and LCP mapping restrictions	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000117	Discussion on the Rel-15 Duplication MAC CE	CATT, Sharp	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000118	On the Open Issues of PDCP Duplication	CATT	available	2020-02-11 07:04:09	2020-02-14 02:49:01
R2-2000119	LCH-to-Cell Restriction in Rel-16	CATT	available	2020-02-11 07:04:10	2020-02-14 02:49:01
R2-2000120	MAC upgrade for SR dropping in PHY	CATT,	available	2020-02-11 07:04:10	2020-02-14 02:49:01
R2-2000121	Correction on the drx-HARQ-RTT-TimerDL	CATT	available	2020-02-11 07:04:10	2020-02-14 02:49:01
R2-2000122	[108#57] Async CA (QC) - CR to 38.331 on support of async CA	Qualcomm Incorporated	noted	2020-02-11 07:06:16	2020-02-14 02:51:28
R2-2000123	Capability coordination for DAPS handover	Ericsson	available	2020-02-11 07:22:59	2020-02-13 20:41:15
R2-2000124	PDCP status reporting in target cell at DAPS	Ericsson	available	2020-02-11 07:23:00	2020-02-13 20:41:15
R2-2000125	Open issues at fallback to source cell at DAPS	Ericsson	available	2020-02-11 07:23:00	2020-02-13 20:41:15
R2-2000126	DAPS handover without key change	Ericsson	available	2020-02-11 07:23:00	2020-02-13 20:41:15
R2-2000127	RRC signalling of DAPS handover per DRB	Ericsson	available	2020-02-11 07:23:00	2020-02-13 20:41:15
R2-2000128	Switch of UL data during DAPS handover with 2-step RA or RACH-less access	Ericsson	available	2020-02-11 07:23:00	2020-02-13 20:41:14
R2-2000129	Subsequent RRC procedures after DAPS handover	Ericsson	available	2020-02-11 07:23:00	2020-02-13 20:41:15
R2-2000130	Remaining RRC aspects of NPN	Ericsson	noted	2020-02-11 07:23:00	2020-02-13 21:52:12
R2-2000131	Remaining RRC aspects of NPN	Ericsson	noted	2020-02-11 07:23:00	2020-02-13 21:52:12
R2-2000132	Support of emergency calls in NPN-only cells	Ericsson	noted	2020-02-11 07:23:00	2020-02-13 23:25:21
R2-2000133	Introduction of enhanced support for dynamic	Ericsson	available	2020-02-11 07:23:00	2020-02-13 20:41:15
R2-2000134	Introduction of enhanced support for dynamic	Ericsson	available	2020-02-11 07:23:03	2020-02-13 20:41:15
R2-2000135	UE capability of Rel-16 DCCA enhancement	Qualcomm Incorporated	available	2020-02-11 07:25:37	2020-02-14 02:51:28
R2-2000136	Finalize NR SCell dormancy	Qualcomm Incorporated	noted	2020-02-11 07:33:20	2020-02-14 02:51:28

R2-2000137	Remaining issues of power control in NR-DC	Qualcomm Incorporated	available	2020-02-11 07:37:05	2020-02-14 02:51:28
R2-2000138	Remaining issues of PC5-RRC	Qualcomm Incorporated	available	2020-02-11 07:42:17	2020-02-14 02:51:28
R2-2000139	CR to 38.331 on missing freqBandIndicator in NR redirection	Qualcomm Incorporated	available	2020-02-11 07:42:26	2020-02-14 02:51:28
R2-2000140	Remaining MAC issues on NR V2X mode 1	Qualcomm Incorporated	available	2020-02-11 07:46:25	2020-02-14 02:51:28
R2-2000141	Simultaneous BWP Switching and Contention Resolution in 2-step RACH	vivo	available	2020-02-11 08:23:52	2020-02-14 06:58:35
R2-2000142	Resource Selection for 2-step RACH Considering Measurment Gap	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000143	Handling of the Collision Between MsgA Grant and Another UL Grant	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000144	Discuession on the MsgB Response Window for 2-	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000145	Further Consideration on RACH Procedure in NR-U	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000146	Issue on the Autonomous BWP Awitching in NR-U	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000147	LBT Impacts on 2-step RACH	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000148	Remaining Issues of UL LBT Failure	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000149	Remaining Issues on CAPC Selection for Configured	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000150	UE Capability for NR-U Support	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000151	Short Message for Stopping Paging Monitoring in NR-	vivo	available	2020-02-11 08:23:53	2020-02-14 06:58:35
R2-2000152	Running CR for the introduction of SRVCC from 5G to 3G	China Unicom	withdrawn	2020-02-11 08:57:21	2020-02-11 14:30:17
R2-2000153	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas Networks Ltd.,	revised	2020-02-11 09:50:55	2020-02-14 03:20:56
R2-2000154	Consideration on SR transmission colliding with PUSCH transmission	Xiaomi Communicat	reserved	2020-02-11 11:12:01	
R2-2000155	Inclusion of 90MHz UE Bandwidth	VODAFONE	revised	2020-02-11 11:58:00	2020-02-12 11:07:42
R2-2000156	Completing the Solution for the 5G Indicator	VODAFONE	available	2020-02-11 12:01:06	2020-02-12 11:08:11
R2-2000157	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas	revised	2020-02-11 12:45:44	2020-02-14 03:43:11
R2-2000158	CR of TS 36.305 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT,	revised	2020-02-11 12:49:39	2020-02-14 03:58:30
R2-2000159	TS 36.331 Clarifying the options for PDCP version change	Nokia, Nokia Shanghai	postponed	2020-02-11 13:01:55	2020-02-13 18:45:22
R2-2000160	TS 36.306 Clarifying the options for PDCP version change	Nokia, Nokia Shanghai	postponed	2020-02-11 13:01:59	2020-02-13 18:45:22
R2-2000161	TS 38.331 Fixing NE-DC Band Combinations	Nokia, Nokia Shanghai	revised	2020-02-11 13:02:03	2020-02-13 18:45:22
R2-2000162	TS 38.331 Capability Coordination for Measurement Reporting Identities in MR-DC	Nokia, Nokia Shanghai	available	2020-02-11 13:02:06	2020-02-13 18:45:22
R2-2000163	TDOC Capability Coordination for Measurement Reporting Identities in MR-DC	Nokia, Nokia Shanghai	available	2020-02-11 13:02:08	2020-02-13 18:45:22
R2-2000164	TS 38.331 Dummifying bandwidth class F	Nokia, Nokia Shanghai	withdrawn	2020-02-11 13:02:08	2020-02-13 18:45:22
R2-2000165	TS 38.306 Clarifying consequences if not supported	Nokia, Nokia Shanghai	postponed	2020-02-11 13:02:10	2020-02-13 18:45:22

R2-2000166	TDoc IODT issue in 1-symbol PUCCH configuration with frequency hopping	Nokia, Nokia Shanghai	available	2020-02-11 13:02:12	2020-02-13 18:45:22
R2-2000167	TS 38.331 IODT issue in 1-symbol PUCCH configuration with frequency hopping	Nokia, Nokia Shanghai	available	2020-02-11 13:02:12	2020-02-13 18:45:22
R2-2000168	Autonomous gap support for CGI reading	vivo, CMCC,	withdrawn	2020-02-11 13:39:45	
R2-2000169	Autonomous gap support for CGI reading	vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel,	revised	2020-02-11 13:39:48	2020-02-14 06:15:37
R2-2000170	Autonomous gap support for CGI reading	vivo, CMCC,	withdrawn	2020-02-11 13:39:53	
R2-2000171	Autonomous gap support for CGI reading	vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel,	revised	2020-02-11 13:39:57	2020-02-14 06:15:37
R2-2000172	Consideration on SR transmission colliding with PUSCH transmission	Xiaomi Communicat	reserved	2020-02-11 14:08:51	
R2-2000173	Consideration on SR transmission colliding with PUSCH transmission	Xiaomi Communicat	available	2020-02-11 14:21:58	2020-02-12 13:12:57
R2-2000174	Running CR for the introduction of SRVCC from 5G to 3G	China Unicom	withdrawn	2020-02-11 14:56:34	2020-02-11 15:06:48
R2-2000175	Report of email discussion [108#53] [IIOT] EHC remaining issues	Huawei, HiSilicon	noted	2020-02-11 15:25:52	2020-02-14 00:31:00
R2-2000176	Remaining issues of CAPC	Huawei,	available	2020-02-11 15:41:29	2020-02-14 00:31:00
R2-2000177	FDD and TDD Timing Alignment for Dual Connectivity	VODAFONE	available	2020-02-11 16:01:19	2020-02-12 11:07:58
R2-2000178	L2 aspects of MPE mitigation	InterDigital	available	2020-02-11 18:22:21	2020-02-13 21:49:52
R2-2000179	Cat. M2/NB2 indication in UERadioPagingInformation	Qualcomm Incorporated	available	2020-02-11 22:36:51	2020-02-13 21:18:34
R2-2000180	Introduction of RLOS support indicator and RLOS request indicator	Qualcomm Incorporated	agreed	2020-02-11 22:58:25	2020-02-13 02:11:05
R2-2000181	Discussion on Tx-Side RLM Support	Apple	withdrawn	2020-02-11 23:04:57	
R2-2000182	Discussion on Zone Configurations in NR V2X	Apple	withdrawn	2020-02-11 23:04:57	
R2-2000183	Discussion on HARQ feedback for Sidelink	Apple	withdrawn	2020-02-11 23:04:57	
R2-2000184	Draft Reply LS on Sidelink HARQ Feedback for	Apple	withdrawn	2020-02-11 23:04:57	
R2-2000185	Discussion on TX resource pool selection	Apple	withdrawn	2020-02-11 23:04:57	
R2-2000186	Discussion on remaining issues on SL HARQ	Apple	withdrawn	2020-02-11 23:04:57	
R2-2000187	Clarification on RRCReconfiguration and RRCReconfigurationComplete in MR-DC	Apple	withdrawn	2020-02-11 23:04:57	
R2-2000188	Addition of broadcast of barometric pressure assistance data	Polaris Wireless, FirstNet,	revised	2020-02-11 23:08:45	2020-02-11 23:37:09
R2-2000189	Left issues on SLRB re-configuration due to state	OPPO	available	2020-02-12 00:58:22	2020-02-14 06:21:31
R2-2000190	Left issues on failure case handling for NR V2X	OPPO	available	2020-02-12 00:58:23	2020-02-14 06:21:31
R2-2000191	Left issues on RRC running CR	OPPO	available	2020-02-12 00:58:23	2020-02-14 06:21:31
R2-2000192	Left issues on RLC mode collision	OPPO	available	2020-02-12 00:58:23	2020-02-14 06:21:31
R2-2000193	Left issues on SL capability	OPPO	available	2020-02-12 00:58:23	2020-02-14 06:21:31
R2-2000194	Summary of [108#50][V2X] Feature List and UE caps	OPPO	noted	2020-02-12 00:58:23	2020-02-15 05:37:31
R2-2000195	Left issues on MAC running CR for NR-V2X	OPPO	available	2020-02-12 00:58:23	2020-02-14 06:21:31
R2-2000196	Left issues on HARQ for NR-V2X	OPPO	available	2020-02-12 00:58:23	2020-02-14 06:21:31
R2-2000197	Discussion on resource allocation mode for NR-V2X	OPPO	available	2020-02-12 00:58:23	2020-02-14 06:21:31
R2-2000198	Introduction of downgraded configurations for SRS antenna switching	OPPO	revised	2020-02-12 00:58:23	2020-02-14 06:21:47
R2-2000199	Open issues on system information	OPPO	available	2020-02-12 01:15:03	2020-02-14 05:54:38
R2-2000200	Open issues on prioritization	OPPO	available	2020-02-12 01:27:47	2020-02-14 05:54:38
R2-2000201	Discussion on PDCP open issues	OPPO	available	2020-02-12 01:29:59	2020-02-14 05:54:38
R2-2000202	Discussion on multiple configured grants	OPPO	available	2020-02-12 01:31:39	2020-02-14 05:54:38
R2-2000203	38.323 CR for NR V2X	CATT	revised	2020-02-12 01:37:55	2020-02-14 06:16:20

R2-2000204	Discussion on inter-RAT Cell Selection/Reselection	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000205	MAC open issues	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000206	Leftover Issue of SL SR	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000207	New Resource (Re-) Selection Triggers	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000208	Draft LS to RAN1 on New Resource (Re-) Selection	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000209	Remaining Issues on NR SL RLM/RLF Procedure	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000210	Draft LS to RAN1 on NR SL RLM/RLF Procedure	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000211	Leftover Issues on LCP	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000212	Remaining Issues on Multiple SL CGs	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000213	Draft LS to RAN1 on the maximum number of HARQ process used by one SL CG configuration	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000214	Summary of Email discussion [108#102][V2X] Remaining issues on PDCP	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000215	Draft LS to SA3 on NR V2X Security issues on	CATT	available	2020-02-12 01:37:55	2020-02-14 06:16:20
R2-2000216	Introducing autonomous gap in CGI reporting	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated,	revised	2020-02-12 02:59:02	2020-02-14 06:05:23
R2-2000217	CR to 38.306 on introducing autonomous gap in Rel-16	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated,	revised	2020-02-12 02:59:03	2020-02-14 06:05:23
R2-2000218	CR to 36.331 on introducing autonomous gap in Rel-16	ZTE Corporation, Sanechips,C	withdrawn	2020-02-12 02:59:04	
R2-2000219	CR to 36.306 on introducing autonomous gap in Rel-16	ZTE Corporation, Sanechips,C	withdrawn	2020-02-12 02:59:05	
R2-2000220	Handling PDCCH Order Initiated CFRA	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 06:25:32
R2-2000221	NDI Toggling Aspects	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 22:58:33
R2-2000222	Preamble Group Selection upon switching from 2 step CFRA to 2 step CBRA	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 06:25:32
R2-2000223	Preamble Group Selection upon switching from 2 step to 4 step RA	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 06:25:32
R2-2000224	PUSCH Resource Configuration for CFRA	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 06:25:32
R2-2000225	Handling Preambles not associated with PRUs	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 06:25:32
R2-2000226	Remaining issues of SCell BFR	Samsung Electronics	noted	2020-02-12 03:24:43	2020-02-13 06:26:20
R2-2000227	Summary of Email discussion 108#70 - BFR MAC CE	Samsung Electronics	noted	2020-02-12 03:24:43	2020-02-13 06:26:20
R2-2000228	Remaining Issues of On Demand SI Procedure in RRC Connected	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 06:27:38
R2-2000229	Remaining Issues of Sidelink CSI Reporting	Samsung Electronics	available	2020-02-12 03:24:43	2020-02-13 06:27:07
R2-2000230	SRB only connection enhancement for PDU session change	CATT,Huawei, HiSilicon	available	2020-02-12 03:33:44	2020-02-14 03:20:03
R2-2000231	SRB only connection ehancement option 1	CATT,Huawei, HiSilicon	available	2020-02-12 03:33:44	2020-02-14 03:20:03

R2-2000232	SRB only connection ehancement option 2	CATT	available	2020-02-12 03:33:44	2020-02-14 03:20:03
R2-2000233	Add Description of RACH Resouse Distribution	CATT	available	2020-02-12 03:33:44	2020-02-14 03:39:18
R2-2000234	[Draft] LS to RAN1 on cast type indication	CATT	available	2020-02-12 03:48:49	2020-02-14 06:16:20
R2-2000235	Running CR to 38.321 on Introduction of 5G V2X with NR Sidelink	LG Electronics	revised	2020-02-12 05:09:05	2020-02-14 03:16:31
R2-2000236	Running CR to 36.321 on Introduction of 5G V2X with NR Sidelink	LG Electronics	revised	2020-02-12 05:20:54	2020-02-14 03:16:31
R2-2000237	Report of [108#100][V2X]: Miscellaneous issues on MAC CR for 5G V2X with NR Sidelink	LG Electronics	noted	2020-02-12 05:25:55	2020-02-14 03:16:31
R2-2000238	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	agreed	2020-02-12 06:43:26	2020-02-14 05:11:44
R2-2000239	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	revised	2020-02-12 06:43:27	2020-02-14 05:11:56
R2-2000240	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	agreed	2020-02-12 06:43:29	2020-02-14 05:12:08
R2-2000241	Design of ProvideAssistantData for RAT-Dependent positioning methods	CATT	available	2020-02-12 06:43:30	2020-02-14 06:58:33
R2-2000242	Further Considerations on Broadcast Assistance	CATT	available	2020-02-12 06:43:30	2020-02-14 09:09:56
R2-2000243	UL SRS UE capabilities captured by RRC in TS	CATT	available	2020-02-12 06:43:30	2020-02-14 06:30:50
R2-2000244	CR to 36.331 on missing freqBandIndicator in NR redirection	Qualcomm Incorporated	available	2020-02-12 06:47:59	2020-02-14 02:51:28
R2-2000245	Corrections on maxMeasIdentitiesSCG-NR in MR-DC	ZTE Corporation, Sanechips,	revised	2020-02-12 08:27:08	2020-02-14 00:48:32
R2-2000246	Discussion on XDD-FRX differentiation in UE capability	ZTE Corporation,	available	2020-02-12 08:27:09	2020-02-14 00:48:32
R2-2000247	CR to 38.306 on XDD-FRX differentiation in UE capability	ZTE Corporation,	available	2020-02-12 08:27:09	2020-02-14 00:48:32
R2-2000248	CR to 38.331 on XDD-FRX differentiation in UE capability	ZTE Corporation,	available	2020-02-12 08:27:10	2020-02-14 00:48:32
R2-2000249	[108#55] Report of MCG SCell and SCG configuration with RRC Resume	ZTE Corporation	noted	2020-02-12 08:27:11	2020-02-14 00:48:32
R2-2000250	Remaining clarifications on PUR configuration	THALES	available	2020-02-12 08:32:33	2020-02-13 13:41:28
R2-2000251	Clarification to idle mode mobility for non-BL UEs	THALES	available	2020-02-12 08:36:03	2020-02-13 13:41:28
R2-2000252	Remaining issues for SSB measurement configuration	CATT	available	2020-02-12 08:45:13	2020-02-14 03:15:12
R2-2000253	Contributions summary on further impacts of DCP	CATT	reserved	2020-02-12 08:45:13	
R2-2000254	New issue on CSI reporting with DCP	CATT	available	2020-02-12 08:45:13	2020-02-14 03:06:19
R2-2000255	Reporting UE Assistance Info to NR SN	CATT	available	2020-02-12 08:45:13	2020-02-14 03:06:19
R2-2000256	Way forward on measurement relaxation with high priority frequencies	CATT	available	2020-02-12 08:45:13	2020-02-14 03:06:19
R2-2000257	NR V2X CBR left issues	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000258	Groupcast HARQ feedback related issue	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000259	Discussion on left MAC issues	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000260	Discussion on LTE-SL/NR-UL prioritization	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44

R2-2000261	UE behaviors upon PC5-RRC connection release and configuration failure	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000262	Discussion on the LS on Sidelink UE Information sent from RAN3	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000263	Consideration on sidelink RLM management	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000264	Consideration on NR V2X cross RAT support	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000265	Discussion on multi-mode co-existence	ZTE Corporation,	available	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000266	Report of open issues on V2X 38.304 and 36.304 running CR	ZTE Corporation,	noted	2020-02-12 08:51:56	2020-02-14 04:41:44
R2-2000267	(running)36.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporation,	revised	2020-02-12 09:01:05	2020-02-14 04:41:44
R2-2000268	(running)38.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporation,	revised	2020-02-12 09:06:42	2020-02-14 04:41:44
R2-2000269	(draft)Reply LS on Sidelink UE Information	ZTE Corporation,	available	2020-02-12 09:09:51	2020-02-14 04:41:44
R2-2000270	Design of DL HbH Flow Control Message	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000271	Discussion on BAP control PDU	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000272	Preemptive BSR Procedures and Format	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000273	Discussion on IAB BH RLF report mechanism in	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000274	Verification of BH RLF notification	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000275	[Draft] LS on BH RLF notification verification	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000276	RLF Notification Messages	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000277	Cell baring indication for IAB support	vivo	available	2020-02-12 10:11:49	2020-02-14 06:38:28
R2-2000278	Running CR to 37324 for 5G_V2X_NRSL	vivo	revised	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000279	MAC handling upon PC5 RRC release	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000280	Remaining issues for sidelink SRB	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000281	Mode switch for QoS guarantee in NR V2X	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000282	Resource pool (re-)selection based on HARQ	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000283	Left issues on CSI report	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000284	The UE behivour of deactivated sidelink BWP	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000285	HARQ feedback of SL transmission reporting on	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000286	MAC PDU handling for reserved/unkonwn LCID	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000287	Remaining issues on HARQ support for NR Sidelink	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000288	SL BSR triggered by retxBSR-Timer expiry	vivo	available	2020-02-12 10:11:49	2020-02-14 06:04:12
R2-2000289	Reduce overhead of RSTD measurement report	vivo	available	2020-02-12 10:11:49	2020-02-14 06:58:55
R2-2000290	Remaining issues on support of NR RAT-dependent positioning	vivo	available	2020-02-12 10:11:49	2020-02-14 06:58:55
R2-2000291	Inactive state measurement message sending for	vivo	withdrawn	2020-02-12 10:11:49	
R2-2000292	Running CR to 37.340 for CA_DC enhancements	vivo, Ericsson	revised	2020-02-12 10:11:49	2020-02-14 06:40:17
R2-2000293	Report of email discussion power control for NR-DC	vivo	revised	2020-02-12 10:11:49	2020-02-14 06:43:38
R2-2000294	LS on power control for NR-DC	RAN2	approved	2020-02-12 10:11:49	2020-02-14 06:40:17
R2-2000295	Priority for early measurement frequency	vivo	available	2020-02-12 10:11:49	2020-02-14 06:40:17
R2-2000296	Remaining issue of SCell dormancy	vivo	noted	2020-02-12 10:11:49	2020-02-14 06:40:17
R2-2000297	Some remaining issues on SCG resume	vivo	noted	2020-02-12 10:11:49	2020-02-14 06:40:17
R2-2000298	Granularity of early measurement and reporting	vivo	noted	2020-02-12 10:11:49	2020-02-14 06:40:17
R2-2000299	Running CR to 38.306 for NR_SON_MDT	vivo, CMCC	endorsed	2020-02-12 10:11:49	2020-02-14 06:13:27
R2-2000300	Remaining issues on MDT	vivo	available	2020-02-12 10:11:50	2020-02-14 06:13:27
R2-2000301	Fast recovery failure indication	vivo	noted	2020-02-12 10:20:56	2020-02-14 06:40:17
R2-2000302	Introduction of a second SMTC per frequency carrier in idle/inactive	Orange, AT&T, Vodafone, Telecom Italia S.p.A.,	agreed	2020-02-12 10:24:04	2020-02-12 15:06:34
R2-2000303	Introduction of a second SMTC for inter-RAT cell reselection	Orange, AT&T, Vodafone, Telecom Italia S.p.A.,	agreed	2020-02-12 10:27:15	2020-02-12 15:06:34

R2-2000304	Introduction of additional enhancements for NB-IoT	Qualcomm Incorporated	agreed	2020-02-12 10:34:59	2020-02-13 21:36:34
R2-2000305	Introduction of additional enhancements for eMTC	Qualcomm Incorporated	agreed	2020-02-12 10:34:59	2020-02-13 21:36:34
R2-2000306	Report of Email Discussion 108#94 Finalise the WUS signalling	Qualcomm Incorporated	available	2020-02-12 10:34:59	2020-02-13 21:36:34
R2-2000307	Text proposal for WUS description in TS 36.304	Qualcomm Incorporated	available	2020-02-12 10:34:59	2020-02-13 21:36:34
R2-2000308	Summary of WUS contributions to RAN2#109e.	Qualcomm Incorporated	available	2020-02-12 10:34:59	2020-02-20 12:37:55
R2-2000309	Report of Email Discussion 108#72 To finalize the 2 bit Quality report	Qualcomm Incorporated	available	2020-02-12 10:34:59	2020-02-13 21:36:34
R2-2000310	Text proposal for 2-bit downlink channel quality reporting in MSG3 for eMTC	Qualcomm Incorporated	available	2020-02-12 10:34:59	2020-02-13 21:36:34
R2-2000311	Text proposal for 36.306 to align Cat M definition with LTE-M indicator	Qualcomm Incorporated	available	2020-02-12 10:34:59	2020-02-13 21:36:34
R2-2000312	Configurations for RRM Measurement Relaxation in	MediaTek	available	2020-02-12 10:56:03	2020-02-14 07:29:34
R2-2000313	Security Key Handling for DAPS Handover	MediaTek	available	2020-02-12 10:57:11	2020-02-14 07:29:34
R2-2000314	Email report [108#56][DCCA] Scell Dormancy Open Issues	OPPO	noted	2020-02-12 11:39:34	2020-02-14 04:19:12
R2-2000315	Text Proposal of dormant BWP introduction-38300	OPPO	available	2020-02-12 11:39:34	2020-02-14 04:19:12
R2-2000316	text proposal of dormant BWP introduction-38331	OPPO	available	2020-02-12 11:39:34	2020-02-14 04:19:12
R2-2000317	text proposal of SCell Group configuration for dormancy indication-38331-Alt 1	OPPO	available	2020-02-12 11:39:34	2020-02-14 04:19:12
R2-2000318	text proposal of SCell Group configuration for dormancy indication-38331-Alt2	OPPO	available	2020-02-12 11:39:35	2020-02-14 04:19:12
R2-2000319	Draft LS on dormant BWP configuration and related operation	OPPO	revised	2020-02-12 11:39:35	2020-02-14 04:19:12
R2-2000320	38321CR introductin of dormant BWP	OPPO	revised	2020-02-12 11:39:35	2020-02-14 04:19:12
R2-2000321	Fast Scell activation in sTAG	OPPO	noted	2020-02-12 11:39:36	2020-02-14 04:27:03
R2-2000322	Open issues for early measurement	OPPO	available	2020-02-12 11:39:36	2020-02-14 06:55:53
R2-2000323	Draft LS on early measurement configuration during 2 step resume procedure without UE context	OPPO	available	2020-02-12 11:39:36	2020-02-14 04:27:03
R2-2000324	additional SSB-ToMeasure for smtc2-LP	OPPO, ZTE	available	2020-02-12 11:39:36	2020-02-14 06:55:53
R2-2000325	Introduction of SRVCC from 5G to 3G	Ericsson, ZTE	revised	2020-02-12 13:36:35	2020-02-13 20:02:19
R2-2000326	Running CR for introduction of SRVCC from 5G to 3G	Ericsson	withdrawn	2020-02-12 13:40:30	
R2-2000327	Reporting of Sensing Result for Mode 1 UEs	Fraunhofer HHI, Fraunhofer IIS, Lenovo,	available	2020-02-12 13:56:19	2020-02-13 17:25:42
R2-2000328	Open HARQ Issues	Fraunhofer HHI,	available	2020-02-12 14:00:49	2020-02-13 17:25:57
R2-2000329	Major CHO issues discussed in [108#66][NR Mob]	Ericsson	noted	2020-02-12 14:02:16	2020-02-13 20:02:19
R2-2000330	Major CHO issues not discussed in [108#66][NR	Ericsson	noted	2020-02-12 14:02:16	2020-02-13 20:02:19
R2-2000331	CHO and re-establishment procedure	Ericsson	available	2020-02-12 14:02:16	2020-02-13 20:02:19
R2-2000332	Other aspects of CHO	Ericsson	available	2020-02-12 14:02:16	2020-02-13 20:02:19
R2-2000333	Remaining open issues for conditional PSCell	Ericsson	available	2020-02-12 14:02:16	2020-02-13 20:02:19
R2-2000334	Running CR for Introduction of Even futher Mobility enhancement in E-UTRAN	Ericsson	withdrawn	2020-02-12 14:02:16	
R2-2000335	Introduction of SRVCC from 5G to 3G	Ericsson	revised	2020-02-12 14:02:16	2020-02-13 20:02:20
R2-2000336	Remaining issues on Paging	Ericsson	available	2020-02-12 14:02:19	2020-02-13 20:02:20
R2-2000337	RRM in NR-U	Ericsson	available	2020-02-12 14:02:19	2020-02-13 20:02:20

R2-2000338	Signaling of Q in NR-U	Ericsson	available	2020-02-12 14:02:19	2020-02-13 20:02:20
R2-2000339	Correction for relaxed monitoring for BL and CE UE	Ericsson	revised	2020-02-12 14:20:41	2020-02-14 07:42:00
R2-2000340	Correction for Pcompensation for PC1 in FR2	Ericsson, NTT	withdrawn	2020-02-12 14:20:42	
R2-2000341	Poll request in RRC signalling from NW to UE	Ericsson	noted	2020-02-12 14:20:43	2020-02-14 07:42:00
R2-2000342	Clarification of successful acknowledgement of RRCRelease message	Ericsson	available	2020-02-12 14:20:43	2020-02-14 07:42:00
R2-2000343	ETWS and CMAS acquisition during measurement	Ericsson	noted	2020-02-12 14:20:44	2020-02-14 07:42:00
R2-2000344	Clarification for SIB6, SIB7 and SIB6 acquisition during measurement gaps	Ericsson	available	2020-02-12 14:20:44	2020-02-14 07:42:00
R2-2000345	Introduction of secondary DRX group	Ericsson, Qualcomm, Samsung,	available	2020-02-12 14:20:45	2020-02-14 07:42:00
R2-2000346	Introduction of secondary DRX group CR 38.306	Ericsson, Qualcomm, Samsung,	available	2020-02-12 14:20:45	2020-02-14 07:42:00
R2-2000347	Introduction of secondary DRX group CR 38.321	Ericsson, Qualcomm, Samsung,	available	2020-02-12 14:20:46	2020-02-14 07:42:00
R2-2000348	Introduction of secondary DRX group CR 38.331	Ericsson, Qualcomm, Samsung,	available	2020-02-12 14:20:47	2020-02-14 07:42:00
R2-2000349	Open issues DCP	Ericsson	available	2020-02-12 14:20:49	2020-02-14 07:42:00
R2-2000350	Open issues for UE assistance	Ericsson	available	2020-02-12 14:20:49	2020-02-14 07:42:00
R2-2000351	Open issues for MR-DC scenarios	Ericsson	available	2020-02-12 14:20:49	2020-02-14 07:42:00
R2-2000352	Open issues RRM measurement relaxation	Ericsson	available	2020-02-12 14:20:49	2020-02-14 07:42:00
R2-2000353	Clarification on the PLMN-IdentityInfoList	ZTE Corporation,	revised	2020-02-12 15:07:02	2020-02-14 01:17:07
R2-2000354	Introduction of UECapabilityInformation segmentation in TS38.331	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd, MediaTek	revised	2020-02-12 15:07:03	2020-02-14 01:25:46
R2-2000355	UE radio capability ID in inter-node RRC messages	ZTE Corporation,	noted	2020-02-12 15:07:04	2020-02-14 01:17:07
R2-2000356	Introduction of UE radio capability ID in inter-node RRC messages	ZTE Corporation,	noted	2020-02-12 15:07:04	2020-02-14 01:25:46
R2-2000357	Remaining issues on the cell reselection	ZTE Corporation,	noted	2020-02-12 15:07:04	2020-02-14 03:04:33
R2-2000358	Consideration on the remaining Connected State Issues	ZTE Corporation,	noted	2020-02-12 15:07:04	2020-02-14 03:04:33
R2-2000359	Cell re-selection during RRC connection resume	vivo	merged	2020-02-12 15:51:43	2020-02-14 07:01:26
R2-2000360	Correction on beamSwitchTiming values of 224 and	vivo,	revised	2020-02-12 15:51:44	2020-02-14 07:01:26
R2-2000361	Correction on beamSwitchTiming values of 224 and	vivo	withdrawn	2020-02-12 15:51:45	
R2-2000362	Introduction of NR IDC solution	vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO	revised	2020-02-12 15:51:46	2020-02-14 07:01:26

R2-2000363	UE capability for IDC	vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO	agreed	2020-02-12 15:51:47	2020-02-14 07:01:26
R2-2000364	Running 38.304 CR on UE Power saving in NR	vivo	revised	2020-02-12 15:51:48	2020-02-14 07:01:26
R2-2000365	Report of EmailDisc-79 on open issues for RRM measurement relaxation	vivo (rapporteur)	revised	2020-02-12 15:51:49	2020-02-14 07:01:26
R2-2000366	Draft LS to RAN4 on RRM measurement relaxation in power saving	vivo	available	2020-02-12 15:51:49	2020-02-14 07:01:26
R2-2000367	PDCCH-WUS not applicable for short DRX cycle	vivo	available	2020-02-12 15:51:49	2020-02-14 07:01:26
R2-2000368	WUS impact on CSI reporting	vivo	available	2020-02-12 15:51:49	2020-02-14 07:01:26
R2-2000369	UE assistance information for power saving	vivo	available	2020-02-12 15:51:49	2020-02-14 07:01:26
R2-2000370	UE Power Consumption Reduction in RRM	vivo	available	2020-02-12 15:51:49	2020-02-14 07:01:26
R2-2000371	Running 36.321 CR for LTE feMob	vivo (rapporteur)	revised	2020-02-12 15:51:49	2020-02-14 07:01:26
R2-2000372	Running 38.321 CR for NR mobility enh.	vivo (rapporteur)	revised	2020-02-12 15:51:50	2020-02-14 07:01:26
R2-2000373	Report of EmailDisc-65 on MAC open issues for mobility enh.	vivo (rapporteur)	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000374	RRC remaining issues for conditional handover configuration	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000375	Discussion on CHO release	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000376	Discussion on the CHO during failure handling	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000377	Discussion on simultaneous connectivity in CHO	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000378	Release of the source ROHC upon the source link	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000379	PDCP status report for RLC UM	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000380	Failure handling of the non-DAPS DRB	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000381	Clarification on stopping the source link failure	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000382	Single or two RRC messages for DAPS handover	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000383	Header compression after PDCP reordering	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000384	Issue on the uplink duplicated PDCP SDUs	vivo	available	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000385	MAC CEs regarding multiple CCs/BWPs	vivo	noted	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000386	SR cancellation due to the truncated BFR MAC CE	vivo	noted	2020-02-12 15:51:51	2020-02-14 07:01:26
R2-2000387	RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC	Document Rapporteur	revised	2020-02-12 16:11:23	2020-02-12 16:38:11
R2-2000388	Preamble group selection and 2-step failure reporting	Ericsson	available	2020-02-12 16:13:48	2020-02-13 19:59:14
R2-2000389	Combined Back-off and 4-step switch	Ericsson	available	2020-02-12 16:13:49	2020-02-13 19:59:14
R2-2000390	BSR over 2-step RA	Ericsson	available	2020-02-12 16:13:49	2020-02-13 19:59:14
R2-2000391	Use of 2-step resources on different BWPs	Ericsson	available	2020-02-12 16:13:49	2020-02-13 19:59:14
R2-2000392	Beam specific 2-step RA support	Ericsson	available	2020-02-12 16:13:49	2020-02-13 19:59:14
R2-2000393	MsgA transmission for NR-U	Ericsson	available	2020-02-12 16:13:49	2020-02-13 19:59:14
R2-2000394	Introduction of Rel-16 additional enhancements NB-IoT: running 36.306 CR	BlackBerry UK Limited	withdrawn	2020-02-12 16:25:46	2020-02-12 16:42:33
R2-2000395	HARQ RTT Timers in Rel-16 NB-IoT	BlackBerry UK Limited	available	2020-02-12 16:30:46	2020-02-12 16:48:04
R2-2000396	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet,	revised	2020-02-12 16:33:55	2020-02-13 21:28:55
R2-2000397	Support of MT-EDT CIoT EPS optimisation (for CP and UP)	BlackBerry UK Limited	available	2020-02-12 16:34:51	2020-02-12 16:51:58

R2-2000398	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet, Polaris Wireless	withdrawn	2020-02-12 16:35:22	
R2-2000399	Support for Non-Public Networks	Nokia	withdrawn	2020-02-12 17:10:53	
R2-2000400	Proposals on Editor's Notes of running RRC CR	Nokia, Nokia Shanghai	noted	2020-02-12 17:10:53	2020-02-13 19:21:51
R2-2000401	Proposals on open RRC issues	Nokia, Nokia Shanghai	noted	2020-02-12 17:10:53	2020-02-13 19:21:51
R2-2000402	Handling of selected CAG ID in Idle/Inactive mode	Nokia, Nokia Shanghai	noted	2020-02-12 17:10:53	2020-02-14 06:52:17
R2-2000403	Handling of SIB1 decoding error	Nokia, Nokia Shanghai	available	2020-02-12 17:10:53	2020-02-14 06:52:17
R2-2000404	Including RSSI and Channel Occupancy in NR-U UE Capabilities	Mediatek Inc.	available	2020-02-12 17:18:35	2020-02-13 22:57:25
R2-2000405	On RLM and RLF Issues in NR-U	Mediatek Inc.	available	2020-02-12 17:22:19	2020-02-13 22:57:46
R2-2000406	Cell restriction for CA duplication	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000407	Further considerations on secondary DRX group	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000408	Issues on preamble group selection for 2-step RACH	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000409	Measurement gap impacts on MSGA transmission	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000410	Remaining issues on configuration of 2-step CFRA	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000411	Running CR to 37.340 for power saving	OPPO	revised	2020-02-12 17:35:26	2020-02-14 05:20:07
R2-2000412	Remaining issues on DCP	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000413	Impacts of power saivng signalling on CSI reporting	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000414	Running CR to 37.340 for NR-U	OPPO	revised	2020-02-12 17:35:26	2020-02-14 05:20:07
R2-2000415	Remaining issues on consistent uplink LBT failure for	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000416	2-step RACH for NR-U	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000417	Remaining issues on NR-U configured grant	OPPO	available	2020-02-12 17:35:26	2020-02-17 13:57:59
R2-2000418	Stopping criteria for paging monitoring	OPPO	available	2020-02-12 17:35:26	2020-02-14 04:10:37
R2-2000419	PC5-RRC connection scope and identification of	MediaTek	available	2020-02-12 19:48:24	2020-02-14 06:00:06
R2-2000420	DRAFT LS on Layer 2 IDs and PC5 unicast link	MediaTek	available	2020-02-12 19:50:19	2020-02-14 06:00:06
R2-2000421	Introduction of RACS and DL RRC segmentation	MediaTek Inc.	revised	2020-02-12 19:53:01	2020-02-14 06:00:06
R2-2000422	Introduction of RACS and DL RRC segmentation	MediaTek Inc.	revised	2020-02-12 19:55:00	2020-02-14 06:00:07
R2-2000423	Introduction of UECapabilityInformation segmentation in 36.331	MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation,	revised	2020-02-12 19:57:42	2020-02-14 06:00:07
R2-2000424	Work plan for RACS-RAN work item	MediaTek	noted	2020-02-12 19:59:32	2020-02-14 06:00:07
R2-2000425	Correction on removal of NR-DC and NE-DC band combinations when capabilityRequestFilterCommon	MediaTek Inc.	revised	2020-02-12 20:02:19	2020-02-14 06:00:07
R2-2000426	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet, Polaris Wireless	revised	2020-02-12 20:05:37	2020-02-13 21:28:55
R2-2000427	Discussion on propagation delay compensation	Huawei,	available	2020-02-12 21:02:11	2020-02-14 00:31:00
R2-2000428	Remaining issues of reference time delivery	Huawei,	available	2020-02-12 21:02:11	2020-02-14 00:31:00
R2-2000429	Configured grant configurations for SUL serving cell	Huawei,	available	2020-02-12 21:02:11	2020-02-14 00:31:00
R2-2000430	Discussion on the new CG type 2 confirmation MAC	Huawei,	available	2020-02-12 21:02:11	2020-02-14 00:31:00
R2-2000431	Method to avoid confusion between UE and network for CG type 1	Huawei, HiSilicon	available	2020-02-12 21:02:11	2020-02-14 00:31:00
R2-2000432	Further discussion on EHC related issues	Huawei,	available	2020-02-12 21:02:11	2020-02-14 00:31:00
R2-2000433	Introduction of Rel-16 eMTC enhancements	Qualcomm Incorporated	revised	2020-02-12 21:29:24	2020-02-14 07:05:16

R2-2000434	LS on CGI reading with autonomous gaps (R4-1914782; contact: ZTE)	RAN4	noted	2020-02-12 21:50:53	2020-02-12 22:05:47
R2-2000435	T300 applicability for PUR	Qualcomm Incorporated	available	2020-02-12 21:51:45	2020-02-13 21:20:08
R2-2000436	Introduction of LTE-based 5G terrestrial broadcast	Qualcomm Incorporated	revised	2020-02-12 21:51:45	2020-02-14 00:35:52
R2-2000437	Introduction of LTE-based 5G terrestrial broadcast	Qualcomm Incorporated	revised	2020-02-12 21:51:46	2020-02-14 00:35:52
R2-2000438	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	available	2020-02-12 21:51:48	2020-02-14 00:07:32
R2-2000439	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	revised	2020-02-12 21:51:48	2020-02-14 00:07:32
R2-2000440	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	revised	2020-02-12 21:51:49	2020-02-14 00:07:32
R2-2000441	Introduction of Cross Link Interference (CLI) handling and Remote Interference Management (RIM)	Qualcomm Incorporated	agreed	2020-02-12 21:51:50	2020-02-13 21:44:03
R2-2000442	UE Capabilities for Measurements in NR-U	Mediatek Inc.	available	2020-02-12 22:04:36	2020-02-14 05:00:43
R2-2000443	TA validation based on serving cell RSRP change (related to RAN4 LSes)	Sierra Wireless,	available	2020-02-12 22:31:25	2020-02-14 04:31:24
R2-2000444	On CHO execution triggering with two joint events	Futurewei	available	2020-02-12 22:40:39	2020-02-14 03:24:07
R2-2000445	Resource limitation on number of CHO candidates	Futurewei	available	2020-02-12 22:40:39	2020-02-14 03:24:07
R2-2000446	Failure and validation handling on intra-SN CPC	Futurewei	available	2020-02-12 22:40:39	2020-02-14 03:24:07
R2-2000447	Fast Pcell RLF recovery during intra-SN CPC	Futurewei	available	2020-02-12 22:40:39	2020-02-14 03:24:07
R2-2000448	Discussion on Scell domancy	Futurewei	noted	2020-02-12 22:40:39	2020-02-14 03:24:07
R2-2000449	Remaining issues on UL LBT failures handling	Intel	available	2020-02-12 22:56:57	2020-02-14 05:25:15
R2-2000450	Open issues of DCP feature	Intel Corporation	available	2020-02-12 22:56:58	2020-02-14 05:25:15
R2-2000451	Open issues of new UE assistance information for	Intel	available	2020-02-12 22:56:58	2020-02-14 05:25:15
R2-2000452	UE capabilities for Rel-16 UE power saving WI	Intel	available	2020-02-12 22:56:58	2020-02-14 05:25:15
R2-2000453	UE capabilities for Rel-16 UE power saving WI	Intel	available	2020-02-12 22:56:58	2020-02-14 05:25:15
R2-2000454	Remaining aspects for SL HARQ operation	Intel	available	2020-02-12 22:56:59	2020-02-14 05:25:15
R2-2000455	Open aspects on SL Configured Grant design	Intel	available	2020-02-12 22:56:59	2020-02-14 05:25:15
R2-2000456	Open aspects on mode 2 operation	Intel	available	2020-02-12 22:56:59	2020-02-14 05:25:15
R2-2000457	Open issues on mode 2 resource selection	Intel	available	2020-02-12 22:56:59	2020-02-14 05:25:15
R2-2000458	Cross-RAT scheduling for NR V2X SL	Intel	available	2020-02-12 22:56:59	2020-02-14 05:25:15
R2-2000459	UE feature list for LTE and NR mobility	Intel Corporation	noted	2020-02-12 22:56:59	2020-02-14 05:25:15
R2-2000460	Running CR for the introduction of NR mobility enhancement	Intel Corporation	revised	2020-02-12 22:56:59	2020-02-14 05:25:15
R2-2000461	Report of [108#66][LTE NR Mob] Open issues for LTE and NR mobility	Intel Corporation	available	2020-02-12 22:57:00	2020-02-14 05:25:15
R2-2000462	RRC running CR for introduction of NR mobility enhancement [108#34]	Intel Corporation	withdrawn	2020-02-12 22:57:00	
R2-2000463	RRC running CR for introduction of NR mobility enhancement [108#66 P2]	Intel Corporation	noted	2020-02-12 22:57:00	2020-02-14 05:25:15
R2-2000464	Remaining issues on PDCP status report for CHO	Intel Corporation	withdrawn	2020-02-12 22:57:00	
R2-2000465	Remaining issues on PDCP status report for DAPS	Intel Corporation	available	2020-02-12 22:57:00	2020-02-14 05:25:15
R2-2000466	Open issues in RRC CR on NR mobility	Intel	noted	2020-02-12 22:57:00	2020-02-14 05:25:15
R2-2000467	Remaining issues on RLM after RACH for DAPS	Intel Corporation	available	2020-02-12 22:57:00	2020-02-14 05:25:15
R2-2000468	"And" events for CHO	Intel Corporation	available	2020-02-12 22:57:00	2020-02-14 06:23:12
R2-2000469	Parent selection at IAB nodes during Initial Setup	Intel	available	2020-02-12 23:03:48	2020-02-14 06:26:09
R2-2000470	Multi-route support in IAB	Intel	available	2020-02-12 23:03:48	2020-02-14 06:26:09
R2-2000471	Uplink latency reduction	Intel	available	2020-02-12 23:03:48	2020-02-14 06:26:10
R2-2000472	Further discussion on Backhaul RLF handling	Intel	available	2020-02-12 23:03:48	2020-02-14 06:26:10
R2-2000473	Running stage 2 CR on NR positioning ([108#84][NR Pos])	Intel Corporation,	revised	2020-02-12 23:03:48	2020-02-14 06:26:10

R2-2000474	LPP CR Capturing RAN1 parameters for positioning ([108#85][NR Pos])	Intel Corporation	revised	2020-02-12 23:03:50	2020-02-14 06:26:10
R2-2000475	UE capability on positioning ([108#85][NR Pos])	Intel	available	2020-02-12 23:03:50	2020-02-14 06:26:09
R2-2000476	Open issues in LPP CR	Intel	available	2020-02-12 23:03:50	2020-02-14 06:26:09
R2-2000477	Remaining issues in Ethernet header compression	Intel	available	2020-02-12 23:03:50	2020-02-14 06:26:09
R2-2000478	Remaining open issues on on-demand request in Connected mode	Intel	available	2020-02-12 23:03:50	2020-02-14 06:26:09
R2-2000479	Parent selection at IAB nodes during Initial Setup (Text proposal)	Intel Corporation	available	2020-02-12 23:03:50	2020-02-14 06:26:09
R2-2000480	IAB workplan update	Qualcomm Incorporated	available	2020-02-12 23:30:38	2020-02-13 22:22:42
R2-2000481	Email discussion [108#51][IAB]: BAP functional view	Qualcomm Incorporated	noted	2020-02-12 23:30:38	2020-02-13 22:22:42
R2-2000482	(TP for NR_IAB BL CR to TS 38.331) IP address configuration	Qualcomm Incorporated	available	2020-02-12 23:30:38	2020-02-13 22:22:42
R2-2000483	(TP for NR_IAB BL CR to TS 38.321) MAC CE for guard symbols	Qualcomm Incorporated,	available	2020-02-12 23:30:38	2020-02-13 22:22:42
R2-2000484	IAB access barring	Qualcomm Incorporated	available	2020-02-12 23:30:38	2020-02-13 22:22:42
R2-2000485	Summary on deprioritized transmissions	CATT	noted	2020-02-12 23:39:54	2020-02-21 11:38:00
R2-2000486	Avoiding unnecessary preemption among eMBB traffic	CATT	available	2020-02-12 23:39:54	2020-02-14 02:49:01
R2-2000487	Introduction of extended capabilities for NE-DC only BCs	ZTE Corporation,	noted	2020-02-13 00:36:20	2020-02-14 00:48:32
R2-2000488	CR on introduction of extended capabilities for NE-DC only BCs	ZTE Corporation,	revised	2020-02-13 00:36:20	2020-02-14 00:48:32
R2-2000489	UE report of the TSC interest	vivo	available	2020-02-13 00:41:30	2020-02-14 06:48:34
R2-2000490	Discussion on propagation delay compensation in rel-	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000491	Discussion on provisioning of timing information for	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000492	TP on 38.331 of provisioning of timing information for	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000493	TP on 36.331 of provisioning of timing information for	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000494	Remaining issues for EHC	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000495	Discussion on the MAC PDU recovery procedure	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000496	Intra-UE Prioritization with CA	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000497	Remaining issues for SR and PUSCH collision	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000498	Reusing legacy MAC CE for multi-leg PDCP	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000499	Discussion on LCID restriction	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000500	On-demand SI support for EN-DC SCG	vivo	available	2020-02-13 00:41:34	2020-02-14 06:48:34
R2-2000501	Addressing Editor's Notes in 36.302 running CR for eMTC	ZTE Corporation,	available	2020-02-13 00:56:59	2020-02-14 08:08:21
R2-2000502	Further consideration on routing configuration	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000503	Further consideration on bearer mapping	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000504	Consideration on flow control control PDU	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000505	Discussion on the pre-emptive BSR format	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000506	Discussion on remaining issues on Timing Delta	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000507	TP for Timing Delta MAC CE	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000508	Draft LS on Timing Delta signaling	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000509	Discussion on IAB BH RLF handling	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000510	Discussion on BAP control PDU of RLF indication	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000511	Discussion on the RRC signalling for IP address	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:56:05
R2-2000512	Consideration on IAB node access control	ZTE,	available	2020-02-13 00:58:25	2020-02-14 06:50:32
R2-2000513	Discussion on non-periodic SRS resource for	ZTE	available	2020-02-13 01:06:56	2020-02-14 04:03:31
R2-2000514	Remaining issue of pre-emptive BSR in IAB	Kyocera	available	2020-02-13 01:08:40	2020-02-14 01:00:35
R2-2000515	CE Mode Threshold Adjustments for non-BL and BL UE	NTT DOCOMO INC.	noted	2020-02-13 01:10:11	2020-02-14 05:30:47
R2-2000516	Possible issues on Backhaul RLF handling	Kyocera	available	2020-02-13 01:10:56	2020-02-14 01:00:35
R2-2000517	Remaining FFSs for connection to 5GC	ZTE Corporation,	available	2020-02-13 01:12:29	2020-02-14 08:08:45
R2-2000518	Remaining issues for routing	Huawei,	available	2020-02-13 01:13:20	2020-02-14 03:13:07
R2-2000519	Remaining issues for bearer mapping	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000520	Remaining issues of the pre-emptive BSR	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000521	Leftover issues to support the IAB RACH procedure	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000522	Backhaul RLF Recovery	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07

R2-2000523	Leftover issue for cell barring	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000524	Correction of TS 38.304 to introduce IAB	Huawei,	revised	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000525	Correction of TS 36.304 to introduce IAB	Huawei,	revised	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000526	Correction of TS 37.340 on the support of MR-DC for	Huawei,	revised	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000527	Remaining issue for the Timing Delta MAC CE	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000528	TP for Guard Symbols MAC CEs	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000529	The impacts of IP address management of IAB node	Huawei,	available	2020-02-13 01:13:22	2020-02-14 03:13:07
R2-2000530	PC5 L2/L3 protocols for unicast and groupcast	Kyocera	available	2020-02-13 01:16:30	2020-02-14 01:00:35
R2-2000531	Corrections on bwp-WithoutRestriction	OPPO	available	2020-02-13 01:16:56	2020-02-14 04:27:03
R2-2000532	Remaining issues of UL/SL prioritization	MediaTek	available	2020-02-13 01:21:26	2020-02-14 06:59:51
R2-2000533	LCID extension for Rel-16	Samsung	noted	2020-02-13 01:22:43	2020-02-14 01:50:19
R2-2000534	LBT failure handling considering SUL aspect	Samsung	available	2020-02-13 01:22:43	2020-02-14 01:50:19
R2-2000535	Applicability of NR-U features to licensed carrier	Samsung	available	2020-02-13 01:22:43	2020-02-14 01:50:20
R2-2000536	Early UE capability retrieval enhancements for eMTC/5GC	Qualcomm India Pvt Ltd	noted	2020-02-13 01:24:15	2020-02-13 23:36:37
R2-2000537	UE capability co-ordination signalling aspects for DAPS HO	Qualcomm Inc, Google Inc, Apple Inc,	available	2020-02-13 01:31:20	2020-02-13 23:36:37
R2-2000538	Page monitoring in RRC_INACTIVE state with short eDRX	Qualcomm India Pvt Ltd	available	2020-02-13 01:35:20	2020-02-13 23:36:37
R2-2000539	UAC information change indication for eMTC UE connected to 5GC	Qualcomm Incorporated	available	2020-02-13 01:37:39	2020-02-13 23:36:37
R2-2000540	Email discussion report [108#97] for how to minimize ping-pong between CN types in	Qualcomm India Pvt Ltd	postponed	2020-02-13 01:55:04	2020-02-13 23:36:37
R2-2000541	Discussion on RRC reestablishment initiated by failure of MCG failure recovery	sharp	noted	2020-02-13 02:07:48	2020-02-17 11:25:22
R2-2000542	Introduction of SRVCC from 5G to 3G	Huawei, HiSilicon, China	revised	2020-02-13 02:17:54	2020-02-14 02:55:13
R2-2000543	Report on email discussion on [108#99][V2X] HARQ based TX side RLM/RLF	InterDigital	revised	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000544	Draft CR to 38.321 for HARQ-Based RLF at TX UE	InterDigital	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000545	Draft CR to 38.331 for HARQ-Based RLF at TX UE	Interdigital	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000546	HARQ Buffer Management at the RX UE	InterDigital, Lenovo,	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000547	Remaining Aspects of CSI Reporting	InterDigital	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000548	Remaining Asoects of Sidelink HARQ Feedback for	InterDigital	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000549	Details of Flexible BSR Prioritization	InterDigital,	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000550	Remaining Aspects of HARQ for NR V2X	InterDigital	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000551	Draft 36.331 CR for Handling SCG Configuration in Resume	InterDigital, Ericsson,	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000552	Draft 38.331 CR for Handling SCG Configuration in Resume	InterDigital, Ericsson,	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000553	Handling the SCG Configuration in RRC Resume	InterDigital, Ericsson,	noted	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000554	Remaining Issues and TP on Simultaneous CHO and CPC Configurations	InterDigital	available	2020-02-13 02:34:00	2020-02-14 01:04:50
R2-2000555	Remaining Issues of UE-CLI Reporting	Nokia, Nokia Shanghai	noted	2020-02-13 03:11:43	2020-02-14 06:37:53
R2-2000556	UE-CLI Measurements for EN-DC	Nokia, Nokia Shanghai	noted	2020-02-13 03:11:43	2020-02-14 06:37:53
R2-2000557	Draft LS to RAN3 on UE-CLI measurements for EN-DC	Nokia, Nokia Shanghai	noted	2020-02-13 03:11:43	2020-02-14 04:30:35
R2-2000558	Rapporteur Summary :Discussion on cell selection for non-BL UE	Nokia, Nokia Shanghai	available	2020-02-13 03:11:43	2020-02-14 04:30:35
R2-2000559	Security Aspects of D-PUR for control plane solution	Nokia, Nokia Shanghai	available	2020-02-13 03:11:43	2020-02-14 04:30:35
R2-2000560	Failure Recovery for Conditional Pscell change	Nokia, Nokia Shanghai	available	2020-02-13 03:11:43	2020-02-14 04:30:35
R2-2000561	Flow control open issues in IAB	NEC	available	2020-02-13 03:16:48	2020-02-13 03:18:23
R2-2000562	Miscellaneous MAC issues for 5G V2X with NR Sidelink	Spreadtrum Communicat	available	2020-02-13 03:35:25	2020-02-14 01:00:52
R2-2000563	LBT Failures Handling in Non-Connected State	Spreadtrum Communicat	available	2020-02-13 03:35:25	2020-02-14 01:00:52

R2-2000564	Consideration on collision of measurement gap and TSN traffic	Spreadtrum Communicat	available	2020-02-13 03:35:25	2020-02-14 01:00:52
R2-2000565	Discussion on configured selective PDCP duplication mechanism	Spreadtrum Communicat	available	2020-02-13 03:35:25	2020-02-14 01:00:52
R2-2000566	Security and RRC Resume Request	Nokia	revised	2020-02-13 03:38:30	2020-02-14 05:26:01
R2-2000567	Security and RRC Resume Request	Nokia	revised	2020-02-13 03:38:33	2020-02-14 05:26:01
R2-2000568	NPN Work Plan	Nokia	noted	2020-02-13 03:38:34	2020-02-14 05:26:01
R2-2000569	Non-Public Networks	Nokia, China Telecom	revised	2020-02-13 03:38:34	2020-02-14 05:26:01
R2-2000570	Emergency Calls in CAG-Only Cells	Nokia (Rapporteur), China Telecom, Ericsson,	available	2020-02-13 03:38:34	2020-02-14 05:26:01
R2-2000571	Notification for Alternative QoS profiles	Nokia, Nokia Shanghai	noted	2020-02-13 03:38:34	2020-02-14 05:26:01
R2-2000572	Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point	Nokia	available	2020-02-13 03:38:34	2020-02-14 05:26:01
R2-2000573	Temporary Boost	Nokia, Nokia Shanghai	available	2020-02-13 03:38:34	2020-02-14 12:07:07
R2-2000574	LS on Temporary Boost	Nokia	available	2020-02-13 03:38:34	2020-02-14 12:07:07
R2-2000575	Introduction of NR IDC Solution	Nokia, CATT, Ericsson, Huawei, InterDigital, NEC, NTT	agreed	2020-02-13 03:38:34	2020-02-14 05:26:01
R2-2000576	LCP Mapping Restrictions	Nokia, Ericsson, Fujitsu,	available	2020-02-13 03:38:35	2020-02-14 05:26:01
R2-2000577	Dynamic LCP Mapping Restrictions	Nokia, Nokia Shanghai	available	2020-02-13 03:38:35	2020-02-14 05:26:01
R2-2000578	QoS Flow Handling	Nokia, Nokia Shanghai	available	2020-02-13 03:38:37	2020-02-14 05:26:01
R2-2000579	MDBV Enforcement	Nokia, InterDigital,	available	2020-02-13 03:38:37	2020-02-14 05:26:01
R2-2000580	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile USA, Verizon,	revised	2020-02-13 03:46:04	2020-02-14 05:55:05
R2-2000581	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile USA, Verizon,	agreed	2020-02-13 03:46:08	2020-02-14 05:55:05
R2-2000582	Introdution of EPS voice fallback enhancement	Qualcomm Incorporated	revised	2020-02-13 03:46:10	2020-02-14 05:55:05
R2-2000583	xDD FRx split capabilities.	Qualcomm Incorporated	available	2020-02-13 03:46:11	2020-02-14 05:55:05
R2-2000584	PDCCH-WUS Mechanism	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000585	UE Power Saving in (NG)EN-DC	Apple, Samsung, Qualcomm,	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000586	Open Issues on 2-step RACH	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000587	SCell BFR Operation	Apple, Nokia, Nokia	noted	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000588	Optimization of RRC Resume with SCG Configuration Procedure	Apple	noted	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000589	RRC Resume with SCG Configuration Procedure	Apple	noted	2020-02-13 03:48:01	2020-02-14 04:51:36

R2-2000590	Clarification on DRX Timers for Cross-carrier Scheduling with Different Numerologies	Apple	not treated	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000591	Open issues on Mobility Enhancement	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000592	Return CHO Configuration	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000593	Open Issues on TSC Scheduling Enhancement	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000594	Preamble Selection for RACH Procedure	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000595	Open Issues of RRM Measurement Relaxation	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:36
R2-2000596	UE Assistance Information for Scell	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:37
R2-2000597	Open Items for usage of R15 MAC CE for PDCP	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:37
R2-2000598	0-PDCCH RRC Connections for Certain Application	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:37
R2-2000599	PDCCH-WUS and Short DRX Cycle	Apple	available	2020-02-13 03:48:01	2020-02-14 04:51:37
R2-2000600	Handling of fallbacks for combined contiguous and non-contiguous CA in FR2	Apple, Nokia, Nokia Shanghai	available	2020-02-13 03:48:01	2020-02-14 04:51:37
R2-2000601	CR to TS38.331 on FR2 intra band contiguous and non-contiguous CA fallback	Apple, Nokia, Nokia Shanghai	available	2020-02-13 03:48:01	2020-02-14 04:51:37
R2-2000602	CR to TS38.306 on FR2 intra band contiguous and non-contiguous CA fallback	Apple, Nokia, Nokia Shanghai	available	2020-02-13 03:48:02	2020-02-14 04:51:37
R2-2000603	SpCell LBT Failure MAC CE Delivery	Apple, vivo	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000604	Maximum Data Rate Enumeration for UP Integrity Protection	Apple, ZTE Corporation,	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000605	Draft LS on Maximum Data Rate Enumeration for UP Integrity Protection	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000606	Discussion on open issues in PSCell change	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000607	Discussion on open issues in On Demand SI	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000608	UL-SL Prioritization under SL incapable RAN	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000609	Disucssion on PC5 RRC left issues	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000610	Discussion on Tx-Side RLM Support	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000611	Discussion on Zone Configurations in NR V2X	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000612	Discussion on HARQ feedback for Sidelink	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000613	Draft Reply LS on Sidelink HARQ Feedback for	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000614	Discussion on TX resource pool selection	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000615	Discussion on remaining issues on SL HARQ	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000616	Clarification on RRCReconfiguration and RRCReconfigurationComplete in MR-DC	Apple	available	2020-02-13 03:48:03	2020-02-14 04:51:37
R2-2000617	Clarification on polling bit for	Huawei,	available	2020-02-13 03:50:51	2020-02-14 06:19:44
R2-2000618	Clarification on polling bit for	Huawei,	available	2020-02-13 03:50:52	2020-02-14 06:19:44
R2-2000619	Introduction of additional enhancements for NB-IoT in TS 36.300	Huawei	revised	2020-02-13 03:50:53	2020-02-14 06:19:44
R2-2000620	Introduction of additional enhancements for NB-IoT in TS 36.331	Huawei	revised	2020-02-13 03:50:54	2020-02-14 06:19:44
R2-2000621	Introduction of additional enhancements for NB-IoT in TS 36.302	Huawei	revised	2020-02-13 03:50:55	2020-02-14 06:19:44
R2-2000622	UE capabilities, TDD/FDD differentiation and 5GC applicability for NB-IoT	Huawei, HiSilicon	available	2020-02-13 03:50:56	2020-02-14 06:19:44
R2-2000623	Summary of [108#95][NB-IoT] Finalise SON ANR	Huawei	noted	2020-02-13 03:50:56	2020-02-14 06:19:44
R2-2000624	NRS presence on non-anchor paging carrier	Huawei,	available	2020-02-13 03:50:56	2020-02-14 06:19:44
R2-2000625	Coexistence with NR for NB-IoT	Huawei,	available	2020-02-13 03:50:56	2020-02-14 06:19:44
R2-2000626	Report of email discussion [108#98][NB-IoT] UE	Huawei	revised	2020-02-13 03:50:56	2020-02-14 13:09:46
R2-2000627	[Drfat] Reply LS to Reply LS on Rel-16 NB-IoT enhancements	Huawei	available	2020-02-13 03:50:56	2020-02-14 13:09:46
R2-2000628	TP for Introduction of UE specific DRX for NB-IoT in	Huawei	available	2020-02-13 03:50:56	2020-02-14 12:05:11
R2-2000629	TP Introduction of UE specific DRX for NB-IoT in	Huawei	available	2020-02-13 03:50:56	2020-02-14 12:05:11
R2-2000630	TP for Introduction of UE specific DRX for NB-IoT in	Huawei	withdrawn	2020-02-13 03:50:56	
R2-2000631	TP for Introduction of UE specific DRX for NB-IoT in	Huawei	available	2020-02-13 03:50:56	2020-02-14 12:05:11
R2-2000632	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	revised	2020-02-13 03:50:56	2020-02-14 06:19:44
R2-2000633	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	revised	2020-02-13 03:50:57	2020-02-14 06:19:44

R2-2000634	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	revised	2020-02-13 03:50:58	2020-02-14 06:19:44
R2-2000635	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	revised	2020-02-13 03:50:59	2020-02-14 06:19:44
R2-2000636	Clarification on default configuration and SRB1 for UP-EDT and RRC_INACTIVE	Huawei, HiSilicon	revised	2020-02-13 03:51:00	2020-02-14 06:19:44
R2-2000637	System support for Wake Up Signal	Huawei, HiSilicon	withdrawn	2020-02-13 03:51:02	
R2-2000638	System support for Wake Up Signal	Huawei, HiSilicon	available	2020-02-13 03:51:03	2020-02-14 06:19:44
R2-2000639	Remaining issues for Rel-16 GWUS	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000640	Handling of D-PUR configuration for CP solution	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000641	[Draft] LS on handling of D-PUR configuration for the CP solution	Huawei	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000642	RRC-MAC-PHY interactions for PUR	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000643	Signalling aspect of PUR configuration	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000644	Signalling aspect of multiple TBs scheduling for NB-IoT	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000645	Discussion on paging of RRC_INACTIVE for eMTC connected to 5GC	Huawei, HiSilicon,	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000646	SRBs and DRBs handling for NB-IoT and eMTC connected to 5GC	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000647	Miscellaneous for NB-IoT and eMTC RRC CRs	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000648	Access barring for eMTC connected to 5GC	Huawei, HiSilicon	available	2020-02-13 03:51:04	2020-02-14 06:19:44
R2-2000649	Remaining open issues on UE assistance	OPPO	available	2020-02-13 04:13:41	2020-02-14 01:27:10
R2-2000650	Views on Remaining RRC Issues for 2-Step RACH	CATT	available	2020-02-13 04:29:24	2020-02-14 06:43:39
R2-2000651	Introduction of SRVCC from 5G to 3G	China Unicom,	agreed	2020-02-13 04:35:31	2020-02-14 03:25:27
R2-2000652	Discussion on CHO impact on T312	OPPO	available	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000653	On the need of including CHO configuration in HO command	OPPO	available	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000654	Discussion on UE capabilities for DAPS HO	OPPO	available	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000655	Further considerations on capability coordination	OPPO	available	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000656	Non-DAPS DRB handling upon DAPS HO failure	OPPO	available	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000657	Source RLF handling during DAPS HO	OPPO	available	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000658	Open issues on SCell BFR	OPPO	noted	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000659	CC list-based SRS Activation MAC CE	OPPO	noted	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000660	Report of [108#68][NR eMIMO] Design of DL MAC	OPPO	available	2020-02-13 04:38:46	2020-02-14 04:00:33
R2-2000661	Considerations on BAP entity release	KDDI	available	2020-02-13 05:20:17	2020-02-13 05:28:59
R2-2000662	Considerations on Intra-CU indication	KDDI	available	2020-02-13 05:21:51	2020-02-13 05:28:59
R2-2000663	Missing QCI to CAPC mapping	Nokia, Nokia Shanghai	revised	2020-02-13 05:32:55	2020-02-14 06:48:34
R2-2000664	Clarification on the presence of ssb-perRACH-Occasion for the CSI-RS based CFRA	ZTE Corporation, Sanechips,	available	2020-02-13 05:39:39	2020-02-14 01:17:07
R2-2000665	Discussion on introduction of search space for the DCP	ZTE Corporation, Sanechips	available	2020-02-13 05:39:39	2020-02-14 01:17:07
R2-2000666	Introduction of search space for the DCP in TS38.331	ZTE Corporation, Sanechips	available	2020-02-13 05:39:39	2020-02-14 02:09:28
R2-2000667	Remaining issues on on-demand SI in connected	ZTE Corporation,	available	2020-02-13 05:39:40	2020-02-14 01:17:07
R2-2000668	Consideration on the HRNN and Access control	ZTE Corporation, Sanechips,	noted	2020-02-13 05:39:40	2020-02-14 03:04:32

R2-2000669	LBT failure measurement report handling	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:34
R2-2000670	LS on LBT failure measurement report handling	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:34
R2-2000671	using spare from SIB1	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:34
R2-2000672	Q values per cell and useInterlacePUCCH coding	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:34
R2-2000673	intraCellGuardBand coding	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:34
R2-2000674	NR DC power control	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:34
R2-2000675	LTE early measurement legacy text changes	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:34
R2-2000676	On early measurements related to SCG CA	Nokia, Nokia Shanghai	available	2020-02-13 05:53:39	2020-02-14 06:48:35
R2-2000677	Remaining details of MCG failure recovery	Nokia, Nokia Shanghai	noted	2020-02-13 05:53:39	2020-02-14 06:48:35
R2-2000678	BFD on Dormant Scell	Nokia, Nokia Shanghai	noted	2020-02-13 05:53:39	2020-02-14 06:48:35
R2-2000679	BFR on Dormant Scell	Nokia, Nokia Shanghai	noted	2020-02-13 05:53:39	2020-02-14 06:48:35
R2-2000680	Correction on cellReselectionSubPriority	Nokia, Nokia Shanghai	merged	2020-02-13 05:53:39	2020-02-14 06:48:35
R2-2000681	Correction on reporting of uplink TX direct current	MediaTek	revised	2020-02-13 06:14:26	2020-02-14 06:03:27
R2-2000682	Clarification on candidate NR frequencies for IDC in EN-DC	NTT DOCOMO, INC., Ericsson, MediaTek	revised	2020-02-13 06:20:54	2020-02-14 07:45:01
R2-2000683	Solution for under-reporting CSI-RS capabilities	NTT DOCOMO,	noted	2020-02-13 06:31:34	2020-02-14 07:45:01
R2-2000684	Correction on SRB capability in NR-DC	MediaTek Inc.	agreed	2020-02-13 06:32:35	2020-02-14 06:03:27
R2-2000685	Correction on LTE early measurement	MediaTek Inc., Nokia, Nokia	revised	2020-02-13 06:40:26	2020-02-14 06:03:27
R2-2000686	Mobility state related information inheritance after inter-RAT cell reselection	Huawei, HiSilicon,	available	2020-02-13 06:44:38	2020-02-14 02:55:13
R2-2000687	Correction on usage of access category 2 for UAC for RNA update	MediaTek Inc.	agreed	2020-02-13 06:51:03	2020-02-14 06:03:27
R2-2000688	Extension of CSI-RS capabilities per codebook type	NTT DOCOMO,	revised	2020-02-13 06:53:07	2020-02-14 07:45:01
R2-2000689	Extension of CSI-RS capabilities per codebook type	NTT DOCOMO,	revised	2020-02-13 06:57:28	2020-02-14 07:45:01
R2-2000690	[DRAFT] Reply LS on CSI-RS capabilities (FG 2-33/36/40/41/43)	NTT DOCOMO,	revised	2020-02-13 07:02:41	2020-02-14 07:45:01
R2-2000691	Further discussion on NR CA with unaligned frame boundary	MediaTek Inc.	available	2020-02-13 07:05:54	2020-02-14 06:03:27
R2-2000692	Correction on FR1-GP flag	Huawei,	revised	2020-02-13 07:11:52	2020-02-14 02:55:13
R2-2000693	Correction on RLC entity release in case of full config	Huawei,	available	2020-02-13 07:11:53	2020-02-14 02:55:13
R2-2000694	PDCP Status Report for DAPS Handover	ETRI	available	2020-02-13 07:12:22	2020-02-14 07:15:26
R2-2000695	Remaining FFSes on RRC-MAC interaction for PUR	Qualcomm Incorporated	available	2020-02-13 07:13:09	2020-02-14 00:20:12
R2-2000696	Remaining issue on Groupcast and Broadcast Support	ITRI	available	2020-02-13 07:13:21	2020-02-13 07:18:38
R2-2000697	SFN misalignment issue on periodicities of non-divisor of 10240ms	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000698	Left issues on autonomous transmission	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000699	Left issue on multiple entry confirmation MAC CE	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000700	Intra-UE prioritization between multiple SRs	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000701	Grant collision with the same HARQ process	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40

R2-2000702	Discussion on SR cancelling on intra-UE prioritization involving SR	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000703	Consideration on CG timer for the deprioritized MAC	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000704	Cell restriction for PDCP duplication in IIoT	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000705	Consideration on propagation delay compensation for	OPPO	available	2020-02-13 07:17:39	2020-02-18 12:37:59
R2-2000706	Support mapping LCHs configured with allowedCG-list to dynamic grant	OPPO	available	2020-02-13 07:17:39	2020-02-14 03:17:40
R2-2000707	Resetting UL PDCP SN for RLC UM in DAPS	NEC	available	2020-02-13 07:39:39	2020-02-14 02:09:18
R2-2000708	PDCP anchor relocation in DAPS	NEC	available	2020-02-13 07:39:39	2020-02-14 02:09:18
R2-2000709	On SL LCP mapping restriction for HARQ feedback enable and disable	Huawei, HiSilicon	available	2020-02-13 07:40:16	2020-02-14 02:48:44
R2-2000710	Conditions for Uu RRC connection establishment and resume for NR SL	Huawei, HiSilicon	available	2020-02-13 07:40:16	2020-02-14 02:48:44
R2-2000711	Further discussion on the Sidelink CSI reporting	Huawei,	available	2020-02-13 07:40:16	2020-02-14 02:48:44
R2-2000712	General framework for the introduction of UE capabilities for 5G V2X with NR SL in TS 38.306	Huawei, HiSilicon	available	2020-02-13 07:40:16	2020-02-14 02:48:44
R2-2000713	Handling of multiple resource pools for NR sidelink	Huawei,	available	2020-02-13 07:40:16	2020-02-14 02:48:44
R2-2000714	Measurement and reporting for SL-RSRP and SL pathloss for open-loop power control	Huawei, HiSilicon	available	2020-02-13 07:40:16	2020-02-14 06:08:30
R2-2000715	On the left FFS on SR trigger for SL Mode 1	Huawei, Lenovo, Motorola Mobility,	available	2020-02-13 07:40:16	2020-02-14 02:30:52
R2-2000716	Report of [108#58][TEI16] NeedForGap Signaling	MediaTek	available	2020-02-13 07:41:47	2020-02-14 06:30:09
R2-2000717	Introduction of NeedForGap capability for NR measurement - 36.331	MediaTek Inc.	revised	2020-02-13 07:41:47	2020-02-14 06:30:09
R2-2000718	Introduction of NeedForGap capability for NR measurement - 36.306	MediaTek Inc.	endorsed	2020-02-13 07:41:47	2020-02-14 06:30:09
R2-2000719	Introduction of NeedForGap capability for NR measurement - 38.300	MediaTek Inc.	available	2020-02-13 07:41:47	2020-02-14 06:30:09
R2-2000720	Introduction of NeedForGap capability for NR measurement - 38.331	MediaTek Inc.	revised	2020-02-13 07:41:47	2020-02-14 06:30:09
R2-2000721	Introduction of NeedForGap capability for NR measurement - 38.306	MediaTek Inc.	noted	2020-02-13 07:41:47	2020-02-14 06:30:09
R2-2000722	Consideration of configured grant timer for Intra-UE prioritization	Asia Pacific Telecom co.	available	2020-02-13 07:47:48	2020-02-14 05:52:04
R2-2000723	PDCP security issue about duplicate detection	Samsung, LG Electronics Inc., Nokia,	available	2020-02-13 07:50:33	2020-02-14 02:00:00
R2-2000724	CR on PDCP security issue	Samsung, LG Electronics Inc., Nokia,	available	2020-02-13 07:55:22	2020-02-14 02:00:00
R2-2000725	Unnecessary deciphering for duplicated PDUs	Samsung	available	2020-02-13 08:00:34	2020-02-14 02:00:00
R2-2000726	SDAP control PDU handling in Rel-16 EHC	Samsung	available	2020-02-13 08:03:08	2020-02-14 02:00:00
R2-2000727	Running CR for 38.323 on supporting DAPS handover	Huawei, HiSilicon,	withdrawn	2020-02-13 08:06:23	2020-02-14 02:56:45
R2-2000728	Running CR for 36.323 on supporting DAPS handover	Huawei, HiSilicon,	withdrawn	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000729	Discussion on ROHC failure issue	Huawei,	available	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000730	Draft CR for 38.323 based on email discussion#66	Huawei,	available	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000731	Draft CR for 36.323 based on email discussion#66	Huawei,	available	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000732	Draft CR for 38.323 on ROHC failure issue	Huawei,	available	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000733	Discussion on fallback to source cell	Huawei,	available	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000734	Discussion on SCell handling during DAPS HO	Huawei,	available	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000735	Discussion on UE capability coordination for DAPS	Huawei,	available	2020-02-13 08:06:23	2020-02-14 02:56:46
R2-2000736	The source MAC LCP procedure for DAPS handover	Samsung	available	2020-02-13 08:09:35	2020-02-14 02:00:00
R2-2000737	Handling of consistent UL LBT failures during HO	ITRI	available	2020-02-13 08:12:13	2020-02-14 06:05:36
R2-2000738	Leftover issues on DAPS PDCP	Samsung	available	2020-02-13 08:13:44	2020-02-14 02:00:00
R2-2000739	Tirggering condition for sidelink RSRP reporting	MediaTek	available	2020-02-13 08:23:54	2020-02-14 01:42:56
R2-2000740	Summary of email discussion [108#46][IAB] Feature	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:32
R2-2000741	Running CR to TS 38.331 on IAB for NR	Ericsson	revised	2020-02-13 08:44:38	2020-02-13 16:11:32
R2-2000742	Running CR to TS 36.331 on IAB for NR	Ericsson	revised	2020-02-13 08:44:38	2020-02-13 16:11:32
R2-2000743	On Multi-connectivity for IAB	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:32

R2-2000744	Security for inter-IAB node Signalling	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:32
R2-2000745	Further Discussion on BAP Layer Signaling	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:32
R2-2000746	Remaining Issues Related to HbH Flow Control	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:32
R2-2000747	Remaining Aspects of Pre-emptive BSR Format	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:32
R2-2000748	L1 Resource Multiplexing MAC CE	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:33
R2-2000749	Further details on Backhaul link RLF Notification Types to Downstream Node(s)	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:33
R2-2000750	IP Address Assignment for IAB Node(s)	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:33
R2-2000751	On cell Reservations in MIB and SIB1	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:33
R2-2000752	Draft CR to 36.304 on cell Reservations for IAB-MTs	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:33
R2-2000753	Draft CR to 38.304 on cell Reservations for IAB-MTs	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:33
R2-2000754	IAB-MT Feature Capabilities	Ericsson	available	2020-02-13 08:44:38	2020-02-13 16:11:33
R2-2000755	Deprioritized transmissions on configured grants	III	available	2020-02-13 08:49:31	2020-02-13 09:14:22
R2-2000756	Running CR to TS 38.331 for 5G V2X with NR	Huawei,	revised	2020-02-13 08:56:04	2020-02-14 06:23:06
R2-2000757	Summary of email discussion [108#44][V2X] - Miscellaneous RRC issues for 5G V2X with NR	Huawei, HiSilicon	noted	2020-02-13 08:56:04	2020-02-18 14:37:55
R2-2000758	Enhancement on BSR format for the one LCG case	Huawei,	available	2020-02-13 08:56:04	2020-02-14 02:27:37
R2-2000759	Remaining issues on capability coordination for	NEC	available	2020-02-13 08:57:11	2020-02-14 02:09:18
R2-2000760	Running CR to 38.321 on Integrated Access and Backhaul for NR	Samsung Electronics	revised	2020-02-13 09:06:29	2020-02-13 12:59:15
R2-2000761	Corrections to T312 and Discovery Signals measurement	Lenovo, Motorola Mobility	revised	2020-02-13 09:09:19	2020-02-13 10:14:15
R2-2000762	Corrections to the Location measurement indication procedure	Lenovo, Motorola	revised	2020-02-13 09:11:53	2020-02-13 10:15:08
R2-2000763	Introduction of provisions for late non-critical extensions	Lenovo, Motorola	agreed	2020-02-13 09:14:02	2020-02-13 10:14:39
R2-2000764	Introduction of provisions for late non-critical extensions	Lenovo, Motorola Mobility	agreed	2020-02-13 09:17:16	2020-02-13 10:14:50
R2-2000765	Transfer of segmented UECapabilityInformation by	Samsung	noted	2020-02-13 09:17:43	2020-02-14 05:23:05
R2-2000766	Enhancement of multiple PDCCH-based TRP	Samsung	noted	2020-02-13 09:17:43	2020-02-14 05:23:05
R2-2000767	MAC running CR for NR eMIMO	Samsung	revised	2020-02-13 09:17:43	2020-02-14 05:23:05
R2-2000768	Additional UE capability filtering to limit the total number of carriers in NR	Samsung	available	2020-02-13 09:17:43	2020-02-14 05:23:05
R2-2000769	IP address configuration for IAB	Samsung	available	2020-02-13 09:18:04	2020-02-14 01:39:14
R2-2000770	Desired data rate for hop-by-hop flow control	Samsung	available	2020-02-13 09:18:04	2020-02-14 01:39:14
R2-2000771	RA procedure considering SSBs with QCL	Fujitsu	available	2020-02-13 09:21:42	2020-02-14 05:58:47
R2-2000772	[Eri10] SR resources for consistent LBT failure	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 06:53:48
R2-2000773	Discussion on sidelink SR trigger	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 05:58:47
R2-2000774	Discussion on remaining PDB	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 05:58:47
R2-2000775	MAC CE for duplication per UE or per MAC entity	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 06:53:48
R2-2000776	R15 MAC CE duplication on/off for R16 duplication	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 06:53:48
R2-2000777	Discussion on preamble group selection for 2step RACH initiated by HO	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 05:58:47
R2-2000778	Discussion on RO and PO configuration for CFRA	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 05:58:47
R2-2000779	SR_COUNTER initialization due to RRC	Fujitsu	withdrawn	2020-02-13 09:21:43	
R2-2000780	PDCP discard timer with 0.5ms	Fujitsu	available	2020-02-13 09:21:43	2020-02-14 06:53:48
R2-2000781	Finalising Rel-16 pre-emptive BSR design	Samsung Electronics	available	2020-02-13 09:26:41	2020-02-13 12:56:32
R2-2000782	TP on outstanding issues with pre-emptive BSR	Samsung Electronics	available	2020-02-13 09:28:04	2020-02-13 12:49:05
R2-2000783	RRC running CR for NR IIoT	Ericsson	revised	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000784	LTE RRC running CR for NR IIoT	Ericsson	revised	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000785	Remaining minor issues in [108#32][IIoT] Running	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000786	On downlink delay compensation	Ericsson, LG,	available	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000787	On UE need for time synch	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000788	LCP restriction enhancement based on PHY priority	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:19
R2-2000789	SPS and CG remaining MAC aspects	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:19
R2-2000790	TSC AI clarifications: meaning of arrival time	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:19
R2-2000791	Draft LS: TSC AI clarifications for arrival time	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:19

R2-2000792	EHC solution	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:19
R2-2000793	EHC padding removal	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000794	Handling of de-prioritized MAC PDUs	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000795	On PHY and MAC interaction to support intra-UE prioritization	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000796	Draft LS on PHY and MAC interaction to support intra-UE prioritization	Ericsson	available	2020-02-13 09:30:18	2020-02-13 21:01:20
R2-2000797	Remaining details of intra-UE prioritization	Ericsson	available	2020-02-13 09:30:19	2020-02-13 21:01:20
R2-2000798	Remaining issues related to MAC CEs for PDCP	Ericsson	available	2020-02-13 09:30:19	2020-02-13 21:01:20
R2-2000799	on MAC CE design for eURLLC	Ericsson	noted	2020-02-13 09:30:19	2020-02-13 21:01:20
R2-2000800	PDCP discard timers	Ericsson	available	2020-02-13 09:30:19	2020-02-13 21:01:20
R2-2000801	Remaining issues on RLF report	ZTE Corporation,	available	2020-02-13 09:30:37	2020-02-14 05:11:11
R2-2000802	CR to 38300 on Introducing RLF report in NR	ZTE Corporation,	available	2020-02-13 09:30:37	2020-02-14 05:11:11
R2-2000803	Draft Reply LS to RAN3 on RLF report	ZTE Corporation,	available	2020-02-13 09:30:38	2020-02-14 05:11:11
R2-2000804	Remaining issues on RACH report procedure	ZTE Corporation,	available	2020-02-13 09:30:38	2020-02-14 05:11:11
R2-2000805	Further considerations on RACH optimization	ZTE Corporation,	available	2020-02-13 09:30:38	2020-02-14 05:11:11
R2-2000806	Further consideration on INACTIVE UE counting	ZTE Corporation,	available	2020-02-13 09:30:38	2020-02-14 05:11:11
R2-2000807	Remaining issues on MDT	ZTE Corporation,	available	2020-02-13 09:30:38	2020-02-14 05:11:11
R2-2000808	Open issues with IAB LCID space extension and its wider impact on Rel-16	Samsung Electronics	available	2020-02-13 09:45:25	2020-02-13 12:45:26
R2-2000809	System support for Wake Up Signal	Huawei, HiSilicon	available	2020-02-13 09:49:05	2020-02-14 06:19:44
R2-2000810	System support for Wake Up Signal	Huawei, HiSilicon	available	2020-02-13 09:49:06	2020-02-14 06:19:44
R2-2000811	Discussion on PDCCH-WUS missing problems during handover	Xiaomi Communications	available	2020-02-13 09:54:03	2020-02-13 10:09:02
R2-2000812	Views on Remaining MAC Issues for 2-Step RACH	CATT	available	2020-02-13 10:01:25	2020-02-14 06:43:39
R2-2000813	Remaining Issues on Autonomous Transmission of Pending MAC PDUs	Nokia, Nokia Shanghai	available	2020-02-13 10:05:20	2020-02-13 15:54:37
R2-2000814	Intra-UE Prioritization for conflicts with existing MAC PDU	Nokia, Nokia Shanghai	available	2020-02-13 10:05:20	2020-02-13 15:54:37
R2-2000815	Intra-UE Prioritization Considering MAC CEs and Configured Grant Timer	Nokia, Nokia Shanghai	available	2020-02-13 10:05:20	2020-02-13 15:54:37
R2-2000816	On MAC CEs for PDCP Duplication	Nokia, Nokia Shanghai	available	2020-02-13 10:05:20	2020-02-13 15:54:37
R2-2000817	PDCP Duplication for SRB in Rel-16	Nokia, Nokia Shanghai	available	2020-02-13 10:05:20	2020-02-13 15:54:37
R2-2000818	PDCP PDU Discarding by Secondary RLC entities	Nokia, Nokia Shanghai	available	2020-02-13 10:05:20	2020-02-13 15:54:37
R2-2000819	On BAP features and their mandatory vs optional support	Samsung Electronics	available	2020-02-13 10:12:49	2020-02-13 12:38:30
R2-2000820	SL BWP operation	Lenovo, Motorola	available	2020-02-13 10:26:06	2020-02-13 14:23:29
R2-2000821	HARQ process configuration for configured grants	Lenovo, Motorola	available	2020-02-13 10:28:02	2020-02-13 14:23:29
R2-2000822	UE behavior upon consistent LBT failure	Lenovo, Motorola	available	2020-02-13 10:29:37	2020-02-13 14:23:29
R2-2000823	Remaining aspects of SL HARQ protocol operation	Lenovo, Motorola	available	2020-02-13 10:32:59	2020-02-13 14:23:29
R2-2000824	PWS information handling in IAB	Sony	available	2020-02-13 10:33:42	2020-02-13 20:51:51
R2-2000825	HARQ retransmissions for deprioritized PDU with empty HARQ buffer	Sony	available	2020-02-13 10:33:42	2020-02-13 20:51:51
R2-2000826	Power Saving UE assistance information	Sony	withdrawn	2020-02-13 10:33:42	
R2-2000827	UE power saving for inter frequency measurements	Sony	available	2020-02-13 10:33:42	2020-02-13 20:51:51
R2-2000828	UE-group wake-up signal for MTC/NB-IoT	Sony	withdrawn	2020-02-13 10:33:42	
R2-2000829	Blacklist/whitelist for PCI range signaling and stage-3	Sony	noted	2020-02-13 10:33:43	2020-02-13 20:51:51

R2-2000830	Mobility enhancements for Connectivity to 5GC for MTC and NB-IoT	Sony	withdrawn	2020-02-13 10:33:43	
R2-2000831	Differentiating between MsgB carrying RRC and other messages	Sony	available	2020-02-13 10:33:43	2020-02-13 20:51:51
R2-2000832	RNTI ambiguity for CFRA and CBRA of 4-Step	Sony	available	2020-02-13 10:33:43	2020-02-13 20:51:51
R2-2000833	msgB-RNTI ambiguity for CFRA and CBRA of 2-	Sony	available	2020-02-13 10:33:43	2020-02-13 20:51:51
R2-2000834	EHC absence of Q-Tags and NACK feedback	Sony	available	2020-02-13 10:33:43	2020-02-13 20:51:51
R2-2000835	IAB Cell Barring	Sony	available	2020-02-13 10:33:43	2020-02-13 20:51:51
R2-2000836	Details on UE Specific DRX cycle	Sony	available	2020-02-13 10:33:43	2020-02-13 20:51:51
R2-2000837	On supporting UE-based positioning	Sony	available	2020-02-13 10:33:43	2020-02-13 20:51:51
R2-2000838	PHR for NR-U	Lenovo, Motorola	available	2020-02-13 10:34:44	2020-02-13 14:23:29
R2-2000839	Remaining details for autonomous retransmission functionality	Lenovo, Motorola	available	2020-02-13 10:36:24	2020-02-13 14:23:29
R2-2000840	Remaining issues on consistent LBT failures and BWP switching	MediaTek Inc.	available	2020-02-13 11:05:30	2020-02-13 23:07:27
R2-2000841	Issues on retransmissions across different configured grant configurations	MediaTek Inc.	available	2020-02-13 11:05:30	2020-02-13 23:07:27
R2-2000842	On PHR and autonomous retransmissions	MediaTek	available	2020-02-13 11:05:30	2020-02-13 23:07:27
R2-2000843	Running CR for 38.331 for Power Savings	MediaTek	revised	2020-02-13 11:05:30	2020-02-15 13:02:07
R2-2000844	Email discussion summary on running 38.331 CR for Power Saving	MediaTek Inc.	revised	2020-02-13 11:05:30	2020-02-15 13:02:07
R2-2000845	On UL intra-UE prioritisation	MediaTek	available	2020-02-13 11:05:30	2020-02-13 23:07:27
R2-2000846	draft response to SA2 LS on Location of UEs and associated key issues	THALES	noted	2020-02-13 11:21:04	2020-02-13 17:13:52
R2-2000847	Flow-control details	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000848	Remaining issues of buffer status reporting for IAB	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000849	Format for pre-emptive BSR	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000850	MAC CE for guard symbols indication	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000851	MSGA PUSCH LBT failure and PDCCH decoding	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000852	2-step CBRA preamble group selection	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000853	Need for ra-MsgASizeGroupA parameter	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000854	CFRA resource handling for BFR upon TAT expiry	Nokia, Nokia Shanghai	available	2020-02-13 11:28:44	2020-02-13 12:36:33
R2-2000855	Measurement reporting while CHO is configured	PANASONIC R&D	available	2020-02-13 11:40:13	2020-02-13 15:45:05
R2-2000856	Discussion on recursion in RRC	Nokia, Nokia Shanghai	available	2020-02-13 11:45:14	2020-02-13 19:28:40
R2-2000857	Clarification on recursion in RRC messages	Nokia, Nokia Shanghai	available	2020-02-13 11:45:14	2020-02-13 19:28:40
R2-2000858	SSB-ToMeasure related clarification	Nokia, Nokia Shanghai	noted	2020-02-13 11:45:18	2020-02-13 19:28:40
R2-2000859	SSB-ToMeasure related clarification	Nokia, Nokia Shanghai	not pursued	2020-02-13 11:45:18	2020-02-13 19:28:40
R2-2000860	Multiple rate matching patterns with M-TRP	Nokia, Nokia Shanghai	noted	2020-02-13 11:45:20	2020-02-13 19:28:40
R2-2000861	Introduction of UL Tx switching for UL MIMO in FR1	Nokia, Nokia Shanghai	noted	2020-02-13 11:45:20	2020-02-14 06:13:04
R2-2000862	RRC signalling for Tx switching for UL MIMO	Nokia, Nokia Shanghai	withdrawn	2020-02-13 11:45:20	
R2-2000863	UE capabilities for Tx switching for UL MIMO	Nokia, Nokia Shanghai	withdrawn	2020-02-13 11:45:20	
R2-2000864	Support of UL sharing for variable-duplex FDD bands	Nokia, Nokia Shanghai	postponed	2020-02-13 11:45:21	2020-02-13 19:28:40
R2-2000865	Introduction of multiple LTE CRS rate matching patterns	Nokia, Nokia Shanghai	postponed	2020-02-13 11:45:22	2020-02-13 19:28:40
R2-2000866	Introduction of multiple LTE CRS rate matching patterns	Nokia, Nokia Shanghai	postponed	2020-02-13 11:45:23	2020-02-13 19:28:41

R2-2000867	Further Consideration on Ethernet Header Compression	China Telecom	available	2020-02-13 11:51:56	2020-02-13 11:57:15
R2-2000868	Discussion on MAC CE for PDCP Duplication	China Telecom	available	2020-02-13 11:55:25	2020-02-13 11:57:15
R2-2000869	Power Saving UE assistance information	Sony Europe	available	2020-02-13 11:56:32	2020-02-13 20:51:51
R2-2000870	RRC signalling for Tx switching for UL MIMO	Nokia, Nokia Shanghai	revised	2020-02-13 12:02:37	2020-02-14 06:13:04
R2-2000871	UE capabilities for Tx switching for UL MIMO	Nokia, Nokia Shanghai	available	2020-02-13 12:02:41	2020-02-14 06:13:04
R2-2000872	Remaining issues for NR-DC power control	Ericsson	available	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000873	SN change during fast MCG recovery procedure	Ericsson	noted	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000874	Value range for T316	Ericsson	noted	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000875	Summary of [108#61][R16] On-demand SI procedure in RRC_CONNECTED_summary	Ericsson	noted	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000876	Running CR on 38.331 for on-demand SIB(s) in CONNECTED	Ericsson	revised	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000877	Running CR on 38.300 for on-demand SIB(s) in CONNECTED	Ericsson	revised	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000878	Open issues list for on-demand SIB	Ericsson	available	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000879	Correction on p-maxNR-FR1 for NE-DC	Ericsson	revised	2020-02-13 12:02:43	2020-02-13 19:32:03
R2-2000880	Correction on SFTD frequency list in INM	Ericsson	agreed	2020-02-13 12:02:45	2020-02-13 19:32:03
R2-2000881	Discussion on SL information reporting over Uu	Ericsson	available	2020-02-13 12:02:47	2020-02-13 19:32:03
R2-2000882	Discussion on SL Mode 2 left issues	Ericsson	available	2020-02-13 12:02:47	2020-02-13 19:32:03
R2-2000883	Draft Reply LS on Sideline UE information	Ericsson	available	2020-02-13 12:02:47	2020-02-13 19:32:03
R2-2000884	Handling of SLRB (re)configuration failure	Ericsson	available	2020-02-13 12:02:47	2020-02-13 19:32:03
R2-2000885	Inter-node resource coordination in NR SL	Ericsson	available	2020-02-13 12:02:47	2020-02-13 19:32:03
R2-2000886	Remaining issues on capability transfer in sidelink	Ericsson	available	2020-02-13 12:02:47	2020-02-13 19:32:03
R2-2000887	Running CR for 38.322 for NR V2X	Ericsson	revised	2020-02-13 12:02:47	2020-02-13 19:32:03
R2-2000888	Introduction of UE Power Saving in NR	CATT	revised	2020-02-13 12:12:05	2020-02-14 03:06:19
R2-2000889	Early measurement performing for SCG CA case	CATT	available	2020-02-13 12:12:30	2020-02-14 03:15:12
R2-2000890	Views on eMIMO MAC CEs	CATT	noted	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000891	Views on Remaining Issues of SCell BFR	CATT	noted	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000892	Views on Cell Barring Mechanism for IAB	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000893	Remaining open Issues of IAB Flow Control	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000894	Remaining Issues on Pre-emptive BSR	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000895	Views on RRC States of IAB nodes	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000896	UDC Impacts of DAPS	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000897	Further Discussion on Capability Coordination for	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000898	Remaining RRC configuration details for DAPS	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000899	Further Discussion on Cell Evaluation for CHO Cell	CATT	available	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000900	Report on email discussion [108#67][NR Mob] Resolving open issues in CPAC and creating TP	CATT	revised	2020-02-13 12:19:44	2020-02-14 04:58:28
R2-2000901	Summary document for conditional PSCell change for Intra-SN	CATT	noted	2020-02-13 12:19:44	2020-02-21 01:17:56
R2-2000902	Inter-node BH RLF indication	CMCC	available	2020-02-13 12:28:55	2020-02-14 03:56:21
R2-2000903	BAP mapping support for routing	CMCC	available	2020-02-13 12:28:55	2020-02-14 03:56:21
R2-2000904	On counting the LBT failure of a BWP with multiple	CMCC	available	2020-02-13 12:28:56	2020-02-14 03:56:21
R2-2000905	Further enhancement of reporting for NR-U cell	CMCC	available	2020-02-13 12:28:56	2020-02-14 03:56:21
R2-2000906	Discussion on the flexible configuration of Maximum Data Rate Enumeration for UP Integrity Protection	CMCC, Huawei,	available	2020-02-13 12:28:56	2020-02-14 03:56:21
R2-2000907	Summary of open points in [108#91][NR/L2M] running 38.314 CR (CMCC)	CMCC	available	2020-02-13 12:28:56	2020-02-14 03:56:21
R2-2000908	Running TS 38.314	CMCC	endorsed	2020-02-13 12:28:56	2020-02-14 03:56:22
R2-2000909	Summary of L2M open points and proposals	CMCC	noted	2020-02-13 12:29:00	2020-02-20 12:37:56

R2-2000910	Clarification for per cell PRB usage	CMCC, Ericsson,	revised	2020-02-13 12:29:00	2020-02-14 03:56:22
R2-2000911	Introduction of one-slot periodic TRS configuration for FR1 under a certain condition in TS38.306	CMCC	postponed	2020-02-13 12:29:00	2020-02-14 03:56:22
R2-2000912	Introduction of one-slot periodic TRS configuration for FR1 under a certain condition in TS38.331	CMCC	postponed	2020-02-13 12:29:00	2020-02-14 03:56:22
R2-2000913	Discussion on power saving for inter-frequency	CMCC	available	2020-02-13 12:29:00	2020-02-14 03:56:22
R2-2000914	CR on alternative cell reselection priorities in 38.304	CMCC,	available	2020-02-13 12:29:00	2020-02-14 03:56:22
R2-2000915	CR on alternative cell reselection priorities in 38.331	CMCC,	available	2020-02-13 12:29:02	2020-02-14 03:56:22
R2-2000916	Discussion on the release of the PUSCH resources	CMCC	available	2020-02-13 12:29:04	2020-02-14 03:56:22
R2-2000917	Remaining issues on 2-step CFRA	CMCC	available	2020-02-13 12:29:04	2020-02-14 03:56:22
R2-2000918	Discussion on CHO for DC scenarios	CMCC	revised	2020-02-13 12:29:04	2020-02-14 03:56:22
R2-2000919	Discussion on signalling for R16 NR HST	CMCC	revised	2020-02-13 12:29:04	2020-02-14 03:56:22
R2-2000920	38.331 CR on introduction of RRC parameters and UE capabilities for Rel-16 NR HST	CMCC, Huawei,	revised	2020-02-13 12:29:04	2020-02-14 03:56:22
R2-2000921	38.306 CR on introduction of UE capabilities for Rel-16 NR HST	CMCC, Huawei,	revised	2020-02-13 12:29:05	2020-02-14 03:56:22
R2-2000922	Further consideration on CHO compliance check failure	CMCC	available	2020-02-13 12:29:07	2020-02-14 06:14:21
R2-2000923	Combination of CHO and DAPS HO	CMCC	available	2020-02-13 12:29:07	2020-02-14 06:49:26
R2-2000924	Leftovers for TS 37.320 to support NR MDT	CMCC	available	2020-02-13 12:29:07	2020-02-14 05:43:57
R2-2000925	Running TS 37.320 CR	CMCC, Nokia	revised	2020-02-13 12:29:07	2020-02-14 05:43:57
R2-2000926	Open issues for 2-step CFRA	CMCC	revised	2020-02-13 12:29:07	
R2-2000927	Feature list for R16 SON MDT WI	CMCC	available	2020-02-13 12:35:26	2020-02-14 03:56:22
R2-2000928	T312 handling in NR	Sharp	available	2020-02-13 12:35:43	2020-02-14 00:54:28
R2-2000929	To discard duplicate PDUs for the RLCs deactivated for PDCP duplication	Sharp, CATT	available	2020-02-13 12:38:48	2020-02-13 23:45:51
R2-2000930	Introduction of Rel-16 additional enhancements NB-IoT in TS 36.306	BlackBerry UK Limited	revised	2020-02-13 12:42:00	2020-02-13 12:49:01
R2-2000931	Introduction of DL RRC segmentation	Ericsson	not	2020-02-13 12:44:20	2020-02-13 13:04:54
R2-2000932	Introduction of DL RRC segmentation	Ericsson	revised	2020-02-13 12:44:22	2020-02-13 13:04:54
R2-2000933	Introduction of DL RRC segmentation	Ericsson	revised	2020-02-13 12:44:23	2020-02-13 13:04:54
R2-2000934	Introduction of DL RRC segmentation	Ericsson	not	2020-02-13 12:44:24	2020-02-13 13:04:54
R2-2000935	Introduction of DL RRC segmentation	Ericsson	revised	2020-02-13 12:44:26	2020-02-13 13:04:54
R2-2000936	Introduction of DL RRC segmentation	Ericsson	revised	2020-02-13 12:44:28	2020-02-13 13:04:54
R2-2000937	Allowing PDCP version change without handover	Ericsson	postpone	2020-02-13 12:44:31	2020-02-13 13:26:18
R2-2000938	Allowing PDCP version change without handover	Ericsson	postpone	2020-02-13 12:44:32	2020-02-13 13:26:18
R2-2000939	Generic stage-2 description for RRC segmentation	Ericsson	available	2020-02-13 12:44:34	2020-02-13 13:27:44
R2-2000940	CR for discarding duplicate PDUs for the RLCs deactivated for PDCP duplication	Sharp	available	2020-02-13 12:46:09	2020-02-13 23:45:51
R2-2000941	Uplink transmission upon detection of LBT failure	Nokia, Nokia Shanghai	available	2020-02-13 13:07:48	2020-02-13 14:28:39
R2-2000942	Stage-2 running CR for 2-step RACH	Nokia (rapporteur),	revised	2020-02-13 13:07:48	2020-02-13 14:28:39
R2-2000943	MSGB for CFRA	Nokia, Nokia Shanghai	available	2020-02-13 13:07:50	2020-02-13 14:28:39
R2-2000944	On the need of HARQ based RLF	Ericsson	available	2020-02-13 13:11:56	2020-02-13 13:28:30
R2-2000945	On PDCP re-establishment	Ericsson	available	2020-02-13 13:11:56	2020-02-13 13:28:30
R2-2000946	Discussion on congestion control	Ericsson	available	2020-02-13 13:11:56	2020-02-13 13:28:30
R2-2000947	On PC5-S and PC5-RRC signalling	Ericsson	available	2020-02-13 13:11:56	2020-02-13 13:28:30
R2-2000948	Discussion on SL Mode 1 left issues	Ericsson	available	2020-02-13 13:11:56	2020-02-13 13:28:30
R2-2000949	Discussion on RLC left issues	Ericsson	available	2020-02-13 13:11:56	2020-02-13 13:28:31
R2-2000950	MAC miscellaneous issues	Ericsson	available	2020-02-13 13:11:56	2020-02-13 13:28:30
R2-2000951	Remaining issues on the msgA transmission	Huawei,	available	2020-02-13 13:18:12	2020-02-14 04:55:09
R2-2000952	Remaining issues on MsgB reception	Huawei,	available	2020-02-13 13:18:12	2020-02-14 04:55:10
R2-2000953	Draft LS to RAN1 on LSBs of SFN	Huawei,	available	2020-02-13 13:18:12	2020-02-14 04:55:09
R2-2000954	Open issues on MAC spec for 2-stepRACH	Huawei,	available	2020-02-13 13:18:12	2020-02-14 04:55:09
R2-2000955	MAC handling of MsgA with invalid PUSCH	Huawei,	available	2020-02-13 13:18:12	2020-02-14 04:55:09
R2-2000956	Prioritized 2-step RACH	Huawei,	available	2020-02-13 13:18:12	2020-02-14 04:55:09
R2-2000957	Remaining issue on handling UL LBT failure	Huawei,	available	2020-02-13 13:20:22	2020-02-14 04:55:43
R2-2000958	Remaining issue on 2-step random access in NRU	Huawei,	available	2020-02-13 13:20:22	2020-02-14 04:55:43
R2-2000959	Remaining issue on configured grant	Huawei,	available	2020-02-13 13:20:22	2020-02-14 04:55:43
R2-2000960	PHR reporting for NR-U	Huawei,	available	2020-02-13 13:20:22	2020-02-14 04:55:43
R2-2000961	Reply LS on PHR report	Huawei,	available	2020-02-13 13:20:22	2020-02-14 04:55:43

R2-2000962	Disucssion PDCCH group switching	Huawei,	available	2020-02-13 13:20:23	2020-02-14 04:55:43
R2-2000963	Remaining issues on LBT failure MAC CE	Huawei,	available	2020-02-13 13:20:23	2020-02-14 04:55:43
R2-2000964	Discussion on the remaining issues in RRC	Huawei,	available	2020-02-13 13:20:23	2020-02-14 04:55:43
R2-2000965	Discussion on security requirement for UE capability	Huawei,	available	2020-02-13 13:20:58	2020-02-14 05:35:48
R2-2000966	Remaining issues on DL positioning procedure	Huawei, HiSilicon,	available	2020-02-13 13:21:41	2020-02-14 04:56:10
R2-2000967	Remaining issues on SRS configuration	Huawei,	available	2020-02-13 13:21:41	2020-02-14 04:56:10
R2-2000968	Discussion on GAP request for RSTD measurement	Huawei,	available	2020-02-13 13:21:41	2020-02-14 04:56:10
R2-2000969	Discussion on DL-AoD positioning procedure	Huawei,	available	2020-02-13 13:21:41	2020-02-14 04:56:10
R2-2000970	Discussion on SRS capability transfer	Huawei,	available	2020-02-13 13:21:41	2020-02-14 04:56:10
R2-2000971	Discussion on on-demand SI in connected for NR	Huawei,	available	2020-02-13 13:21:41	2020-02-14 04:56:10
R2-2000972	Discussion on SI request enhancement for	Huawei,	available	2020-02-13 13:21:41	2020-02-14 04:56:10
R2-2000973	Correction on PUSCH-less uplink carrier	Huawei,	withdrawn	2020-02-13 13:22:23	
R2-2000974	Correction on autonomous RACH retransmission for SRS switching	Huawei, HiSilicon	withdrawn	2020-02-13 13:22:23	
R2-2000975	Correction on the RACH parameters for BFR	Huawei,	withdrawn	2020-02-13 13:22:23	
R2-2000976	Running CR on 36.321 for eMTC	Ericsson	revised	2020-02-13 13:34:50	2020-02-14 01:00:57
R2-2000977	Scheduling enhancements for LTE-M and NB-IoT	Ericsson	available	2020-02-13 13:34:53	2020-02-14 01:00:58
R2-2000978	Stage-3 details for MPDCCH performance improvement	Ericsson	noted	2020-02-13 13:34:53	2020-02-14 01:00:58
R2-2000979	S-Criterion interpretation for non-BL UEs	Ericsson	available	2020-02-13 13:34:53	2020-02-14 01:00:58
R2-2000980	Cell Reselection improvement for LTE-M Standalone	Ericsson	available	2020-02-13 13:34:53	2020-02-14 01:00:58
R2-2000981	LTE-M coexistence with NR	Ericsson	revised	2020-02-13 13:34:53	2020-02-14 01:00:58
R2-2000982	Report of [108#19] when to resume DRBs in UP optimization for 5GC	Ericsson	available	2020-02-13 13:34:53	2020-02-14 07:40:22
R2-2000983	Running CR on 36.321 for NB-IoT	Ericsson	revised	2020-02-13 13:34:53	2020-02-14 01:00:58
R2-2000984	PUR periodicity and UE multiplexing	Ericsson	available	2020-02-13 13:34:56	2020-02-14 01:00:57
R2-2000985	RRC-MAC interaction details and other FFSs for PUR in running MAC CR	Ericsson	available	2020-02-13 13:34:56	2020-02-14 01:00:57
R2-2000986	NB-IoT coexistence with NR	Ericsson	revised	2020-02-13 13:34:56	2020-02-14 01:00:57
R2-2000987	Early security re-activation at RRC Connection Resume	Ericsson, Qualcomm Inc., LG Electronics	revised	2020-02-13 13:34:56	2020-02-14 07:51:22
R2-2000988	Early security re-activation at RRC Connection Resume	Ericsson, Qualcomm Inc., LG Electronics	revised	2020-02-13 13:34:58	2020-02-14 07:51:22
R2-2000989	Summary of email discussion 108#51 on BAP open	Huawei	available	2020-02-13 13:38:39	2020-02-20 07:48:12
R2-2000990	draft TS for TS 38.340 (BAP)	Huawei	revised	2020-02-13 13:38:39	2020-02-20 07:48:14
R2-2000991	SSB Configuration for UL-PRS and DL-PRS	LG	available	2020-02-13 13:40:55	2020-02-13 15:25:07
R2-2000992	Summary of running MAC CR review issue list - phase 1	ZTE Corporation (email	available	2020-02-13 13:41:40	2020-02-13 21:39:01
R2-2000993	Summary of running MAC CR review issue list - phase 2	ZTE Corporation (email	available	2020-02-13 13:41:40	2020-02-13 21:39:01
R2-2000994	Summary of open issues in MAC running CR	ZTE Corporation (email	available	2020-02-13 13:41:40	2020-02-13 21:39:01
R2-2000995	Summary of open issues in MAC running CR - Updated	ZTE Corporation (email	noted	2020-02-13 13:41:40	2020-02-26 10:51:18
R2-2000996	Draft-Running MAC CR for 2-step RACH	ZTE Corporation (email	available	2020-02-13 13:41:40	2020-02-13 21:39:01
R2-2000997	Running MAC CR for 2-step RACH	ZTE Corporation (email	revised	2020-02-13 13:41:40	2020-02-13 21:39:01
R2-2000998	Resource configuration for 2-step CFRA	ZTE Corporation,	available	2020-02-13 13:41:42	2020-02-13 21:39:01
R2-2000999	The remaining issues for UL LBT failure	ZTE Corporation,	available	2020-02-13 13:41:42	2020-02-13 21:39:01
R2-2001000	Remaining Exceptional Pool Aspects	LG	available	2020-02-13 13:42:24	2020-02-13 15:25:24

R2-2001001	Remaining issues on V2X System Information	LG	available	2020-02-13 13:43:53	2020-02-13 15:25:43
R2-2001002	On reconfigurations when CHO is prepared	Nokia, Nokia Shanghai	available	2020-02-13 13:51:46	2020-02-14 06:45:21
R2-2001003	On T312 in Conditional PSCell change or handover	Nokia, Nokia Shanghai	available	2020-02-13 13:51:46	2020-02-14 06:45:21
R2-2001004	On serving cell's radio link status reporting for CHO preparation	Nokia, Nokia Shanghai	available	2020-02-13 13:51:46	2020-02-14 06:45:21
R2-2001005	On MN-initiated reconfigurations during conditional PSCell change	Nokia, Nokia Shanghai	available	2020-02-13 13:51:46	2020-02-14 06:45:21
R2-2001006	On informing the MN about CPC execution	Nokia, Nokia Shanghai	available	2020-02-13 13:51:46	2020-02-14 06:45:21
R2-2001007	On avoiding simultaneous CHO and CPC	Nokia, Nokia Shanghai	available	2020-02-13 13:51:46	2020-02-14 06:45:21
R2-2001008	Draft LS on avoiding simultaneous CHO and CPC	Nokia, Nokia Shanghai	revised	2020-02-13 13:51:47	2020-02-14 06:45:21
R2-2001009	Missing reportAddNeighMeas in periodic measurement reporting	Nokia, Nokia Shanghai	available	2020-02-13 13:51:47	2020-02-14 06:45:21
R2-2001010	HARQ process collision between CG and DG	Huawei, HiSilicon	available	2020-02-13 13:52:47	2020-02-14 05:00:11
R2-2001011	Prioritization issues for MAC CEs and PUSCH	Huawei, HiSilicon	available	2020-02-13 13:52:47	2020-02-14 05:00:11
R2-2001012	Discussion on PDCP duplication	Huawei,	available	2020-02-13 13:52:47	2020-02-14 05:00:11
R2-2001013	Remaining issues of cell restriction for PDCP	Huawei,	available	2020-02-13 13:52:47	2020-02-14 05:00:11
R2-2001014	UE redirection to a specific CN type and ping-pong behavior	Sony Europe B.V.	available	2020-02-13 14:01:44	2020-02-13 20:54:42
R2-2001015	Updates to reestablishment procedure	ZTE Corporation, Sanechips,	available	2020-02-13 14:09:13	2020-02-13 21:39:01
R2-2001016	Remaining details for IAB-MT access	Samsung Electronics	available	2020-02-13 14:10:47	2020-02-13 14:44:59
R2-2001017	Remaining issues on 2-step CBRA	Qualcomm Incorporated	available	2020-02-13 14:26:26	2020-02-14 04:45:24
R2-2001018	Consideration on uplink low-latency scheduling	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:45:41
R2-2001019	Pre-emptive BSR in DC scenario	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:45:41
R2-2001020	BSR and pre-BSR in packet re-routing scenario	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:45:41
R2-2001021	Cell selection for IAB RLF recovery	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:45:41
R2-2001022	Considerations on QoS based resource pool for NR V2X	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001023	Views on miscellaneous issues for NR V2X MAC layer	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001024	Paging probability based UE grouping	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001025	WUS grouping for mobile UE	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001026	Consideration on WUS configuration	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001027	Remaining issues on ANR reporting	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001028	Consideration on the de-prioritized PDU transmission	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001029	L1-priority applies for CG	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001030	Reuse R15 MAC CE on/off for R16 configurations	Lenovo, Motorola	available	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001031	Power headroom reporting for additional SRS	Lenovo, Motorola	noted	2020-02-13 14:27:45	2020-02-14 03:46:27
R2-2001032	Remaining issues on 2-step CFRA	Qualcomm Incorporated	available	2020-02-13 14:27:46	2020-02-14 04:45:24
R2-2001033	Remaining issues on Configured Grant	Huawei,	available	2020-02-13 14:28:38	2020-02-14 05:00:11
R2-2001034	Design of MIMO DL MAC CE	Qualcomm Incorporated	noted	2020-02-13 14:29:44	2020-02-14 04:45:24

R2-2001035	Introducing the support of Non-Public Networks	Nokia (Rapporteur)	revised	2020-02-13 14:30:51	2020-02-13 19:21:51
R2-2001036	Discussion the MIMO RRC parameter CRS pattern list	Qualcomm Incorporated	noted	2020-02-13 14:31:38	2020-02-14 04:45:24
R2-2001037	On DRX ambiguous period	Nokia, Nokia Shanghai Bell	available	2020-02-13 14:37:26	2020-02-13 14:50:33
R2-2001038	On DCP monitoring and CSI/SRS transmission	Nokia, Nokia Shanghai Bell	available	2020-02-13 14:37:26	2020-02-13 14:50:33
R2-2001039	On RRM measurement relaxation	Nokia, Nokia Shanghai	available	2020-02-13 14:37:26	2020-02-13 14:50:33
R2-2001040	On short DRX cycle applicability for DCP	Nokia, Nokia Shanghai Bell	available	2020-02-13 14:37:26	2020-02-13 14:50:33
R2-2001041	On combined RRC procedures	Nokia, Nokia Shanghai	available	2020-02-13 14:41:26	2020-02-13 14:50:33
R2-2001042	RRC processing delays for combined procedures	Nokia, Nokia Shanghai	available	2020-02-13 14:43:22	2020-02-13 14:50:33
R2-2001043	Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement	CATT	revised	2020-02-13 14:49:28	2020-02-14 04:58:28
R2-2001044	Stage-2 CR for Conditional PSCell Change for intra-SN without MN involvement	CATT	revised	2020-02-13 14:49:30	2020-02-14 04:58:28
R2-2001045	Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement	CATT	revised	2020-02-13 14:49:32	2020-02-14 06:37:45
R2-2001046	Summary of open issues for IIOT WI	Nokia, Nokia Shanghai	noted	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001047	Propagation delay compensation	Nokia, Nokia Shanghai	available	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001048	Determining the need for accurate reference time delivery	Nokia, Nokia Shanghai	available	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001049	Remaining issues on TSC scheduling	Nokia, Nokia Shanghai	available	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001050	Joint IP and Ethernet Header compression	Nokia, Nokia Shanghai	available	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001051	Ethernet Header compression remaining issues	Nokia, Nokia Shanghai	available	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001052	UE feature list and capabilities remaining issues	Nokia, Nokia Shanghai	available	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001053	Summary of e-mail discussion: [108#47][IIOT] UE feature list	Nokia, Nokia Shanghai	available	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001054	UE radio access capabilities introduction for NR IIOT WI	Nokia, Nokia Shanghai	revised	2020-02-13 14:54:51	2020-02-14 07:51:37
R2-2001055	UE feature list introduction for NR IIOT WI	Nokia, Nokia Shanghai	revised	2020-02-13 14:54:53	2020-02-14 07:51:37
R2-2001056	BH link failure handling	Nokia, Nokia Shanghai	available	2020-02-13 14:54:55	2020-02-14 07:51:58
R2-2001057	Remaining aspects of F1AP transport in EN-DC	Nokia, Nokia Shanghai	available	2020-02-13 14:54:55	2020-02-14 07:51:58
R2-2001058	Remaining aspects of IAB initial access	Nokia, Nokia Shanghai	available	2020-02-13 14:54:55	2020-02-14 07:51:58
R2-2001059	IP address assignment for IAB nodes	Nokia, Nokia Shanghai	available	2020-02-13 14:54:55	2020-02-14 07:51:58
R2-2001060	Remaining issues of BAP	Nokia, Nokia Shanghai	available	2020-02-13 14:54:55	2020-02-14 07:51:58
R2-2001061	IAB-MT features list and capabilities	Nokia, Nokia Shanghai	available	2020-02-13 14:54:55	2020-02-14 07:51:58
R2-2001062	Correction to support of UP-EDT, CP-EDT, in eMTC	Huawei,	revised	2020-02-13 14:55:04	2020-02-14 07:30:18
R2-2001063	On SrxlevRef adaptation in relaxed monitoring	Huawei,	available	2020-02-13 14:55:14	2020-02-14 07:30:18
R2-2001064	Reducing the number of neighbour cells/carriers to	Huawei,	available	2020-02-13 14:55:14	2020-02-14 07:30:18
R2-2001065	Introduction of additional enhancements for eMTC	Huawei,	revised	2020-02-13 14:55:14	2020-02-14 07:30:18
R2-2001066	Open issues on the 36.306 running CR for eMTC	Huawei,	available	2020-02-13 14:55:15	2020-02-14 07:30:18
R2-2001067	Enhancements to idle mode mobility for non-BL UEs	Huawei,	available	2020-02-13 14:55:15	2020-02-14 07:30:18
R2-2001068	Coexistence with NR for eMTC	Huawei,	available	2020-02-13 14:55:15	2020-02-14 07:30:18
R2-2001069	Remaining issue of DL quality report	Huawei,	available	2020-02-13 14:55:15	2020-02-14 07:30:18
R2-2001070	Remaining issue on standalone deployment	Huawei,	available	2020-02-13 14:55:15	2020-02-14 07:30:18

R2-2001071	Discussion on the proximity indication in connected	vivo	noted	2020-02-13 14:57:26	2020-02-14 06:48:35
R2-2001072	Consideration on fixed MCC for SNPN	vivo	noted	2020-02-13 14:57:26	2020-02-14 06:48:35
R2-2001073	Blind HARQ retransmissions	Lenovo, Motorola	available	2020-02-13 15:07:11	2020-02-13 15:30:36
R2-2001074	Ensuring timeliness of CSI Reporting	Lenovo, Motorola	available	2020-02-13 15:10:58	2020-02-13 15:30:36
R2-2001075	MCR for Option 2 FB and group size ambiguity	Lenovo, Motorola	available	2020-02-13 15:13:04	2020-02-13 15:30:36
R2-2001076	RLM Procedure	Lenovo, Motorola	available	2020-02-13 15:15:06	2020-02-13 15:30:36
R2-2001077	Zone configuration and Tx Rx distance calculation	Lenovo, Motorola	available	2020-02-13 15:17:17	2020-02-13 15:30:36
R2-2001078	Remaining aspects of NR V2X Tx UE behavior	Lenovo, Motorola Mobility, Deutsche Telekom, Fraunhofer	revised	2020-02-13 15:19:16	2020-02-13 15:30:36
R2-2001079	Introduction of Power headroom reporting for Additional SRS	Ericsson	revised	2020-02-13 15:19:28	2020-02-13 19:41:36
R2-2001080	Stage 2 CR for the introduction of SSR positioning support into LTE	ESA, Intel Corporation	revised	2020-02-13 15:25:50	2020-02-13 15:29:35
R2-2001081	Miscellaneous non-controversial corrections Set V	Ericsson	revised	2020-02-13 16:11:29	2020-02-14 06:21:10
R2-2001082	Clarification of handover and measurement capabilities in NR-DC and NE-DC	Ericsson	available	2020-02-13 16:11:31	2020-02-14 06:21:10
R2-2001083	Clarification of fallback per band feature set	Ericsson	available	2020-02-13 16:11:35	2020-02-14 06:21:10
R2-2001084	Un-defined band combinations in UECapabilityInformation	Ericsson	available	2020-02-13 16:11:36	2020-02-14 06:21:10
R2-2001085	[108#28][R16 RRC] RRC Merge – 38331 - Email discussion report	Ericsson	noted	2020-02-13 16:11:36	2020-02-14 06:21:10
R2-2001086	Rel-16 RRC 38331 CR Merge	Ericsson	revised	2020-02-13 16:11:36	2020-02-14 06:21:10
R2-2001087	Rel-16 ASN.1 review plan	Ericsson	revised	2020-02-13 16:11:36	2020-03-05 07:24:37
R2-2001088	On the introduction of P-bit into the single entry PHR MAC CE	Apple	withdrawn	2020-02-13 16:26:56	2020-02-14 04:51:37
R2-2001089	Initial view on introduction of the MPE related enhancements	Apple	available	2020-02-13 16:26:56	2020-02-14 04:51:37
R2-2001090	Discussion on PC5-RRC AS-layer configuration failure and T400 expiry handling	Intel Corporation	available	2020-02-13 16:31:51	2020-02-14 05:49:23
R2-2001091	PC5 QoS information in UAI	Intel	available	2020-02-13 16:31:51	2020-02-14 05:49:23
R2-2001092	UE Capability for Rel-16 NR mobility enhancement	Intel	withdrawn	2020-02-13 16:31:51	
R2-2001093	UE Capability for Rel-16 LTE even further mobility enhancement	Intel Corporation	withdrawn	2020-02-13 16:31:51	
R2-2001094	CAPC selection for UL transmissions	Intel	available	2020-02-13 16:31:51	2020-02-14 05:25:15
R2-2001095	RAN2 aspect of UE capability for 2-step RACH	Intel	available	2020-02-13 16:31:51	2020-02-14 05:25:15
R2-2001096	Security requirement for UE capability enquiry for LTE	Intel Corporation,	revised	2020-02-13 16:31:51	2020-02-14 05:25:15
R2-2001097	Introduction of Rel-16 eMTC enhancements	Intel	revised	2020-02-13 16:31:53	2020-02-14 05:25:15
R2-2001098	Non-BL UE in normal and enhanced coverage	Intel	available	2020-02-13 16:31:56	2020-02-14 05:25:15
R2-2001099	Support of PC5-S Keep alive signalling	Intel	available	2020-02-13 16:31:56	2020-02-14 05:49:23
R2-2001100	Clarification on CEF report	ZTE Corporation,	available	2020-02-13 16:41:43	2020-02-14 05:11:11
R2-2001101	Handling of dropped SRs	InterDigital	available	2020-02-13 17:09:49	2020-02-13 21:49:52

R2-2001102	Discussion on MsgB PDCCH	Potevio Company Limited	available	2020-02-13 17:13:55	2020-02-14 03:53:17
R2-2001103	Remaining issues for CPC-intra-SN in NR	Potevio Company Limited	available	2020-02-13 17:19:34	2020-02-14 03:53:17
R2-2001104	Proposals for [108#36][NR eMIMO] Running RRC CR (Ericsson)	Ericsson Limited	noted	2020-02-13 17:27:03	2020-02-13 17:42:22
R2-2001105	Avoid consecutive CHO failure	Beijing Xiaomi	available	2020-02-13 17:29:56	2020-02-13 17:33:34
R2-2001106	Discussion on the use case of CHO failure recovery	Beijing Xiaomi	available	2020-02-13 17:29:56	2020-02-13 17:33:34
R2-2001107	Discussion on BSR prioritization issue	Beijing Xiaomi	available	2020-02-13 17:29:56	2020-02-13 17:33:34
R2-2001108	Remaining CAPC aspects for CG when SRB is multiplexed	NEC Telecom	available	2020-02-13 17:30:52	2020-02-13 17:57:28
R2-2001109	Running RRC CR for Introduction of NR eMIMO	Ericsson	revised	2020-02-13 17:33:20	2020-02-13 17:42:22
R2-2001110	[DRAFT] LS on throughput measurement in DC based PDCP duplication scenario	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001111	[DRAFT] LS on MDT configurations	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001112	Definition of number of active UEs	Ericsson, CMCC	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001113	Handling PDCP queueing delay measurements in split bearer scenario	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001114	Measurement configuration options for immediate and logged MDT in NR	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001115	Neighbor frequency coverage hole indication in logged MDT	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001116	Open issues associated to RA report	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001117	Open issues related to current logged MDT contents in running CR	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001118	SCGFailureInformation message content alignment with RLFReport	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001119	Throughput measurement in duplication scenario	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001120	On inter-frequencyand inter-RAT measurement priority handling	Ericsson	available	2020-02-13 17:35:36	2020-02-13 18:10:38
R2-2001121	On inter-frequencyand inter-RAT measurement priority handling	Ericsson	available	2020-02-13 17:35:37	2020-02-13 18:10:38
R2-2001122	Measurement priority handling in NR	Ericsson	available	2020-02-13 17:35:39	2020-02-13 18:10:38
R2-2001123	Report of email discussion [108#93] running 38.331 CR to support RACH report	Ericsson	available	2020-02-13 17:35:39	2020-02-13 18:10:38
R2-2001124	Early measurement indication in NR SIB1	ZTE Corporation, Sanechips,	available	2020-02-13 17:42:06	2020-02-14 00:48:32

R2-2001125	Preamble grouping for 2-step RA	NEC Telecom	available	2020-02-13 17:42:34	2020-02-13 17:57:28
R2-2001126	Remaining update for PDSCH TCI state MAC CE	Ericsson	noted	2020-02-13 17:46:32	2020-02-13 17:48:34
R2-2001127	Remaining details for standalone LTE-M deployment	Ericsson	reserved	2020-02-13 17:47:11	
R2-2001128	New MAC CE for indicating spatial resource for PUCCH resources	Ericsson	noted	2020-02-13 17:52:37	2020-02-13 17:54:21
R2-2001129	Introduction of Even futher Mobility enhancement in E-UTRAN	Ericsson India Private	revised	2020-02-13 17:56:30	2020-02-13 20:02:20
R2-2001130	Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 36.306.	China Telecom, Huawei,	revised	2020-02-13 18:07:11	2020-02-13 18:21:08
R2-2001131	Support of inter-RAT handover from NR to EN-DC in TS 36.331	China Telecom, Huawei,	revised	2020-02-13 18:07:31	2020-02-13 18:21:08
R2-2001132	Support of inter-RAT handover from NR to EN-DC in TS 38.331	China Telecom, Huawei,	revised	2020-02-13 18:07:31	2020-02-13 18:21:08
R2-2001133	Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 38.306	China Telecom, Huawei,	revised	2020-02-13 18:07:31	2020-02-13 18:21:08
R2-2001134	Interpretation of UE capabilities for non-contiguous intra-band CA	Nokia, Nokia Shanghai	noted	2020-02-13 18:13:11	2020-02-14 07:48:26
R2-2001135	Clarification to UE capabilities for non-contiguous intra-band CA	Nokia, Nokia Shanghai	postponed	2020-02-13 18:13:11	2020-02-14 07:48:26
R2-2001136	Clarification to UE capabilities for non-contiguous intra-band CA	Nokia, Nokia Shanghai	postponed	2020-02-13 18:13:17	2020-02-14 07:48:26
R2-2001137	Clarification to UE capabilities for non-contiguous intra-band CA	Nokia, Nokia Shanghai	postponed	2020-02-13 18:13:19	2020-02-14 07:48:26
R2-2001138	Clarification to UE capabilities for non-contiguous intra-band CA	Nokia, Nokia Shanghai	postponed	2020-02-13 18:13:22	2020-02-14 07:48:26
R2-2001139	Inclusion of Maximum Number of PDCP SDUs per TTI for DL Categories 22-26	Nokia, Nokia Shanghai	revised	2020-02-13 18:13:25	2020-02-14 07:48:26
R2-2001140	Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs	Nokia, Nokia Shanghai	postponed	2020-02-13 18:13:28	2020-02-14 08:28:38
R2-2001141	Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs	Nokia, Nokia Shanghai	postponed	2020-02-13 18:13:30	2020-02-14 08:28:38
R2-2001142	Clarification on codebook-HARQ-ACK-r13 capability for CA with more than 5CCs	Nokia, Nokia Shanghai	postponed	2020-02-13 18:13:34	2020-02-14 08:28:38
R2-2001143	A2-like measurement results in Logged MDT	Nokia, Nokia Shanghai	available	2020-02-13 18:13:54	2020-02-14 07:48:26
R2-2001144	CGI in MDT reports	Nokia, Nokia Shanghai	available	2020-02-13 18:13:54	2020-02-14 07:48:26
R2-2001145	Location information encoding in NR MDT	Nokia, Nokia Shanghai	available	2020-02-13 18:13:54	2020-02-14 07:48:26
R2-2001146	Principle on Rareport entry logging	Nokia, Nokia Shanghai	available	2020-02-13 18:13:54	2020-02-14 07:48:27
R2-2001147	Per DRB measurements in TS38.314	Nokia, Nokia Shanghai	available	2020-02-13 18:13:54	2020-02-14 08:28:38
R2-2001148	TP to 38.300 on SON support	Nokia, Nokia Shanghai	available	2020-02-13 18:13:54	2020-02-14 07:48:27
R2-2001149	Source connection handling during DAPS HO	Qualcomm Incorporated	available	2020-02-13 18:18:13	2020-02-14 01:58:47
R2-2001150	Remaining issues on failure handling for conditional PSCell change	Qualcomm Incorporated	available	2020-02-13 18:19:47	2020-02-14 01:58:47
R2-2001151	Remaining issues on RRC message handling for conditional PSCell change	Qualcomm Incorporated	available	2020-02-13 18:21:16	2020-02-14 01:58:47
R2-2001152	Remaining open issues on DAPS HO	Qualcomm Incorporated	available	2020-02-13 18:22:29	2020-02-14 01:58:47
R2-2001153	UE capability handling for DAPS	Nokia Italy	available	2020-02-13 18:32:23	2020-02-13 19:23:21
R2-2001154	Discussion on open issues of on-demand SI procedure in connected	Lenovo, Motorola	available	2020-02-13 18:51:49	2020-02-13 20:23:49
R2-2001155	UE-initiated change of NPN UE configuration	Lenovo, Motorola	noted	2020-02-13 18:55:48	2020-02-13 20:24:06
R2-2001156	Correction of UE assistance information	Samsung Telecommun	agreed	2020-02-13 18:59:55	2020-02-13 19:33:21

R2-2001157	Correction of UE assistance information	Samsung Telecommun	postponed	2020-02-13 18:59:57	2020-02-13 19:33:21
R2-2001158	Minor corrections collected by Rapporteur	Samsung Telecommun	revised	2020-02-13 18:59:58	2020-02-13 19:33:21
R2-2001159	Draft 36331 Rel-16 resulting from CR merge [108#28][R16 RRC]	Samsung Telecommunications	noted	2020-02-13 19:00:00	2020-02-13 19:33:21
R2-2001160	Notes from 36331 Rel-16 CR merge [108#28][R16 RRC]	Samsung Telecommunications	noted	2020-02-13 19:00:00	2020-02-14 09:49:45
R2-2001161	Introduction of Rel-16 eMTC enhancements	Nokia Solutions &	withdrawn	2020-02-13 19:59:31	2020-02-14 08:11:01
R2-2001162	Remaining eDCCA issues (early measurements, fast MCG recovery)	Samsung Telecommun	available	2020-02-13 20:00:23	2020-02-14 08:56:05
R2-2001163	Remaining issues concerning conditional change (mostly PSCell)	Samsung Telecommun	available	2020-02-13 20:00:23	2020-02-14 07:36:04
R2-2001164	Capability coordination for DAPS	Samsung Telecommun	reserved	2020-02-13 20:00:23	
R2-2001165	Whether to continue R15 general principle to limit UE capability size	Samsung Telecommun	postponed	2020-02-13 20:00:23	2020-02-14 07:36:04
R2-2001166	Review of UE information in NR, alignment and harmonisation	Samsung Telecommun	reserved	2020-02-13 20:00:23	
R2-2001167	Introduction of Rel-16 eMTC enhancements	Nokia	revised	2020-02-13 20:07:20	2020-02-14 08:11:01
R2-2001168	Introduction of Rel-16 NR positioning	Intel	revised	2020-02-13 20:11:46	
R2-2001169	Network indexing for UAC and Connection Control	Intel	noted	2020-02-13 20:11:47	2020-02-14 06:26:09
R2-2001170	Remaining mobility issues for idle mode and	Intel	noted	2020-02-13 20:11:47	2020-02-14 06:26:09
R2-2001171	LCP restrictions in IIoT	Intel	available	2020-02-13 20:11:47	2020-02-14 06:26:09
R2-2001172	Remaining issues in PDCP duplication	Intel	available	2020-02-13 20:11:47	2020-02-14 06:26:09
R2-2001173	Summary on LPP for aganda 6.8.2.3	Intel	noted	2020-02-13 20:11:47	2020-02-23 09:17:55
R2-2001174	Open issues in the specification of NPN in TS 38.304	Lenovo, Motorola	noted	2020-02-13 20:13:58	2020-02-13 22:51:46
R2-2001175	Clarification on PDCP version change	Huawei,	postponed	2020-02-13 21:00:35	2020-02-13 21:23:28
R2-2001176	Clarification on PDCP version change	Huawei,	postponed	2020-02-13 21:00:37	2020-02-13 21:23:28
R2-2001177	Correction on the need for reconfiguration with sync in (NG)EN-DC, NR-DC and NE-DC	Huawei, HiSilicon,	available	2020-02-13 21:00:38	2020-02-13 21:23:28
R2-2001178	Correction to RRC reconfiguration complete for NR-	Huawei,	postponed	2020-02-13 21:00:39	2020-02-13 21:23:28
R2-2001179	Correction to DRB addition/modification for the LTE UE not in EN-DC	Huawei, HiSilicon	merged	2020-02-13 21:00:40	2020-02-13 21:23:28
R2-2001180	Potential issue on the Counter Check in (NG)EN-DC and NR standalone	Huawei, HiSilicon	available	2020-02-13 21:00:41	2020-02-13 21:23:28
R2-2001181	Draft LS to SA3 on potential issue of Counter Check	Huawei,	available	2020-02-13 21:00:41	2020-02-13 21:23:28
R2-2001182	Clarification on NE-DC only band combination	Huawei, HiSilicon	available	2020-02-13 21:00:41	2020-02-13 21:23:28
R2-2001183	Clarification on gap sharing configuration at handover and re-establishment	Huawei, HiSilicon	revised	2020-02-13 21:00:42	2020-02-13 21:23:28
R2-2001184	Clarification on gap sharing configuration at handover and re-establishment	Huawei, HiSilicon	revised	2020-02-13 21:00:43	2020-02-13 21:23:28
R2-2001185	"Need M" field mandatory presence due to a child presence condition	Huawei, HiSilicon	withdrawn	2020-02-13 21:00:44	
R2-2001186	Clarification on SCell release	Huawei,	available	2020-02-13 21:00:44	2020-02-13 21:23:28
R2-2001187	Correction on parameter description of beamManagementSSB-CSI-RS	Huawei, HiSilicon	agreed	2020-02-13 21:00:45	2020-02-13 21:23:28
R2-2001188	On the support of NG-based (i.e. via CN) handover based using CGI report	Huawei, HiSilicon	available	2020-02-13 21:00:46	2020-02-13 21:23:28
R2-2001189	Summary of [108#48][DCCA] DCCA R2 feature list	Huawei	noted	2020-02-13 21:00:46	2020-02-26 14:26:58
R2-2001190	TP for 38.331 on introducing UE capability for eDDCA	Huawei	endorsed	2020-02-13 21:00:46	2020-03-05 22:11:32
R2-2001191	TP for 36.331 on introducing UE capability for eDCCA	Huawei	endorsed	2020-02-13 21:00:46	2020-03-06 10:46:24
R2-2001192	Running CR for 38.306 on introducing UE capability for eDCCA	Huawei	endorsed	2020-02-13 21:00:46	2020-03-06 10:46:24

R2-2001193	Discussion on UE behaviour of checking MR-DC band combination when performing early	Huawei, HiSilicon	available	2020-02-13 21:00:47	2020-02-14 07:27:23
R2-2001194	Discussion on editor's notes in the running CR for early measurement	Huawei, HiSilicon	available	2020-02-13 21:00:47	2020-02-14 07:27:23
R2-2001195	Considerations on SFTD measurement in idle/inactive state	Huawei, HiSilicon	available	2020-02-13 21:00:47	2020-02-14 07:27:24
R2-2001196	MAC CE signalling for multi-beam enhancement	Huawei,	noted	2020-02-13 21:00:47	2020-02-13 21:23:28
R2-2001197	Remaining FFSs for MT-EDT	ZTE Corporation,	available	2020-02-13 21:09:04	2020-02-14 08:09:03
R2-2001198	D-PUR reconfiguration and release for CP solution	ZTE Corporation,	available	2020-02-13 21:12:11	2020-02-14 08:09:28
R2-2001199	Introduction of bandlist for ENDC for 5G indicator	HUAWEI, British	revised	2020-02-13 21:15:12	2020-02-13 21:28:40
R2-2001200	MAC-RRC coordination for TA validation and some FFS for D-PUR	ZTE Corporation,	available	2020-02-13 21:15:58	2020-02-14 08:09:43
R2-2001201	Remaining FFSs for D-PUR in 36.331	ZTE Corporation,	available	2020-02-13 21:18:34	2020-02-14 08:09:59
R2-2001202	Remaining FFSs for D-PUR in 36.321	ZTE Corporation,	available	2020-02-13 21:21:38	2020-02-14 08:10:16
R2-2001203	Consideration on mobility for WUS	ZTE Corporation,	available	2020-02-13 21:24:43	2020-02-14 08:10:40
R2-2001204	Remaining issue on PHR	Ericsson	available	2020-02-13 21:25:13	2020-02-13 21:41:52
R2-2001205	Configured Grant remaining issues	Ericsson	available	2020-02-13 21:25:13	2020-02-13 21:41:52
R2-2001206	Channel access priority for Configured Grant	Ericsson	available	2020-02-13 21:25:13	2020-02-13 21:41:52
R2-2001207	Handling consistent UL LBT failures	Ericsson	available	2020-02-13 21:25:13	2020-02-13 21:41:52
R2-2001208	Remaining issues on RACH	Ericsson	available	2020-02-13 21:25:13	2020-02-13 21:41:52
R2-2001209	Gapless msgA transmissions in NR-U	Ericsson	available	2020-02-13 21:25:13	2020-02-13 21:41:52
R2-2001210	Formula for mapping UE to WUS group	ZTE Corporation,	available	2020-02-13 21:26:31	2020-02-14 08:10:58
R2-2001211	FFSs for supporting short eDRX in RRC_INACTIVE for eMTC in 5GC	ZTE Corporation,	available	2020-02-13 21:32:04	2020-02-14 08:11:17
R2-2001212	Propagation Delay Compensation in TSC	ZTE Corporation, Sanechips, China	available	2020-02-13 21:43:04	2020-02-14 08:13:38
R2-2001213	Running 36.302 CR for R16 eMTC	ZTE Corporation,	revised	2020-02-13 21:47:38	2020-02-14 08:13:54
R2-2001214	Semi-persistent and aperiodic SRS-for-positioning	Qualcomm Incorporated	available	2020-02-13 21:53:14	2020-02-14 07:24:30
R2-2001215	RAN2 impacts of coexistence between NB-IoT and NR	ZTE Corporation,	available	2020-02-13 21:54:03	2020-02-14 08:14:13
R2-2001216	Introduction of PPP-RTK (SSR)	Qualcomm Incorporated	agreed	2020-02-13 21:56:24	2020-02-14 07:24:30
R2-2001217	Draft CR 2-step RA 38.331 Running CR	Ericsson (Email disc	revised	2020-02-13 21:56:57	2020-02-13 22:15:43
R2-2001218	Open issues for RRC	Ericsson (Email disc	revised	2020-02-13 21:56:57	2020-02-13 22:15:43
R2-2001219	Phase 2 and phase 1 issue list	Ericsson (Email disc	available	2020-02-13 21:56:57	2020-02-13 22:15:44
R2-2001220	Data rate for the case of single carrier standalone operation	Ericsson	revised	2020-02-13 21:57:09	2020-02-13 22:12:33
R2-2001221	Clarification on maximum number of supported PDSCH Resource Element mapping patterns	Ericsson	not pursued	2020-02-13 21:57:12	2020-02-13 22:12:33
R2-2001222	Handling of FR2 fallback band combinations	Ericsson	available	2020-02-13 21:57:13	2020-02-13 22:12:33
R2-2001223	[DRAFT] Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2	Ericsson	available	2020-02-13 21:57:13	2020-02-13 22:12:33
R2-2001224	Capability coordination for NE-DC	Ericsson	revised	2020-02-13 21:57:13	2020-02-13 22:12:33
R2-2001225	Remaining issues for SCell dormancy	Ericsson	noted	2020-02-13 21:57:14	2020-02-13 22:12:33
R2-2001226	Short CSI reporting for NR CA	Ericsson	noted	2020-02-13 21:57:14	2020-02-13 22:12:33
R2-2001227	Inter-node signaling of UE Capabilities	Ericsson	available	2020-02-13 21:57:14	2020-02-13 22:12:33
R2-2001228	Introduction of NR positioning	Qualcomm Incorporated	available	2020-02-13 21:59:03	2020-02-14 07:24:30

R2-2001229	Remaining issues for EHC in TSC	ZTE Corporation,	available	2020-02-13 21:59:31	2020-02-14 08:14:28
R2-2001230	Introduction of PPP-RTK (SSR)	Qualcomm Incorporated	merged	2020-02-13 22:01:17	2020-02-14 07:24:30
R2-2001231	Discussion on timer T400	Nokia, Nokia Shanghai	available	2020-02-13 22:02:06	2020-02-13 22:26:29
R2-2001232	posSIBs for NR positioning	Qualcomm Incorporated	available	2020-02-13 22:03:07	2020-02-14 07:24:30
R2-2001233	Request for accurate reference timing delivery in TSC	ZTE Corporation, Sanechips, China	available	2020-02-13 22:03:39	2020-02-14 08:14:45
R2-2001234	Summary of [108#89][NR/Pos] UE-based downlink positioning assistance data	Qualcomm Incorportaed	available	2020-02-13 22:05:03	2020-02-14 07:24:30
R2-2001235	Quality Report in eMTC Remaining Issues	Ericsson	available	2020-02-13 22:06:03	2020-02-14 01:05:20
R2-2001236	Segmentation info in gNB	Ericsson	available	2020-02-13 22:06:03	2020-02-14 01:05:20
R2-2001237	Spatial Relations and MAC CE	Ericsson	available	2020-02-13 22:06:03	2020-02-14 01:05:20
R2-2001238	Transfer of unicast RS observations with GNSS integer ambiguity level information	Ericsson	available	2020-02-13 22:06:03	2020-02-14 01:05:20
R2-2001239	Overhead in current structure	Ericsson	available	2020-02-13 22:06:03	2020-02-14 01:05:20
R2-2001240	UE-based configuration options	Ericsson	available	2020-02-13 22:06:03	2020-02-14 01:05:20
R2-2001241	Summary of [108#88][NR/Rel-16] Remaining issues on broadcast assistance data	Ericsson	noted	2020-02-13 22:06:03	2020-02-15 17:17:42
R2-2001242	Summary of [108#73] [eMTC] TPs for RSS	Ericsson	noted	2020-02-13 22:06:03	2020-02-14 01:05:20
R2-2001243	Summary of [108#87][NR/Rel-16] Additional path	Ericsson	revised	2020-02-13 22:06:03	2020-02-14 01:05:21
R2-2001244	Remaining details for UE-based downlink positioning assistance data	Qualcomm Incorporated	available	2020-02-13 22:07:02	2020-02-14 07:24:30
R2-2001245	Summary of UE-based positioning Agenda Item 6.8.2.5	Qualcomm Incorporated	available	2020-02-13 22:15:45	2020-02-25 00:37:34
R2-2001246	Running CR for 36.300 on CA/DC Enhancements	Ericsson	revised	2020-02-13 22:15:53	2020-02-14 00:00:54
R2-2001247	Running CR for 38.300 for CA/DC Enhancements	Ericsson	revised	2020-02-13 22:15:54	2020-02-14 00:00:54
R2-2001248	Running CR for 36.331 for CA/DC Enhancements	Ericsson	revised	2020-02-13 22:15:55	2020-02-17 18:47:55
R2-2001249	Running CR for 38.331 on CA/DC Enhancements	Ericsson	revised	2020-02-13 22:15:57	2020-02-17 18:47:55
R2-2001250	Early measurement configuration in UE context retrieval	Ericsson, Qualcomm Incorporated, LG	available	2020-02-13 22:15:58	2020-02-13 23:01:51
R2-2001251	Granular reporting of early measurement results	Ericsson, MediaTek Inc., ZTE	available	2020-02-13 22:15:58	2020-02-13 23:01:51
R2-2001252	Report on Email Discussion [108#54][DCCA] Early measurements (Ericsson)	Ericsson	noted	2020-02-13 22:15:58	2020-02-13 23:01:51
R2-2001253	Synchronization and random access to the PSCell during resume	Ericsson	noted	2020-02-13 22:15:58	2020-02-13 23:01:51
R2-2001254	Running RRC CR for NR Shared Spectrum	Qualcomm Incorporated	revised	2020-02-13 22:40:50	2020-02-14 06:19:21
R2-2001255	Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED for Positioning	Ericsson	noted	2020-02-13 22:42:03	2020-02-14 01:05:21
R2-2001256	Introducing support for GNSS Integer Ambiguity Level Indications	Ericsson	revised	2020-02-13 22:48:20	2020-02-14 01:05:20
R2-2001257	Conventional HO overriding a CHO command	ZTE Corporation,	available	2020-02-13 22:50:20	2020-02-14 06:52:18
R2-2001258	CHO triggering configuration	ZTE Corporation,	available	2020-02-13 22:50:20	2020-02-14 06:52:18
R2-2001259	Applicable CHO configuration	ZTE Corporation,	available	2020-02-13 22:50:20	2020-02-14 06:52:18
R2-2001260	Discussion on fast RLF recovery when applying CHO and fast MCG recovery	ZTE Corporation,	available	2020-02-13 22:50:20	2020-02-14 06:52:18
R2-2001261	Remaining issues on UE capability coordination for DAPS HO	ZTE Corporation,	available	2020-02-13 22:50:21	2020-02-14 06:52:18
R2-2001262	Remaining Issues on Early Measurements	ZTE Corporation,	available	2020-02-13 22:50:21	2020-02-14 06:52:18

R2-2001263	On SRS transmission on SCell in dormancy	ZTE Corporation,	noted	2020-02-13 22:50:21	2020-02-14 06:52:18
R2-2001264	On transmission from dormancy behavior	ZTE Corporation,	noted	2020-02-13 22:50:21	2020-02-14 06:52:18
R2-2001265	On UL dormant BWP	ZTE Corporation,	noted	2020-02-13 22:50:21	2020-02-14 06:52:18
R2-2001266	Further issues on MCG fast recovery	ZTE Corporation,	noted	2020-02-13 22:50:21	2020-02-14 06:52:18
R2-2001267	Running Stage-2 CR for NR Shared Spectrum	Qualcomm Incorporated	revised	2020-02-13 23:03:37	2020-02-14 06:19:21
R2-2001268	Restructuring of LPP Broadcast solution to remove	Ericsson	available	2020-02-13 23:17:05	2020-02-14 01:05:20
R2-2001269	Restructuring of RRC Broadcast solution to remove	Ericsson	available	2020-02-13 23:31:59	2020-02-14 01:05:20
R2-2001270	UE Capability for Rel-16 NR mobility enhancement	Intel	noted	2020-02-13 23:36:34	2020-02-14 05:25:15
R2-2001271	RRC running CR for introduction of NR mobility enhancement [108#34]	Intel Corporation	revised	2020-02-13 23:36:35	2020-02-14 05:40:41
R2-2001272	UE Capability for Rel-16 LTE even further mobility enhancement	Intel Corporation	withdrawn	2020-02-13 23:36:37	
R2-2001273	Downgrading configuration of SRS for antenna switching - Alt. 1	Intel Corporation	available	2020-02-13 23:36:39	2020-02-14 05:25:15
R2-2001274	Downgrading configuration of SRS for antenna switching - Alt. 1	Intel Corporation	available	2020-02-13 23:36:41	2020-02-14 05:25:15
R2-2001275	Downgrading configuration of SRS for antenna	Intel	noted	2020-02-13 23:36:43	2020-02-14 05:25:15
R2-2001276	Downgrading configuration of SRS for antenna switching - Alt. 2	Intel Corporation	available	2020-02-13 23:36:43	2020-02-14 05:25:15
R2-2001277	Downgrading configuration of SRS for antenna switching - Alt. 2	Intel Corporation	available	2020-02-13 23:36:44	2020-02-14 05:25:15
R2-2001278	Single positioning method approach in LPP	Ericsson	available	2020-02-13 23:41:11	2020-02-14 01:05:20
R2-2001279	Summary of [108#86][NR/Pos] Single positioning method approach in LPP	Ericsson	revised	2020-02-13 23:44:39	2020-02-14 01:05:20
R2-2001280	Summary of e-mail discussion on PDCP Running CR for NR IIOT	LG Electronics	available	2020-02-13 23:51:56	2020-02-13 23:58:37
R2-2001281	PDCP running CR for NR IIOT	PDCP Rapporteur	revised	2020-02-13 23:51:57	2020-02-13 23:58:37
R2-2001282	Introducing EHC in LTE PDCP	PDCP Rapporteur	available	2020-02-13 23:51:59	2020-02-14 01:05:14
R2-2001283	Issues on Duplicate PDU discard	LG	available	2020-02-13 23:52:00	2020-02-13 23:58:37
R2-2001284	Issues on Duplication Activation-Deactivation MAC	LG	available	2020-02-13 23:52:00	2020-02-13 23:58:37
R2-2001285	ON Duration adaptation	LG Electronics	available	2020-02-13 23:52:00	2020-02-13 23:58:37
R2-2001286	Summary of PDCP duplication enhancements	LG	noted	2020-02-13 23:52:00	2020-02-20 12:37:56
R2-2001287	CR for introducing Ethernet Headere Compression	Huawei,HiSil	withdrawn	2020-02-13 23:55:53	
R2-2001288	Open issues in PDCP duplication enhancements	Qualcomm Incorporated	available	2020-02-13 23:57:32	2020-02-14 03:55:29
R2-2001289	Open issues in Intra-UE prioritization	Qualcomm Incorporated	available	2020-02-14 00:02:53	2020-02-14 03:51:30
R2-2001290	Open issues in Scheduling Enhancements	Qualcomm Incorporated	available	2020-02-14 00:05:20	2020-02-14 03:54:30
R2-2001291	Open issues in autonomous retransmission	Qualcomm Incorporated	available	2020-02-14 00:07:39	2020-02-14 03:52:33
R2-2001292	Allow fallback band combinations when reporting SRS-TxSwitch capability	Qualcomm Incorporated	available	2020-02-14 00:09:25	2020-02-14 00:48:38
R2-2001293	Discussion of the PUCCH & SRS Resource Release	Qualcomm Incorporated	available	2020-02-14 00:09:28	2020-02-14 00:48:38
R2-2001294	PDCP Recovery conditions	Qualcomm Incorporated	available	2020-02-14 00:09:28	2020-02-14 00:48:38
R2-2001295	Ordering of PDCP SN and RLC SN	Qualcomm Incorporated	available	2020-02-14 00:09:29	2020-02-14 00:48:38
R2-2001296	Ordering of PDCP SN and RLC SN	Qualcomm Incorporated	available	2020-02-14 00:09:31	2020-02-14 00:48:38
R2-2001297	Open issues in Accurate Reference Timing Delivery	Qualcomm Incorporated	available	2020-02-14 00:09:33	2020-02-14 03:56:40
R2-2001298	Open issues in Ethernet Header Compression	Qualcomm Incorporated	available	2020-02-14 00:11:34	2020-02-14 04:00:49
R2-2001299	Handling of bwp-InactivityTimer upon BWP switching	LG Electronics	available	2020-02-14 00:15:17	2020-02-14 04:54:00

R2-2001300	Consideration on Short DRX cycle on DCP	LG Electronics Inc.	available	2020-02-14 00:15:17	2020-02-14 04:54:00
R2-2001301	Remaining issue on UE assistance	LG	available	2020-02-14 00:15:17	2020-02-14 04:54:00
R2-2001302	SRS transmission on dormancy SCell	LG Electronics	noted	2020-02-14 00:15:17	2020-02-14 04:54:00
R2-2001303	Consideration on dormant uplink BWP	LG Electronics	noted	2020-02-14 00:15:17	2020-02-14 04:54:00
R2-2001304	Consideration on Truncated format on SCell BFR MAC CE	LG Electronics	noted	2020-02-14 00:15:17	2020-02-14 04:54:00
R2-2001305	Timing of Key Derivation in Conditional Handover	Futurewei	available	2020-02-14 00:18:12	2020-02-14 03:06:21
R2-2001306	Draft LS on the Timing of AS Key Derivation in Conditional Handover	Futurewei	available	2020-02-14 00:18:13	2020-02-14 03:06:21
R2-2001307	Adaptation of QoS Flow to DRB Mapping for MDBV Enforcement	Futurewei	available	2020-02-14 00:18:13	2020-02-14 03:06:21
R2-2001308	Initialization of HFNs of RX_DELIV and RX_NEXT	Futurewei	available	2020-02-14 00:18:13	2020-02-14 03:06:21
R2-2001309	Configuration and Processing Order of ROHC and	Futurewei	available	2020-02-14 00:18:13	2020-02-14 03:06:21
R2-2001310	PRN Running CR for TS 38.304	Qualcomm Incorporated	revised	2020-02-14 00:20:59	2020-02-14 00:38:57
R2-2001311	Report for email discussion [108#71][PRN] Running 38.304 CR (Qualcomm)	Qualcomm Incorporated	noted	2020-02-14 00:26:52	2020-02-14 00:40:10
R2-2001312	Report for email discussion 108#04 on support of 70MHz CBW	Huawei, HiSilicon	noted	2020-02-14 00:27:40	2020-02-14 01:33:54
R2-2001313	CR to 38.331 on support of 70MHz channel bandwidth	Huawei, HiSilicon,	revised	2020-02-14 00:27:40	2020-02-14 01:33:54
R2-2001314	CR to 38.306 on support of 70MHz channel bandwidth	Huawei, HiSilicon,	revised	2020-02-14 00:27:41	2020-02-14 01:33:54
R2-2001315	Discussion on under-reporting CSI-RS capabilities	Huawei, HiSilicon,	revised	2020-02-14 00:27:42	2020-02-14 01:33:54
R2-2001316	CR on CSI UE capabilities parameters (38.331)	Huawei, HiSilicon,	postponed	2020-02-14 00:27:42	2020-02-14 01:33:54
R2-2001317	CR on CSI UE capabilities parameters (38.306)	Huawei, HiSilicon,	postponed	2020-02-14 00:27:44	2020-02-14 01:33:54
R2-2001318	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331)	Huawei, HiSilicon	revised	2020-02-14 00:27:45	2020-02-14 01:33:54
R2-2001319	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306)	Huawei, HiSilicon	revised	2020-02-14 00:27:46	2020-02-14 01:33:54
R2-2001320	Discussion on capabilities with XDD-FRX differentiations	Huawei, HiSilicon	available	2020-02-14 00:27:47	2020-02-14 01:33:54
R2-2001321	Draft reply LS on capabilities with XDD-FRX differentiations	Huawei, HiSilicon	available	2020-02-14 00:27:47	2020-02-14 01:33:54
R2-2001322	CR on fallback BC reporting	Huawei, HiSilicon	revised	2020-02-14 00:27:48	2020-02-14 01:33:54
R2-2001323	CR on maximum stored number of deprioritisation frequencies	Huawei, HiSilicon	revised	2020-02-14 00:27:48	2020-02-14 01:33:54
R2-2001324	CR on overheating assistance reporting in handover	Huawei,	revised	2020-02-14 00:27:49	2020-02-14 01:33:54
R2-2001325	36.331 CR for addressing overheating issue in (NG)EN-DC (comeback from RAN2#108)	Huawei, Huawei	available	2020-02-14 00:27:50	2020-02-14 04:44:33
R2-2001326	38.331 CR for addressing overheating issue in (NG)EN-DC (comeback from RAN2#108)	Huawei, Huawei	available	2020-02-14 00:27:52	2020-02-14 04:44:33
R2-2001327	On the enhancement of SRS carrier switching capability	Huawei, HiSilicon	available	2020-02-14 00:27:53	2020-02-14 01:33:54
R2-2001328	On the over-cold issue	Huawei, HiSilicon	available	2020-02-14 00:27:53	2020-02-14 01:33:54
R2-2001329	Remaining issues on UE capability segmentation	Huawei,	noted	2020-02-14 00:27:53	2020-02-14 01:33:54
R2-2001330	Remaining issues on UE assistance information	Huawei,	available	2020-02-14 00:27:53	2020-02-14 01:33:54
R2-2001331	Open issues in NPN	Qualcomm Incorporated	noted	2020-02-14 00:30:12	2020-02-14 03:53:30
R2-2001332	New values for RLC and PDCP timers- Open issue and capabilities	Qualcomm Incorporated	available	2020-02-14 00:32:44	2020-02-14 04:01:56
R2-2001333	Running CR for the introduction of NR positioning	Ericsson	revised	2020-02-14 00:37:43	2020-02-14 01:05:20
R2-2001334	Discussion on V2X SIB Specific Validity Area	Samsung Electronics	available	2020-02-14 00:42:31	2020-02-14 05:31:51
R2-2001335	TX profile for selected sidelink RAT	Samsung Electronics	available	2020-02-14 00:42:31	2020-02-14 05:31:51

R2-2001336	Aperiodic traffic support in UE Assistance Information	Samsung Electronics	available	2020-02-14 00:42:31	2020-02-14 05:31:51
R2-2001337	Remaining issue in SL SCH subheader	Samsung Electronics	available	2020-02-14 00:42:31	2020-02-14 05:31:51
R2-2001338	Clarification for LCP procedure with HARQ feedback	Samsung Electronics	available	2020-02-14 00:42:31	2020-02-14 05:31:51
R2-2001339	Handling of error in MAC PDU for SL unicast	Samsung Electronics	available	2020-02-14 00:42:31	2020-02-14 05:31:51
R2-2001340	Security impact in SL PDCP	Samsung Electronics	available	2020-02-14 00:42:31	2020-02-14 05:31:51
R2-2001341	Running MAC CR for NR-U	Ericsson	revised	2020-02-14 00:42:52	2020-02-14 00:56:24
R2-2001342	Data volume reporting and dual connectivity with Pre-emptive BSR	Futurewei Technologies	available	2020-02-14 00:44:19	2020-02-14 07:19:50
R2-2001343	Summary of open issues for NR-U Running 38.321	Ericsson	revised	2020-02-14 00:49:11	2020-02-22 01:42:27
R2-2001344	Discussion on some open items of SCell dormancy operation	Intel Corporation	noted	2020-02-14 00:57:54	2020-02-14 05:25:15
R2-2001345	Remaining RRC signalling aspects of NR eMIMO	Intel	noted	2020-02-14 00:57:54	2020-02-14 05:25:15
R2-2001346	Logical Channel with/without HARQ Feedback	Panasonic	available	2020-02-14 00:58:42	2020-02-14 07:22:41
R2-2001347	The problem of LTE RLC out-of-order delivery	Samsung	noted	2020-02-14 01:00:13	2020-02-14 02:00:00
R2-2001348	Cell Selection for Backhaul RLF Recovery	Futurewei Technologies	available	2020-02-14 01:02:54	2020-02-14 07:19:50
R2-2001349	Issues on layer-2 ID update	LG	available	2020-02-14 01:06:41	2020-02-14 04:31:56
R2-2001350	RAN2 impact to support enhancements for dual UL and single UL operations in EN-DC	Huawei, HiSilicon	available	2020-02-14 01:08:30	2020-02-14 05:22:14
R2-2001351	CR on RLC OutOfOrderDelivery configuration	Samsung	not	2020-02-14 01:08:54	2020-02-14 02:00:00
R2-2001352	Introduction of additional RACH configurations for TDD FR1	NTT DOCOMO, INC.	agreed	2020-02-14 01:13:43	2020-02-14 07:45:01
R2-2001353	Strongest first path indication with RSTD and UE RxTx measurements	Ericsson	available	2020-02-14 01:13:53	2020-02-14 01:15:43
R2-2001354	Clarification on p-CSI reporting multiplexed with SR	Huawei,	available	2020-02-14 01:14:09	2020-02-14 03:57:14
R2-2001355	Stopping ra-ResponseWindow for contention-free BFR	Huawei, HiSilicon,	available	2020-02-14 01:14:09	2020-02-14 03:57:14
R2-2001356	Report of [108#112][URLLC] RRC running CR	Huawei,	available	2020-02-14 01:14:09	2020-02-14 03:57:14
R2-2001357	Running 38.331 CR for NR_L1enh_URLLC	Huawei, HiSilicon	revised	2020-02-14 01:14:09	2020-02-14 03:57:14
R2-2001358	Running 38.321 CR for NR_L1enh_URLLC	Huawei,	revised	2020-02-14 01:14:11	2020-02-14 03:57:14
R2-2001359	Running 38.300 CR for NR_L1enh_URLLC	Huawei,	revised	2020-02-14 01:14:12	2020-02-14 03:57:14
R2-2001360	Discussion on UE feature list for URLLC	Huawei,	available	2020-02-14 01:14:13	2020-02-14 03:57:14
R2-2001361	On Layer 2 parameter values to support delay critical GBR QoS flows	Huawei, HiSilicon	available	2020-02-14 01:14:13	2020-02-14 03:57:14
R2-2001362	On handling of URLLC traffic during measurement gaps in uplink	Huawei, HiSilicon	available	2020-02-14 01:14:13	2020-02-14 03:57:14
R2-2001363	Report of email discussion [108#42]	Huawei, Ericsson	noted	2020-02-14 01:15:21	2020-02-17 13:58:00
R2-2001364	CR for introducing MDT and SON	Huawei, Ericsson, HiSilicon	revised	2020-02-14 01:15:21	2020-02-17 13:58:00
R2-2001365	CR on enhancements on LTE MDT and SON	Huawei, CMCC, HiSilicon	revised	2020-02-14 01:15:22	2020-02-14 05:37:50
R2-2001366	Enhancements on logged MDT and accessibility measurements	Huawei, HiSilicon	available	2020-02-14 01:15:24	2020-02-14 05:37:50
R2-2001367	Discusison on sensor measurement reporting	Huawei,	available	2020-02-14 01:15:24	2020-02-14 05:37:50
R2-2001368	Discussion on per DRB and excess delay measurement for L2M	Huawei, HiSilicon	available	2020-02-14 01:15:24	2020-02-14 05:37:50
R2-2001369	TP on per DRB measurements for L2M	Huawei,	available	2020-02-14 01:15:24	2020-02-14 05:37:50
R2-2001370	Discussion on min and max value for delay measurements for L2M	Huawei, HiSilicon	available	2020-02-14 01:15:24	2020-02-14 05:37:50
R2-2001371	Discussion on UL delay measurements in non MR-	Huawei,	available	2020-02-14 01:15:24	2020-02-14 05:37:12
R2-2001372	Discussion on DL delay measurements	Huawei,	available	2020-02-14 01:15:24	2020-02-14 05:37:12
R2-2001373	Discussion on delay measurements for MR-DC and	Huawei,	available	2020-02-14 01:15:24	2020-02-14 05:37:12
R2-2001374	Discussion on remaining aspects on SON	Huawei,	available	2020-02-14 01:15:24	2020-02-14 05:37:12
R2-2001375	Discussion on UE history information in RRC	Huawei,	available	2020-02-14 01:15:24	2020-02-14 05:37:12

R2-2001376	General considerations on idle and inactive mode for	Huawei,	noted	2020-02-14 01:16:26	2020-02-14 02:30:46
R2-2001377	General considerations on connected mode for NPN	Huawei, HiSilicon,	noted	2020-02-14 01:16:26	2020-02-14 02:30:46
R2-2001378	Considerations on SI Validity Checking	Huawei,	noted	2020-02-14 01:16:26	2020-02-14 02:30:46
R2-2001379	CR to 38.331 on CSI-RS inter-node message	Huawei,	revised	2020-02-14 01:16:26	2020-02-14 02:30:46
R2-2001380	Report of [108#60][TEI16] DRX coordination	Huawei,	noted	2020-02-14 01:16:27	2020-02-14 02:30:46
R2-2001381	CR to 38.331 on DRX coordination	Huawei,	agreed	2020-02-14 01:16:27	2020-02-14 02:30:46
R2-2001382	SRS Capability report for SRS only Scell	Huawei, HiSilicon	revised	2020-02-14 01:16:28	2020-02-14 02:30:46
R2-2001383	Support of releasing UL configuration	Huawei, HiSilicon, CMCC, China Telecom, MediaTek Inc., Vodafone,	agreed	2020-02-14 01:16:30	2020-02-14 02:30:46
R2-2001384	Discussion on configuration aspect for CHO	Huawei, HiSilicon,	available	2020-02-14 01:16:35	2020-02-14 05:36:33
R2-2001385	Discussion on remaining issues for CHO	Huawei, HiSilicon	available	2020-02-14 01:16:35	2020-02-14 05:36:33
R2-2001386	Discussion on combination of simultaneous connectivity and CHO	Huawei, HiSilicon	available	2020-02-14 01:16:35	2020-02-14 05:36:33
R2-2001387	Discussion on leftovers for CPAC	Huawei,	available	2020-02-14 01:16:35	2020-02-14 05:36:33
R2-2001388	Discussion on failure handling for MR-DC for CHO	Huawei,	available	2020-02-14 01:16:35	2020-02-14 05:36:33
R2-2001389	SCell dormancy behaviour	Huawei,	noted	2020-02-14 01:17:31	2020-02-14 05:22:14
R2-2001390	Remaining issues on SCG configuration with RRC Resume	Huawei, HiSilicon	noted	2020-02-14 01:17:31	2020-02-14 05:22:14
R2-2001391	NR-DC power control	Huawei,	available	2020-02-14 01:17:31	2020-02-14 05:22:15
R2-2001392	UE capability for eDCCA RAN1 features	Huawei,	available	2020-02-14 01:17:31	2020-02-14 05:22:15
R2-2001393	Miscellaneous Corrections to UE capability parameters	Intel Corporation, Lenovo, Motorola Mobility, NTT	revised	2020-02-14 01:19:51	2020-02-14 06:18:53
R2-2001394	Clarification for the condition of PUR configuration request procedure	LG Electronics	available	2020-02-14 01:20:56	2020-02-14 05:03:01
R2-2001395	Handling application response for D-PUR	LG	available	2020-02-14 01:20:56	2020-02-14 05:03:01
R2-2001396	Draft Reply LS on category M devices and NR	LG	available	2020-02-14 01:20:57	2020-02-14 05:03:01
R2-2001397	Discussion on delivery of D-PUR configuration	LG	available	2020-02-14 01:20:57	2020-02-14 05:03:01
R2-2001398	Paging response usign D-PUR	LG	available	2020-02-14 01:20:57	2020-02-14 05:03:01
R2-2001399	Discussion on preconfigured shared uplink resource transmission	LG Electronics	available	2020-02-14 01:20:57	2020-02-14 05:03:01
R2-2001400	Discussion on FR2 gap timing in async CA	ZTE Corporation,	available	2020-02-14 01:37:05	2020-02-14 08:58:27
R2-2001401	Coexistence issues of measurement relaxation and early measurements	LG Electronics,	available	2020-02-14 01:38:04	2020-02-14 03:49:08
R2-2001402	Per-frequency measurement relaxation based on neighbour cell quality	LG Electronics	available	2020-02-14 01:38:04	2020-02-14 03:49:08
R2-2001403	Early measurement results handling upon inter-RAT cell reselection	LG Electronics	available	2020-02-14 01:38:05	2020-02-14 03:49:09
R2-2001404	Validity area enhancement in NR	LG Electronics	available	2020-02-14 01:38:05	2020-02-14 03:49:09
R2-2001405	Introduction of DL MIMO efficiency enhancement	Huawei, HiSilicon	revised	2020-02-14 01:39:53	2020-02-14 03:16:18
R2-2001406	Introduction of DL MIMO efficiency enhancement	Huawei, HiSilicon	revised	2020-02-14 01:39:55	2020-02-14 03:16:18
R2-2001407	Discussion on handling of MBSFN configuration for new numerologies	Huawei, HiSilicon	noted	2020-02-14 01:39:56	2020-02-14 03:16:18
R2-2001408	Introduction of wideband PRG size	Huawei,	agreed	2020-02-14 01:39:56	2020-02-14 03:16:18
R2-2001409	Introduction of wideband PRG size	Huawei,	agreed	2020-02-14 01:39:58	2020-02-14 03:16:18
R2-2001410	UDC reconfiguration for RRC connection re-establishment case	Huawei, HiSilicon	revised	2020-02-14 01:39:59	2020-02-14 03:16:18
R2-2001411	Introduction of cross link interference management	Huawei, HiSilicon	revised	2020-02-14 01:40:01	2020-02-14 03:16:18

R2-2001412	Introduction of cross link interference management	Huawei, HiSilicon, ZTE	revised	2020-02-14 01:40:02	2020-02-14 03:16:18
R2-2001413	Running CR to 36.331 for NR V2X	Huawei,	revised	2020-02-14 01:40:04	2020-02-14 03:16:18
R2-2001414	Configuration Aspects for Configured Sidelink Grant	Huawei,	available	2020-02-14 01:40:06	2020-02-14 03:16:18
R2-2001415	Remaining issue for groupcast HARQ feedback option 1 and option 2	Huawei, HiSilicon	available	2020-02-14 01:40:06	2020-02-14 03:16:18
R2-2001416	Remaining issues on HARQ operation for NR SL	Huawei,	available	2020-02-14 01:40:06	2020-02-14 03:16:18
R2-2001417	Remaining issues on cell reselection	Huawei,	available	2020-02-14 01:40:06	2020-02-14 03:16:18
R2-2001418	Remaining issue on sidelink AS configuration	Huawei,	available	2020-02-14 01:40:06	2020-02-14 03:16:18
R2-2001419	Clarification on PRB usage	ZTE Corporation,	withdrawn	2020-02-14 01:42:16	
R2-2001420	Autonomous transmission on different CG	LG	available	2020-02-14 01:44:35	2020-02-14 03:38:25
R2-2001421	Remaining issues on SCell BFR procedure	Asia Pacific Telecom co.	noted	2020-02-14 01:45:37	2020-02-14 05:52:04
R2-2001422	SUL Operating over NR-U	Samsung	available	2020-02-14 01:51:47	2020-02-14 05:12:07
R2-2001423	Signalling Design on the PCI Range	CMCC	noted	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001424	TP on NPN Running RRC for PCI list of PRN Cells	CMCC	noted	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001425	Discussion of PDCP status report and UL switching for DAPS HO	CMCC.	available	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001426	Remaining Issues for Propagation Delay	CMCC	available	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001427	TP on IIoT Running RRC for Propagation Delay	CMCC	available	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001428	Remaining Issues for Multiple SPS-CG	CMCC	available	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001429	Remaining Issues for LCP restrictions	CMCC	available	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001430	Access and mobility control for NPN	CMCC	noted	2020-02-14 01:52:34	2020-02-14 06:14:21
R2-2001431	The handling of de-prioritized CG due to SR transmission	LG Electronics	available	2020-02-14 01:53:30	2020-02-14 03:38:25
R2-2001432	On Indicating LBT Failure for NR-U	Samsung	available	2020-02-14 01:55:26	2020-02-14 05:12:08
R2-2001433	Supporting WUS in multiple DRX groups	Samsung	available	2020-02-14 01:57:47	2020-02-17 13:58:00
R2-2001434	CS-RNTI ambiguity in IIoT	LG Electronics	available	2020-02-14 01:59:41	2020-02-14 03:38:25
R2-2001435	Running Idle/Inactive CR for NR Shared Spectrum	Qualcomm Incorporated	revised	2020-02-14 02:00:37	2020-02-14 06:19:21
R2-2001436	Clarification on Cell ID Applied to NR MDT	Samsung	available	2020-02-14 02:03:19	2020-02-14 05:12:08
R2-2001437	Control Plane Open Issues for NR Shared Spectrum	Qualcomm Incorporated	noted	2020-02-14 02:05:39	2020-02-23 19:21:28
R2-2001438	Introducing Further Information Useful for NR MDT	Samsung	available	2020-02-14 02:05:39	2020-02-14 05:12:08
R2-2001439	On supporting Event-triggered Logged MDT	Samsung	available	2020-02-14 02:08:00	2020-02-14 05:12:07
R2-2001440	On Mapping 5QI to DRB	Mediatek Inc	available	2020-02-14 02:08:47	2020-02-14 03:49:51
R2-2001441	RLF Report Enhancement	Samsung	available	2020-02-14 02:12:17	2020-02-14 05:12:08
R2-2001442	Consideration of delayed CG confirmation	LG	available	2020-02-14 02:13:42	2020-02-14 03:38:25
R2-2001443	Stage-3 Miscellaneous for NR MDT	Samsung	available	2020-02-14 02:14:39	2020-02-14 05:12:08
R2-2001444	Inter-RAT RLF reporting for MRO	Samsung	available	2020-02-14 02:16:13	2020-02-14 05:12:08
R2-2001445	Discussion on FFS issue in NR SA NeedForGap Signalling	Nokia,Nokia Shanghai	available	2020-02-14 02:18:03	2020-02-14 06:07:26
R2-2001446	Remaining Aspects on UE History Information	Mediatek Inc	available	2020-02-14 02:18:26	2020-02-14 03:50:25
R2-2001447	Signaling of delta configuration for SCG in NR SA to EN-DC inter-system handover	Qualcomm Incorporated	available	2020-02-14 02:21:00	2020-02-14 02:52:57
R2-2001448	Discussion on support of inter-RAT HO from SA to EN-DC	Nokia, Nokia Shanghai	noted	2020-02-14 02:23:30	2020-02-14 06:07:26
R2-2001449	Additional opportunity for Msg1 in 4-step RACH	LG	available	2020-02-14 02:23:58	2020-02-14 03:38:25
R2-2001450	Dynamic DL opportunity enhancement based on channel busy level in NR-U	LG Electronics	available	2020-02-14 02:26:49	2020-02-14 03:38:25
R2-2001451	MAC impacts of multiple CCAs in wide band	LG	available	2020-02-14 02:28:49	2020-02-14 03:38:25
R2-2001452	Discussion on SN trigger MN release measurement gap	Nokia, Nokia Shanghai	noted	2020-02-14 02:31:31	2020-02-14 06:07:26
R2-2001453	Temporary RS utilization for SCell and SpCell	CATT	noted	2020-02-14 02:36:10	2020-02-14 03:15:12
R2-2001454	Discussion on MCG Failure Information Report	CATT	revised	2020-02-14 02:36:10	2020-02-14 06:05:24
R2-2001455	Correction on Release of EN-DC	CATT	available	2020-02-14 02:36:10	2020-02-14 06:03:47
R2-2001456	Clarification on SN trigger MN release measurement gap	Nokia,Nokia Shanghai	available	2020-02-14 02:45:27	2020-02-14 06:07:26
R2-2001457	Remainiing issues on intra-UE multiplexing	ZTE Corporation,	available	2020-02-14 02:46:41	2020-02-14 03:25:43

R2-2001458	Consideration on HARQ Conflict Between Configured Grant and Dynamic Grant	ZTE Corporation,	available	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001459	Consideration on the multiplexing between BSR MAC CE and URLLC data	ZTE Corporation,	available	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001460	Discussion on UE based PDCP dupllication activation/deactivation	ZTE Corporation,	available	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001461	The considerations on scheduling enhancement	ZTE Corporation,	available	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001462	Remaining issues on PDPC duplication enhancement	ZTE Corporation,	available	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001463	Remaining issues on WUS signal for Power Saving	ZTE Corporation, Sanechips	available	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001464	The remaining issue on BFR on SpCell and SCell	ZTE Corporation, Sanechips,	withdrawn	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001465	Considerations on TCI state MAC CE for mPDCCH mTRP transmission	ZTE Corporation,	noted	2020-02-14 02:46:41	2020-02-14 03:25:43
R2-2001466	Correction on PUSCH-less uplink carrier	Huawei,	available	2020-02-14 03:05:46	2020-02-14 04:56:34
R2-2001467	Correction on autonomous RACH retransmission for SRS switching	Huawei, HiSilicon	agreed	2020-02-14 03:05:47	2020-02-14 04:56:34
R2-2001468	Correction on the RACH parameters for BFR	Huawei,	available	2020-02-14 03:05:48	2020-02-14 04:56:34
R2-2001469	Enhancements to MIB transmission	OPPO	available	2020-02-14 03:14:04	2020-02-14 04:10:37
R2-2001470	Report from eMTC/NB-IoT RRC CR coordination telco	Ericsson	noted	2020-02-14 03:22:29	2020-02-14 03:40:53
R2-2001471	Further discussion on 2-Step CFRA	CMCC	available	2020-02-14 03:23:35	2020-02-14 05:43:57
R2-2001472	Group WUS	Ericsson	available	2020-02-14 03:25:37	2020-02-14 03:40:53
R2-2001473	UE Capability for Rel-16 LTE even further mobility enhancement	Intel Corporation	noted	2020-02-14 03:31:00	2020-02-14 05:25:15
R2-2001474	Report - Email discussion [108#96][NB-IoT/eMTC R16] Finalise details on RAI	Ericsson	available	2020-02-14 03:34:52	2020-02-14 03:40:53
R2-2001475	Remaining Issues for LCP restrictions	CMCC	revised	2020-02-14 03:38:31	
R2-2001476	TP on IIoT Running RRC for Scheduling	CMCC	available	2020-02-14 03:38:34	2020-02-14 06:14:21
R2-2001477	Remaining Issues for Handling of deprioritized	CMCC	available	2020-02-14 03:45:08	2020-02-14 06:14:55
R2-2001478	AS RAI and optimization of release in EDT	Ericsson	available	2020-02-14 03:51:13	2020-02-17 11:41:24
R2-2001479	Discussion on UE capability for location reporting in SCG failure	NTT DOCOMO	available	2020-02-14 03:51:40	2020-02-14 03:54:11
R2-2001480	LS on NeedForGap capability	MediaTek	available	2020-02-14 03:58:07	2020-02-14 06:30:09
R2-2001481	Need of clarification on NDI in SCI for configured	ITL	available	2020-02-14 04:01:44	2020-02-14 06:19:49
R2-2001482	Wakeup signaling with DRX groups	Qualcomm Inc, Samsung	available	2020-02-14 04:02:33	2020-02-14 04:30:38
R2-2001483	Remaining issues on UE Assistancec Information	Qualcomm	available	2020-02-14 04:02:33	2020-02-14 04:30:38
R2-2001484	Remaining issues on SCell BFR	Qualcomm Inc	noted	2020-02-14 04:02:33	2020-02-14 04:30:38
R2-2001485	Enhancement to PHR timeline with URLLC	Qualcomm	noted	2020-02-14 04:02:33	2020-02-14 04:30:38
R2-2001486	Discussion on under-reporting CSI-RS capabilities	Huawei, HiSilicon, China Unicom,	noted	2020-02-14 04:03:02	2020-02-14 04:44:33
R2-2001487	MAC Running CR for NR IIOT	Samsung	revised	2020-02-14 04:03:27	2020-02-14 07:54:11
R2-2001488	Summary of Data-Data Prioritization and SR-Data Prioritization	Samsung	revised	2020-02-14 04:03:30	2020-02-20 12:37:56
R2-2001489	Remaining Issues on CG Confirmation MAC CE	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001490	Autonomous Retransmissions of Different CG Configurations and Timeline Restriction	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001491	Remaining Issues of PDCP Duplication for IIOT	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001492	UL-SCH Resource De-prioritization by Deprioritized SR	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001493	LCP Restriction for allowedCG-List and allowedPHY-PriorityIndex	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001494	Condition of Priority Value Determination	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05

R2-2001495	Transmission of Deprioritized Data by Retransmission Grant	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001496	Ich-basedPrioritization and MAC CE Priority	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001497	Prioritization of SR Transmission	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001498	Type 1 Configured Grant with Integer Periodicity	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001499	Initial Value of RX_DELIV and RX_NEXT	Samsung	available	2020-02-14 04:03:31	2020-02-14 06:09:05
R2-2001500	Extension of the LCID	LG	noted	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001501	Discussion on EHC feedback	LG	available	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001502	Discussion on performing ROHC and EHC	LG	available	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001503	Need of discard indication	LG Electronics	available	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001504	Discussion on consecutive ROHC failure during DAPS HO	LG Electronics	available	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001505	Handling of stroed PDCP PDUs for DAPS	LG Electronics	available	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001506	Handling of DAPS HO failure	LG Electronics	available	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001507	Discussion on PDCP status report	LG Electronics	available	2020-02-14 04:05:09	2020-02-14 04:28:29
R2-2001508	Correction on the content of RRCConnectionReconfigurationComplete message	Google Inc.	not pursued	2020-02-14 04:10:55	2020-02-14 07:56:16
R2-2001509	The remaining issue on BFR on SpCell and SCell	ZTE Corporation, Sanechips,	noted	2020-02-14 04:11:14	2020-02-14 04:15:10
R2-2001510	Further discussion on preamble group selection	LG	available	2020-02-14 04:12:29	2020-02-14 06:11:07
R2-2001511	Summary of fast SCell activation	OPPO	revised	2020-02-14 04:15:37	2020-02-20 07:44:22
R2-2001512	Draft 38.321 CR on preamble group selection for 2-step RA type	LG Electronics	available	2020-02-14 04:22:16	2020-02-14 06:11:07
R2-2001513	the ASN.1 design for SCell group configuration	OPPO	noted	2020-02-14 04:22:38	2020-02-14 06:32:42
R2-2001514	Releasing CFRA resources for 2-step RA type	LG	available	2020-02-14 04:24:42	2020-02-14 06:11:07
R2-2001515	Draft 38.321 CR on release of CFRA resource for 2-step RA type	LG Electronics	available	2020-02-14 04:27:44	2020-02-14 06:11:07
R2-2001516	Further Pre-configured UL Resources Design	Sierra	available	2020-02-14 04:28:08	2020-02-14 04:31:24
R2-2001517	NR V2X Zone ID	Qualcomm Finland	withdrawn	2020-02-14 04:28:08	2020-02-14 04:30:17
R2-2001518	Draft 38.331 CR on release of CFRA resource for 2-step RA type	LG Electronics	available	2020-02-14 04:31:28	2020-02-14 06:11:07
R2-2001519	NR V2X Minimum Communication Range values	Qualcomm Finland RFFE Oy	withdrawn	2020-02-14 04:31:50	2020-02-14 04:32:45
R2-2001520	Interruption Time Reduction in Release 16	Samsung, KT, LG Uplus,	available	2020-02-14 04:32:56	2020-02-14 05:12:07
R2-2001521	Discussion on support of the padding removal	LG	available	2020-02-14 04:34:19	2020-02-18 09:41:32
R2-2001522	Resolving open issues for on-demand SI	LG	available	2020-02-14 04:34:20	2020-02-14 04:48:47
R2-2001523	Access control in IAB networks	LG	available	2020-02-14 04:34:20	2020-02-14 04:48:47
R2-2001524	Necessity of even earlier BH RLF notification	LG	available	2020-02-14 04:34:20	2020-02-14 04:48:48
R2-2001525	BH RLF Notification Termination Layer	LG	available	2020-02-14 04:34:20	2020-02-14 04:48:48
R2-2001526	Resolving miscellaneous issues	LG	noted	2020-02-14 04:34:20	2020-02-14 04:48:48
R2-2001527	High Quality Criterion for SNPN	LG	noted	2020-02-14 04:34:20	2020-02-14 04:48:48
R2-2001528	Manual CAG selection	LG	noted	2020-02-14 04:34:20	2020-02-14 04:48:48
R2-2001529	Remaining issue on user plane aspects	LG	available	2020-02-14 04:34:52	2020-02-14 06:11:07
R2-2001530	RAN4 requirements on Make-Before-Break	Samsung	available	2020-02-14 04:36:20	2020-02-14 05:12:08
R2-2001531	Stage-2 details (38.300/37.340) for Make-Before-	Samsung,	available	2020-02-14 04:38:27	2020-02-14 05:12:07
R2-2001532	Summary document for PDCP/RLC aspects of DAPS HO	LG Electronics	noted	2020-02-14 04:38:55	2020-02-20 09:54:20

R2-2001533	NR V2X Zone ID	Qualcomm Finland RFFE Oy	available	2020-02-14 04:39:09	2020-02-14 04:41:26
R2-2001534	Consideration of HO Command including CHO	LG Electronics	available	2020-02-14 04:39:28	2020-02-14 05:32:11
R2-2001535	T304 Running Issue When CHO Execution	LG Electronics	available	2020-02-14 04:39:28	2020-02-14 05:32:11
R2-2001536	Transaction ID Issue in CPC	LG	available	2020-02-14 04:39:28	2020-02-14 05:32:11
R2-2001537	Measurement ID Handling for CHO and CPC	LG	available	2020-02-14 04:39:28	2020-02-14 05:32:11
R2-2001538	Consideration of SCG failure with CPC	LG Electronics	available	2020-02-14 04:39:29	2020-02-14 05:32:11
R2-2001539	Handling Excess of UE Capability in DAPS HO	LG Electronics	available	2020-02-14 04:39:29	2020-02-14 05:32:11
R2-2001540	Supporting Make-Before-Break in NR	Samsung,	available	2020-02-14 04:42:10	2020-02-14 05:12:07
R2-2001541	NR V2X Zone ID	Qualcomm Finland RFFE Oy	available	2020-02-14 04:42:32	2020-02-14 04:44:00
R2-2001542	Introduction of CLI handling and RIM in TS38.331	LG Electronics Inc.	revised	2020-02-14 04:44:11	2020-02-14 05:17:21
R2-2001543	Supporting Make-Before-Break in NR	Samsung,	available	2020-02-14 04:46:06	2020-02-14 05:12:07
R2-2001544	PDCU SDU Type Length	Qualcomm Finland RFFE Oy	available	2020-02-14 04:46:39	2020-02-14 04:49:09
R2-2001545	CHO in NR-U	LG	available	2020-02-14 04:47:29	2020-02-14 05:17:21
R2-2001546	Cell selection after consecutive UL LBT failures	LG	available	2020-02-14 04:50:53	2020-02-14 05:17:21
R2-2001547	Support of conditional handover for NR-U	LG	available	2020-02-14 04:50:59	2020-02-14 05:17:21
R2-2001548	Stopping condition for paging monitoring	LG	available	2020-02-14 04:51:01	2020-02-14 05:17:21
R2-2001549	RLMRLF in NR-U	LG	available	2020-02-14 04:51:04	2020-02-14 05:17:22
R2-2001550	Remaining issues for SL-SCH MAC subheader	Qualcomm Finland RFFE Oy	available	2020-02-14 04:51:23	2020-02-14 04:52:56
R2-2001551	Summary of DL MAC CE design for aganda 6.16.3	OPPO	available	2020-02-14 04:51:47	2020-02-20 13:17:55
R2-2001552	Remaining issues on RLM/RLF	Qualcomm Finland RFFE Oy	available	2020-02-14 04:55:12	2020-02-14 04:56:44
R2-2001553	Discussion on CHO for DC scenarios	CMCC	available	2020-02-14 04:56:04	2020-02-14 05:43:57
R2-2001554	Retransmission of an RLC SDU with a poll after discard procedure	LG Electronics Inc., Ericsson,	available	2020-02-14 04:56:23	2020-02-14 05:47:38
R2-2001555	Consideration on multiple entry CG confirmation	LG	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001556	Consideration on truncated pre-BSR MAC CE	LG	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001557	Priority determination considering MAC CE	LG Electronics	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001558	Remaining issues on Timing Delta MAC CE	LG	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001559	[DRAFT] LS on Timing Delta MAC CE	LG	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001560	LCG based UL grant	LG	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001561	Ambiguity of pre-BSR with multiple parents	LG	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001562	Need of BAP buffer	LG	available	2020-02-14 04:56:34	2020-02-14 05:47:38
R2-2001563	Consideration on local routing in IAB	LG	available	2020-02-14 04:56:35	2020-02-14 05:47:38
R2-2001564	Details of polling for hop-by-hop flow control	LG	available	2020-02-14 04:56:35	2020-02-14 05:47:38
R2-2001565	Configuration of BH RLC channel for control PDU transmission	LG Electronics	available	2020-02-14 04:56:35	2020-02-14 05:47:38
R2-2001566	Measurement gap skipping for TSN traffic	LG	available	2020-02-14 04:56:35	2020-02-14 05:47:38
R2-2001567	Enhancements of SR cancellation for URLLC traffic	LG	available	2020-02-14 04:56:35	2020-02-14 05:47:38

R2-2001568	UE behaviour on receipt of RRCReconfigurationFailureSidelink message and T400 expiry	Qualcomm Finland RFFE Oy	available	2020-02-14 05:01:15	2020-02-14 05:02:54
R2-2001569	Further discussion on cell reselection for V2X	Samsung Electronics	available	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001570	RRC connection initiation trigger for SLRB configuration handling	Samsung Electronics	available	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001571	Further discussion on SL-RSRP reporting	Samsung Electronics	available	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001572	Transfer of NPN ID in RRC connection establishment	Samsung Electronics	noted	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001573	Discussion on ANR for NPN	Samsung Electronics	noted	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001574	Early measurement configuration mismatch in 2-step resume	Samsung Electronics	available	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001575	Further discussion on EN-DC cell reselection	Samsung Electronics	available	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001576	Support of 5G indicator in EN-DC	Samsung Electronics	available	2020-02-14 05:01:51	2020-02-14 05:59:04
R2-2001577	RRM measurement relaxation	Samsung	available	2020-02-14 05:04:10	2020-02-14 05:12:08
R2-2001578	NR sidelink communication resource selection	Qualcomm Finland RFFE Oy	available	2020-02-14 05:04:47	2020-02-14 05:06:33
R2-2001579	Running 36300 CR for LTE feMob	ChinaTeleco	withdraw	2020-02-14 05:09:53	2020-02-14 05:40:12
R2-2001580	Discussion on support of UL Tx swithing	ChinaTelecom, CMCC, ChinaUnicom, Orange, Huawei,	noted	2020-02-14 05:09:53	2020-02-14 05:40:12
R2-2001581	38306CR UE capability of supporting UL Tx switching	ChinaTelecom,Huawei,HiSilicon,CMC	postponed	2020-02-14 05:09:53	2020-02-14 05:40:12
R2-2001582	38331CR UE capability and RRC configuration of supporting UL Tx switching	ChinaTelecom,Huawei,HiSilicon,CMC	postponed	2020-02-14 05:09:54	2020-02-14 05:40:12
R2-2001583	DAPS configuration related issues for disscussion	China	available	2020-02-14 05:09:56	2020-02-14 05:40:13
R2-2001584	Further details of CHO configuration and execution	China Telecom	available	2020-02-14 05:09:56	2020-02-14 05:40:13
R2-2001585	Discussion on human-readable network name	China Telecom,	noted	2020-02-14 05:09:56	2020-02-14 05:40:13
R2-2001586	Remaining issues discussion on NPN	China	noted	2020-02-14 05:09:56	2020-02-14 05:40:13
R2-2001587	Discussion on the deployment for CAG	China Telecom,	noted	2020-02-14 05:09:56	2020-02-14 05:40:13
R2-2001588	PC5 groupcast handling	Qualcomm Finland RFFE Oy	available	2020-02-14 05:12:58	2020-02-14 05:14:51
R2-2001589	UL grant overridden between configured grant and	ASUSTeK	available	2020-02-14 05:26:29	2020-02-14 06:06:33
R2-2001590	Correction on NZP-CSI-RS-ResourceSet	ASUSTeK	revised	2020-02-14 05:26:29	2020-02-14 06:06:33
R2-2001591	Discussion on including pre-emptive BSR in MAC	ASUSTeK	available	2020-02-14 05:26:30	2020-02-14 06:06:33
R2-2001592	Discussion on cancelling pre-emptive BSR	ASUSTeK	available	2020-02-14 05:26:30	2020-02-14 06:06:33
R2-2001593	Clarification on how UE initiates a Sidelink UE Information procedure for NR sidelink	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 07:51:03
R2-2001594	Clarification on how UE reports sidelink QoS flow	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 06:06:33

R2-2001595	Supporting both IP based and non-IP based V2X messages over PC5	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001596	Considerations of CSI reporting regarding SL LCP	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001597	Additional prioritization for configured uplink grant	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001598	Handling UL grant prioritization with non-overlapping PUSCH duration	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001599	Remaining issues of SCell BFR	ASUSTeK	noted	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001600	SCell BFR regarding Scell deactivation	ASUSTeK	noted	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001601	Handling D-PUR configuration in	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001602	Remaining issues of D-PUR TA timer	ASUSTeK	available	2020-02-14 05:26:31	2020-02-14 06:06:33
R2-2001603	Clarification for per cell PRB usage	CMCC, Ericsson,	available	2020-02-14 05:29:05	2020-02-14 05:43:57
R2-2001604	Unsecured UE capability handling	NTT	available	2020-02-14 05:32:07	2020-02-14 05:43:19
R2-2001605	Differential barring for IAB nodes and UEs	Futurewei Technologies	available	2020-02-14 05:32:31	2020-02-14 06:38:37
R2-2001606	Consideration for C-RNTI monitoring in NR-U	LG	available	2020-02-14 05:36:06	2020-02-14 05:41:23
R2-2001607	Remaining issue on SCG delta configuration	LG Electronics	noted	2020-02-14 05:37:03	2020-02-14 06:39:51
R2-2001608	Unsecured UE capability handling	NTT	available	2020-02-14 05:38:36	2020-02-14 05:43:30
R2-2001609	Discussion on T312 support in CHO events	Samsung	available	2020-02-14 05:38:58	2020-02-14 06:16:14
R2-2001610	Remaining issue on SN notificaiton	LG Electronics	noted	2020-02-14 05:39:46	2020-02-14 06:39:51
R2-2001611	Remaining issue on stored SCG configuration	LG Electronics	noted	2020-02-14 05:42:02	2020-02-14 06:39:51
R2-2001612	Correction on handover preparation message	LG Electronics	merged	2020-02-14 05:47:38	2020-02-14 06:39:51
R2-2001613	Multiple Entry Configured Grant Confirmation MAC	Intel	available	2020-02-14 05:52:22	2020-02-14 06:26:09
R2-2001614	Unsecured UE capability handling	NTT DOCOMO	available	2020-02-14 05:52:56	2020-02-14 06:04:06
R2-2001615	Running CR for Introduction of Rel-16 NR UE power saving in TS 38.321	Huawei	revised	2020-02-14 05:58:55	2020-02-23 09:17:55
R2-2001616	Report of email discussion [108#78][Power Saving] 38.321 open issues	Huawei	noted	2020-02-14 05:58:57	2020-02-23 09:17:55
R2-2001617	[Draft] LS on MAC-PHY modelling for DCP	Huawei	revised	2020-02-14 05:58:57	2020-02-23 09:17:55
R2-2001618	Remaining issue on gurard timer setup	LG Electronics	withdrawn	2020-02-14 05:59:45	
R2-2001619	Unsecured UE capability handling	NTT	available	2020-02-14 06:00:42	2020-02-14 06:04:25
R2-2001620	Remaining issue on gurard timer setup	LG Electronics	noted	2020-02-14 06:03:47	2020-02-14 06:39:51
R2-2001621	Remaining last issues on CLI	Ericsson	noted	2020-02-14 06:05:07	2020-02-14 06:10:05
R2-2001622	Remaining issues for IAB HbH Flow control	Futurewei Technologies	available	2020-02-14 06:06:00	2020-02-14 08:09:44
R2-2001623	Introduction of T312 for NR PSCell in (NG)EN-DC	Samsung	revised	2020-02-14 06:11:25	2020-02-14 06:16:14
R2-2001624	NR-DC support in IAB (signaling perspective)	Samsung R&D Institute	available	2020-02-14 06:15:44	2020-02-14 06:38:31
R2-2001625	F1AP related terminology in NSA IAB	Samsung R&D Institute	available	2020-02-14 06:17:17	2020-02-14 06:38:31
R2-2001626	Clarification on the Operation of DRX Inactivity	Apple	revised	2020-02-14 06:17:35	2020-02-14 06:32:10
R2-2001627	Impact of CG/SPS with periodicities non dividing HF length	Sequans Communicat	available	2020-02-14 06:20:06	2020-02-14 06:52:02
R2-2001628	Rescheduling dropped CG when PDU was not generated	Sequans Communicat	available	2020-02-14 06:20:06	2020-02-14 06:52:03
R2-2001629	NB-IoT UE Specific DRX - NB-IoT UE specific DRX – Options 1/2 and Fast Paging Escalation	Sequans Communicat	available	2020-02-14 06:20:06	2020-02-14 06:52:03
R2-2001630	NB-IoT UE Specific DRX - Efficiency Issues	Sequans Communicat	available	2020-02-14 06:20:06	2020-02-14 07:49:09
R2-2001631	F1-U Flow Control and Reordering Issues	Sequans Communicat	available	2020-02-14 06:20:06	2020-02-14 06:52:03
R2-2001632	Packet Marking for E2E Flow Control	Sequans Communicat	available	2020-02-14 06:20:06	2020-02-14 06:52:03
R2-2001633	Remaining issues on IAB RLF	Samsung R&D Institute	available	2020-02-14 06:21:14	2020-02-14 06:38:31

R2-2001634	EN-DC support in IAB	Samsung R&D Institute	available	2020-02-14 06:22:57	2020-02-14 06:38:31
R2-2001635	BAP layer indication of RLF at child node	Samsung R&D Institute	available	2020-02-14 06:24:17	2020-02-14 06:38:31
R2-2001636	On supporting of SIB for positioning	Samsung R&D Institute	available	2020-02-14 06:25:34	2020-02-14 06:38:31
R2-2001637	Remaining issues for CHO execution	Samsung R&D Institute	available	2020-02-14 06:26:44	2020-02-14 06:38:31
R2-2001638	CR to 38.306 on introducing autonomous gap in Rel-16	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated,	revised	2020-02-14 06:27:32	2020-02-14 06:44:30
R2-2001639	Discussion on status reporting for UM DRB upon DAPS handover	SHARP Corporation	available	2020-02-14 06:27:48	2020-02-14 07:48:28
R2-2001640	State variables of SRB PDCP for the target in NR	SHARP	available	2020-02-14 06:27:48	2020-02-14 07:48:28
R2-2001641	Clarification of implementation order of Reconfiguration with sync and AS Security key	SHARP Corporation	available	2020-02-14 06:27:48	2020-02-14 07:48:28
R2-2001642	Non-DAPS DRB handling at DAPS handover failure	SHARP	available	2020-02-14 06:27:48	2020-02-14 07:48:28
R2-2001643	On the frequency selection for RRM relaxation	Samsung R&D Institute	available	2020-02-14 06:28:59	2020-02-14 06:38:31
R2-2001644	SR_COUNTER initialization due to RRC reconfiguration	Fujitsu, LG Electronics	available	2020-02-14 06:31:38	2020-02-14 06:53:48
R2-2001645	TP for Guard Symbol MAC CE	ZTE Corporation,	available	2020-02-14 06:36:41	2020-02-14 06:50:32
R2-2001646	Running CR for 38.323 on supporting DAPS handover	Huawei, HiSilicon,	revised	2020-02-14 06:47:43	2020-02-14 06:58:37
R2-2001647	Running CR for 36.323 on supporting DAPS handover	Huawei, HiSilicon,	revised	2020-02-14 06:47:45	2020-02-14 06:58:37
R2-2001648	Introduction of NeedForGap capability for NR measurement - 36.331	MediaTek Inc.	revised	2020-02-14 06:48:00	2020-02-14 06:51:00
R2-2001649	Discussion on the target to configure CHO	Google Inc.	available	2020-02-14 06:57:29	2020-02-14 07:48:35
R2-2001650	Autonomous release of CHO	Google Inc.	available	2020-02-14 06:59:51	2020-02-14 07:48:35
R2-2001651	Autonomous release of conditional configuration	Google Inc.	available	2020-02-14 07:07:45	2020-02-14 07:48:35
R2-2001652	BFR MAC CE for SpCell	Ericsson, Nokia, Nokia	noted	2020-02-14 07:08:14	2020-02-14 07:09:57
R2-2001653	36300 CR for LTE feMob	ChinaTelecom	revised	2020-02-14 07:11:07	2020-02-14 07:20:46
R2-2001654	On the target to configure conditional handover	Google Inc.	available	2020-02-14 07:23:10	2020-02-14 07:48:35
R2-2001655	Further Correction on fast MCG link recovery	Google Inc.	noted	2020-02-14 07:53:52	2020-02-14 07:58:45
R2-2001656	LS on the UE capability and network assistance signalling for Rel-16 NR HST demodulation (R4-	RAN4	noted	2020-02-14 11:01:35	2020-02-14 11:06:28
R2-2001657	RRC running CR for NR IIoT	Ericsson	revised	2020-02-14 14:17:44	2020-02-17 14:18:06
R2-2001658	LTE RRC running CR for NR IIoT	Ericsson	revised	2020-02-14 14:19:57	2020-02-17 14:18:06
R2-2001659	Summary of [108#87][NR/Rel-16] Additional path	Ericsson	available	2020-02-14 14:23:49	2020-02-14 16:09:38
R2-2001660	Summary on Scheduling Enhancement for IIoT	Ericsson	revised	2020-02-14 17:58:00	2020-02-20 12:37:56
R2-2001661	Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility	Vice Chairman	approved	2020-02-14 21:29:31	2020-03-06 10:46:26
R2-2001662	Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS	Vice Chairman	approved	2020-02-14 21:29:31	2020-03-06 10:46:26
R2-2001663	Report eMTC breakout session	Session chair	approved	2020-02-14 21:29:31	2020-03-05 22:11:34
R2-2001664	Session minutes for NR-U, Power Savings, NTN and 2-step RACH	Session chair	approved	2020-02-14 21:29:31	2020-03-06 23:48:08

R2-2001665	Report from session on Rel-15 and 16 LTE and NR positioning	Session chair	approved	2020-02-14 21:29:31	2020-03-05 22:11:34
R2-2001666	Report from SOM/MDT session	Session	approved	2020-02-14 21:29:31	2020-03-06 10:46:26
R2-2001667	Report NB-IoT breakout session	Session chair	revised	2020-02-14 21:29:31	2020-03-05 12:03:36
R2-2001668	Report from session on LTE V2X and NR V2X	Session chair	approved	2020-02-14 21:29:31	2020-03-05 22:11:34
R2-2001669	Feature summary for fast MCG recovery	Ericsson (Rapporteur)	noted	2020-02-14 21:37:27	2020-02-20 07:47:24
R2-2001670	Feature summary for on-demand SIB in	Ericsson	noted	2020-02-14 21:49:53	2020-02-20 07:47:24
R2-2001671	Summary of [NR eMIMO] RRC aspects	Ericsson	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2001672	Summary of [NR eMIMO] Beam management enhancements	Samsung	noted	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2001673	Summary of [PRN] Cell Selection and selection	Qualcomm	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2001674	Summary of [PRN] Connected mode aspects	Nokia	available	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2001675	Summary of [PRN] Other (HRNN, Access Control,	ZTE	noted	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2001676	Summary of [PRN] Cell Selection and selection	Qualcomm	noted	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2001677	Offline discussion 110: eMIMO RRC CR discussion	Ericsson	noted	2020-02-26 14:27:01	2020-02-26 14:27:01
R2-2001678	Offline discussion 112: Beam management enhancements	Samsung	noted	2020-02-26 14:27:01	2020-02-26 14:27:01
R2-2001679	[DRAFT] Reply LS on CAG definition	Huawei	revised	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001680	Summary of [PRN] Cell Selection and selection	Qualcomm	available	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001681	Report from email discussion [118][PRN] Connected mode aspects	Nokia (summary	noted	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001682	Report of offline [119 [PRN] HRNN and Access Control aspects (ZTE)	ZTE Corporation,	noted	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001683	LS on eMIMO RRC parameters	RAN2	approved	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001684	Offline discussion 110: eMIMO RRC CR discussion - Second round	Ericsson	noted	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001685	Offline discussion 112: Beam management enhancements	Samsung	noted	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001686	[AT109e][121][EMIMO] DL MAC CE design (Oppo)	OPPO	noted	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001687	Introduction of RACS and DL RRC segmentation	MediaTek Inc.,	agreed	2020-03-02 02:35:15	2020-03-02 02:35:15
R2-2001688	Introduction of RACS and DL RRC segmentation	MediaTek Inc.,	agreed	2020-03-02 02:35:15	2020-03-02 02:35:15
R2-2001689	Introduction of UECapabilityInformation segmentation in TS38.331	ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd, MediaTek	agreed	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001690	Introduction of UECapabilityInformation segmentation in 36.331	MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation,	agreed	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001691	[DRAFT] LS on Optional signalling of UE capabilities at handover	Ericsson	revised	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001692	Introduction of SRVCC from 5G to 3G	Ericsson	revised	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001693	Introduction of SRVCC from 5G to 3G	Huawei, HiSilicon,	agreed	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001694	Introduction of cross link interference management	Huawei,	revised	2020-03-02 02:35:15	2020-03-02 02:35:15
R2-2001695	Introduction of cross link interference management	Huawei, HiSilicon, ZTE	agreed	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001696	Introduction of CLI handling and RIM in TS38.331	LG	revised	2020-03-03 11:05:05	2020-03-03 11:05:05

R2-2001697	Summary of [PRN] Cell Selection and selection	Qualcomm	noted	2020-03-03 11:05:05	2020-03-03 11:05:05
R2-2001698	offline discussion 118: [PRN] Connected mode aspects - Final status	Nokia	noted	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001699	offline discussion 119: [PRN] HRNN and Access Control aspects - Intermediate status	ZTECorporation	noted	2020-03-03 11:05:05	2020-03-03 11:05:05
R2-2001700	Introduction of cross link interference management	Huawei,	agreed	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001701	Introduction of SRVCC from 5G to 3G	Ericsson, ZTE, China	agreed	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001702	LS on RACS and signaling of UE capabilities at handover	RAN2	revised	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001703	Reply LS on CAG definition	RAN2	approved	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001704	LS on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs	RAN2	revised	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001705	Introduction of MIMO enhancements	Ericsson	revised	2020-03-06 10:46:26	2020-03-06 10:46:26
R2-2001706	MAC running CR for NR eMIMO	Samsung	revised	2020-03-06 10:46:26	2020-03-06 10:46:26
R2-2001707	Introducing the support of Non-Public Networks	Nokia	agreed	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001708	PRN Running CR for TS 38.304	Qualcomm Incorporated	revised	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001709	Rel-16 ASN.1 review plan	Ericsson	endorsed	2020-03-12 05:43:11	
R2-2001710	(reserved)	Sergio's	reserved	2020-03-12 05:43:11	
R2-2001711	(reserved)	Sergio's	reserved	2020-03-12 05:43:11	
R2-2001712	(reserved)	Sergio's	reserved	2020-03-12 05:43:11	
R2-2001713	(reserved)	Sergio's	reserved	2020-03-12 05:43:11	
R2-2001714	(reserved)	Sergio's	reserved	2020-03-12 05:43:12	
R2-2001715	(reserved)	Sergio's	reserved	2020-03-12 05:43:12	
R2-2001716	(reserved)	Sergio's	reserved	2020-03-12 05:43:12	
R2-2001717	(reserved)	Sergio's	reserved	2020-03-12 05:43:12	
R2-2001718	(reserved)	Sergio's	reserved	2020-03-12 05:43:12	
R2-2001719	(reserved)	Sergio's	reserved	2020-03-12 05:43:12	
R2-2001720	(reserved)	Sergio's	reserved	2020-03-12 05:43:13	
R2-2001721	Introduction of Power headroom reporting for Additional SRS	Ericsson	revised	2020-02-26 23:56:10	2020-02-26 23:56:10
R2-2001722	Missing QCI to CAPC mapping	Nokia, Nokia Shanghai	agreed	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001723	Clarification on default configuration and SRB1 for UP-EDT and RRC_INACTIVE	Huawei, HiSilicon	agreed	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001724	Correction on LTE early measurement	MediaTek Inc., Nokia, Nokia	agreed	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001725	Corrections to T312 and Discovery Signals measurement	Lenovo, Motorola Mobility	agreed	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2001726	Inclusion of Maximum Number of PDCP SDUs per TTI for DL Categories 22-26	Nokia, Nokia Shanghai Bel,l Lenovo,	agreed	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001727	Report of [AT109e][211][MOB] UE capabilities for DAPS and CHO (Intel)	Intel	noted	2020-03-03 11:05:05	2020-03-03 11:05:05
R2-2001728	Report of [AT109e][212][MOB] CHO configuration and execution details (Intel)	Intel	noted	2020-03-03 11:05:05	2020-03-03 11:05:05
R2-2001729	Correction of UE assistance information	Samsung Telecommun	withdrawn	2020-03-12 05:43:21	
R2-2001730	Summary Report: [AT109e][216][NR MOB] Discussion on MBB handover for NR Rel-16	Samsung	available	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001731	Early security re-activation at RRC Connection Resume	Ericsson, Qualcomm Inc., LG Electronics	agreed	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001732	Early security re-activation at RRC Connection Resume	Ericsson, Qualcomm Inc., LG Electronics	agreed	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001733	Report of [AT109e][206][LTE16] CR discussion on Rel-16 early security activation (Ericsson)	Ericsson	revised	2020-03-12 05:43:24	

R2-2001734	Introduction of DL MIMO efficiency enhancement	Huawei, HiSilicon	reserved	2020-03-12 05:43:25	
R2-2001735	Introduction of DL MIMO efficiency enhancement	Huawei, HiSilicon	agreed	2020-03-05 12:03:36	2020-03-05 12:03:36
R2-2001736	Report of [AT109e][203][LTE15] LTE pre-Rel-15 CRs on CA (Nokia)	Nokia	noted	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001737	UDC reconfiguration for RRC connection re-establishment case	Huawei, HiSilicon	agreed	2020-03-04 05:54:50	2020-03-04 05:54:50
R2-2001738	Correction on non-3GPP paging	Huawei, HiSilicon	agreed	2020-03-04 05:54:50	2020-03-04 05:54:50
R2-2001739	Introduction of LTE-based 5G terrestrial broadcast	Qualcomm Incorporated	agreed	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001740	Introduction of LTE-based 5G terrestrial broadcast	Qualcomm Incorporated	agreed	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001741	Introduction of Power headroom reporting for Additional SRS	Ericsson	agreed	2020-03-05 12:03:36	2020-03-05 12:03:36
R2-2001742	Report from [AT109e][213][MOB] CHO failure handling	Nokia	noted	2020-03-03 11:05:05	2020-03-03 11:05:05
R2-2001743	Report of [AT109e][201][LTE15] Agreeing to simple LTE Rel-15 CRs (RAN2 VC)	RAN2 Vice Chairman	noted	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001744	Report of [AT109e][202][LTE15] Discuss remaining LTE Rel-15 CRs (RAN2 VC)	RAN2 Vice Chairman	noted	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001745	Report of [AT109e][205][LTE16] Agreeing to simple LTE Rel-16 CRs	RAN2 Vice Chair	noted	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001746	Report of [AT109e][210][MOB] RRC procedural issues and remaining open items for DAPS CP	Huawei	reserved	2020-03-12 05:43:32	
R2-2001747	Report of [AT109e][215][NR MOB] Finalization of CPC and discussing remaining open issues	CATT	noted	2020-03-12 05:43:32	
R2-2001748	Introduction of NR mobility enhancement	Intel	agreed	2020-03-08 01:33:23	2020-03-08 01:33:23
R2-2001749	Iintroduction of NR mobility enhancement	Intel	revised	2020-03-10 13:12:05	2020-03-10 13:12:05
R2-2001750	Introduction of DAPS handover	Huawei, HiSilicon,	revised	2020-03-06 10:46:26	2020-03-06 10:46:26
R2-2001751	Introduction NR mobility enhancement	vivo (rapporteur)	revised	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001752	Running CR for introduction of even further mobility enhancement in E-UTRAN	ChinaTelecom	revised	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001753	Introduction of Even futher Mobility enhancement in E-UTRAN	Ericsson, China	agreed	2020-03-11 13:04:13	2020-03-11 13:04:13
R2-2001754	Introduction of DAPS handover	Huawei, HiSilicon,	revised	2020-03-06 10:46:26	2020-03-06 10:46:26
R2-2001755	[Running 36.321 CR for LTE feMob]	vivo (rapporteur)	revised	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001756	Introduction of Conditional PSCell Change for intra-SN without MN involvement	CATT	endorsed	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001757	Introduction of Conditional PSCell Change for intra-SN without MN involvement	CATT	endorsed	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001758	Stage-3 CR for Conditional PSCell Change for intra-SN without MN involvement	CATT	endorsed	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001759	LS on TDD pattern exchange for NR-DC power control	RAN2	approved	2020-03-12 05:43:44	2020-03-16 20:08:09
R2-2001760	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:44	
R2-2001761	Introduction of NR Mobility enhancement	Ericsson,	agreed	2020-03-11 13:04:13	2020-03-11 13:04:13
R2-2001762	Minor corrections collected by Rapporteur	Samsung Telecommun	agreed	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001763	Report of [AT109e][206][LTE16] CR discussion on Rel-16 early security activation (Ericsson)	Ericsson	noted	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001764	LS on avoiding simultaneous CHO and CPC	RAN2	approved	2020-03-12 05:43:48	2020-03-15 19:20:42
R2-2001765	Introduction of DAPS handover	Huawei, HiSilicon,	agreed	2020-03-09 16:06:55	2020-03-09 16:06:55
R2-2001766	Introduction of DAPS handover	Huawei, HiSilicon,	agreed	2020-03-09 16:06:55	2020-03-09 16:06:55
R2-2001767	Introduction of NR mobility enhancement	Intel	agreed	2020-03-10 13:12:05	2020-03-10 13:12:05
R2-2001768	Introduction NR mobility enhancement	vivo	agreed	2020-03-10 13:12:05	2020-03-10 13:12:05

R2-2001769	Introducation of even further mobility enhancement in E-UTRAN	vivo	agreed	2020-03-10 13:12:05	2020-03-10 13:12:05
R2-2001770	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:54	
R2-2001771	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:55	
R2-2001772	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:55	
R2-2001773	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:55	
R2-2001774	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:55	
R2-2001775	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:55	
R2-2001776	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:56	
R2-2001777	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:56	
R2-2001778	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:56	
R2-2001779	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:56	
R2-2001780	(reserved)	Tero's tdocs	reserved	2020-03-12 05:43:56	
R2-2001781	Report of email discussion [108#98][NB-IoT] UE	Huawei	noted	2020-02-24 15:26:51	2020-02-24 15:26:51
R2-2001782	Introduction of additional enhancements for NB-IoT in TS 36.331	Huawei	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001783	Introduction of additional enhancements for NB-IoT	Qualcomm Incorporated	withdrawn	2020-03-12 05:43:58	
R2-2001784	Introduction of additional enhancements for NB-IoT in TS 36.300	Huawei	agreed	2020-03-11 13:04:13	2020-03-11 13:04:13
R2-2001785	Introduction of additional enhancements for NB-IoT in TS 36.302	Huawei	agreed	2020-03-10 13:12:05	2020-03-10 13:12:05
R2-2001786	Introduction of Rel-16 additional enhancements NB-IoT in TS 36.306	BlackBerry UK Limited	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001787	Introduction of additional enhancements for NB-IoT	Ericsson	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001788	Introduction of Rel-16 NB-IoT enhancements	Nokia	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001789	WUS: Progress the FFS from Email Discussion 108#94 and Summary (QC)	Qualcomm Incorporated	noted	2020-02-27 13:37:01	2020-02-27 13:37:01
R2-2001790	WUS: Finalise the signalling	Qualcomm Incorporated	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001791	Report of [AT109e][307][NBIOT] PUR RRC-MAC-PHY interactions	Qualcomm (Rapporteur)	noted	2020-02-28 00:54:33	2020-02-28 00:54:33
R2-2001792	Report of [AT109e][308][NBIOT] PUR RRC in general and L1 signalling impact to RRC (Ericsson)	Ericsson (Rapporteur)	revised	2020-02-28 00:54:33	2020-02-28 00:54:33
R2-2001793	Report -[AT109e][309][NBIOT/EMTC] RAI whether AS RAI should be provided in case including AS RAI would lead to data segmentation (Ericsson)	Ericsson (Rapporteur)	revised	2020-02-27 15:45:45	2020-02-27 15:45:45
R2-2001794	Report of [AT109e][310][NBIOT] 5GC open issues in AI 7.2.10 (Huawei)	Huawei (offline email	revised	2020-02-27 15:45:45	2020-02-27 15:45:45
R2-2001795	[DRAFT] Reply LS on Rel-16 NB-IoT enhancements	Huawei	revised	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001796	Report of [AT109e][308][NBIOT] updated PUR RRC in general and L1 signalling impact to RRC	Ericsson (Rapporteur)	available	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001797	[AT109e][309][NBIOT/EMTC] RAI whether AS RAI should be provided in case including AS RAI would lead to data segmentation	Ericsson (Rapporteur)	available	2020-03-03 11:05:05	2020-03-03 11:05:05
R2-2001798	Report of [AT109e][310][NBIOT] 5GC open issues in AI 7.2.10 (Huawei)	Huawei (offline email	noted	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001799	(reserved)	Brian's tdocs	reserved	2020-03-12 05:44:06	
R2-2001800	(reserved)	Brian's tdocs	reserved	2020-03-12 05:44:06	
R2-2001801	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:08	
R2-2001802	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:08	
R2-2001803	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:08	
R2-2001804	Report of [AT109e][318][NBIOT] value range of UE specific DRX in NB-IoT	Huawei	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001805	Report of [AT109e][301][NBIOT R14] Clarification on polling bit for RRCConnectionRelease (Huawei)	Huawei (offline email	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001806	Report of [AT109e][302][NBIOT R13] Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei (offline email	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001807	Report of [AT109e][303][NBIOT R15] System support for Wake Up Signal (Huawei)	Huawei (offline email	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001808	Report of [AT109e][304][NBIOT R16] NRS presence on non-anchor paging carrier (Huawei)	Huawei (offline email	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001809	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	agreed	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001810	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	agreed	2020-03-05 22:11:34	2020-03-05 22:11:34

R2-2001811	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	agreed	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001812	Handling of UE Radio Capability for Paging in NB-IoT and eMTC	Huawei, HiSilicon	agreed	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001813	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001814	Report NB-IoT breakout session	Session chair	approved	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001815	Reply LS on Rel-16 NB-IoT enhancements	RAN2	approved	2020-03-06 16:53:26	2020-03-06 16:53:26
R2-2001816	LS on open PUR issues for NB-IoT/eMTC	RAN2	approved	2020-03-12 06:13:18	2020-03-15 19:20:42
R2-2001817	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001818	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001819	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001820	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001821	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001822	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001823	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001824	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001825	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001826	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001827	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001828	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001829	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001830	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001831	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001832	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001833	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001834	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001835	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001836	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001837	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001838	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001839	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001840	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001841	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001842	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:18	
R2-2001843	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001844	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001845	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001846	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001847	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001848	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001849	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001850	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001851	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001852	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001853	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001854	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001855	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001856	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001857	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001858	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001859	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001860	(reserved)	Brian's tdocs	reserved	2020-03-12 06:13:19	
R2-2001861	Summary of contributions on mobile-terminated (MT) early data transmission (EDT)	BlackBerry UK Limited	noted	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2001862	Summary of contributions on scheduling multiple DI/UL transport blocks	Ericsson	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2001863	Summary of contributions on quality report in Msg3	Qualcomm Incorporated	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2001864	Summary of contributions on idle mode mobility	Intel	noted	2020-03-12 06:13:20	
R2-2001865	Summary of contributions on stand-alone deployment	Nokia, Nokia Shanghai	noted	2020-02-23 11:52:25	2020-02-23 11:52:25
R2-2001866	Correction for relaxed monitoring for BL and CE UE	Ericsson	not	2020-03-12 06:13:20	
R2-2001867	Correction to support of UP-EDT, CP-EDT, in eMTC	Huawei,	revised	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001868	Introduction of Rel-16 eMTC additional	Intel	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12

R2-2001869	Introduction of additional enhancements for R16 eMTC	ZTE Corporation,	revised	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001870	Introduction of Rel-16 eMTC enhancements	Nokia	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001871	Introduction of additional enhancements for eMTC	Huawei	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001872	Introduction of further enhancements for eMTC	Ericsson	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001873	Introduction of Rel-16 eMTC enhancements	Qualcomm Incorporated	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001874	Running CR to 37324 for 5G_V2X_NRSL	Rapporteur	revised	2020-03-10 13:12:05	2020-03-10 13:12:05
R2-2001875	Report of [AT109e][410][eMTC] CE Mode Threshold Adjustments for non-BL and BL UE (DoCoMo)	NTT DOCOMO Inc. (offline	available	2020-02-27 09:36:27	2020-02-27 09:36:27
R2-2001876	[AT109e][411][eMTC/NB-IoT] MT-EDT: Open issues (Huawei)	Huawei (offline email	noted	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001877	Report of [AT109e][412][eMTC/NB-IoT] Scheduling multiple TBs: Open issues (Ericsson)	Ericsson	noted	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001878	Report of Email Discussion 109e[413][eMTC] Quality report: Open issues	Qualcomm	noted	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001879	Report of [AT109e][414][eMTC] MPDCCH performance imp: Open issues	Qualcomm	noted	2020-03-04 05:54:50	2020-03-04 05:54:50
R2-2001880	Email discussion of Idle mode mobility for non-BL	Intel	noted	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001881	Standalone deployments – Discussion on remaining Issues	Nokia, Nokia Shanghai	noted	2020-03-04 05:54:50	2020-03-04 05:54:50
R2-2001882	TPs for RSS	Ericsson	revised	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001883	Report of [AT109e][418][eMTC/NB-IoT] Coexistence with NR: Open Issues (ZTE)	ZTE	noted	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001884	CE Mode Threshold Adjustments for non-BL and BL	NTT	postpone	2020-02-27 13:37:01	2020-02-27 13:37:01
R2-2001885	[AT109e][419][eMTC/NB-IoT] Connection to 5GC: Open Issues (Huawei)	Huawei (offline email discussion	available	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001886	RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC	Document Rapporteur	endorsed	2020-03-12 06:13:31	2020-03-15 19:20:42
R2-2001887	TPs for RSS	Ericsson	reserved	2020-03-12 06:13:31	
R2-2001888	LS on NR coexistence	RAN2	approved	2020-03-12 06:13:31	2020-03-20 09:46:16
R2-2001889	Correction to support of UP-EDT, CP-EDT, in eMTC	Huawei	agreed	2020-03-05 22:11:34	2020-03-05 22:11:34
R2-2001890	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:32	
R2-2001891	LS on RACS and signaling of UE capabilities at handover	RAN2	approved	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001892	Introduction of additional enhancements for eMTC	Qualcomm Incorporated	withdrawn	2020-03-12 06:13:33	
R2-2001893	Correction on beamSwitchTiming values of 224 and	vivo,	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001894	Introducing support for GNSS Integer Ambiguity Level Indications	Ericsson	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001895	Introduction of CLI handling and RIM in TS38.331	LG	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001896	Introduction of MIMO enhancements	Ericsson	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001897	Introduction of eMIMO for NR	Samsung	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001898	Introduction of PRN for TS 38.304	Qualcomm Incorporated	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001899	Introduction of even further mobility enhancement in	ChinaTeleco	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001900	Introduction of additional enhancements for R16 eMTC	ZTE Corporation,	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001901	Introduction of 5G_V2X_NRSL to 37.324	Rapporteur	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001902	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001903	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001904	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001905	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001906	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001907	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001908	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001909	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001910	(reserved)	Emre's tdocs	reserved	2020-03-12 06:13:45	
R2-2001911	NR-U UP Summary for RACH and UL LBT	InterDigital	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001912	Email discussion summary on running 38.331 CR for Power Saving	MediaTek Inc.	noted	2020-02-23 01:11:33	2020-02-23 01:11:33

R2-2001913	Summary of open issues for PDCCH	CATT	noted	2020-03-03 00:08:20	2020-03-03 00:08:20
R2-2001914	Summary of open issues for UE assistance	Qualcomm	noted	2020-03-03 11:05:05	2020-03-03 11:05:05
R2-2001915	Summary of RRM measurement relaxation open	Huawei	revised	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2001916	Summary of UP open issues	ZTE	noted	2020-03-04 05:54:50	2020-03-04 05:54:50
R2-2001917	Summary of CP open issues	Ericsson	noted	2020-03-04 05:54:50	2020-03-04 05:54:50
R2-2001918	Summary of open issues for NR-U Running 38.321	Ericsson	noted	2020-02-24 15:26:51	2020-02-24 15:26:51
R2-2001919	LS response to RAN1 on MIB signalling of Q	Qualcomm	revised	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001920	Introduction of NR operation with Shared Spectrum Access in RRC	Qualcomm Incorporated	revised	2020-03-10 13:12:05	2020-03-10 13:12:05
R2-2001921	Running Stage-2 CR for NR-U	OPPO	revised	2020-03-06 16:53:27	2020-03-06 16:53:27
R2-2001922	Introduction of NR operation with Shared Spectrum Access to Stage-2	Qualcomm Incorporated	revised	2020-03-10 13:12:05	2020-03-10 13:12:05
R2-2001923	Introduction of NR operation with Shared Spectrum Access in idle mode	Qualcomm Incorporated	revised	2020-03-06 23:48:09	2020-03-06 23:48:09
R2-2001924	Introduction of NR-U in 38.321	Ericsson	agreed	2020-03-10 19:57:12	2020-03-10 19:57:12
R2-2001925	(reserved)	Diana's	reserved	2020-03-12 06:13:52	
R2-2001926	[DRAFT] LS to RAN4 on RRM relaxation in power	vivo	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2001927	[DRAFT] LS on Support of CSI-RS for 2-step RACH	ZTE	revised	2020-02-26 23:56:10	2020-02-26 23:56:10
R2-2001928	LS to RAN1 on NR-U PRACH root sequence for 2-step RA	RAN2	revised	2020-02-26 23:56:10	2020-02-26 23:56:10
R2-2001929	LS to RAN1 on Support of 2-step CFRA	RAN2	approved	2020-02-26 23:56:10	2020-02-26 23:56:10
R2-2001930	(reserved)	Diana's	reserved	2020-03-12 06:13:53	
R2-2001931	Summary on the Stage-2 Aspects of R16 Positioning	Huawei, HiSilicon,	available	2020-02-25 00:37:36	2020-02-25 00:37:36
R2-2001932	Corrections to the Location measurement indication procedure	Lenovo, Motorola	agreed	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001933	[DRAFT] reply LS on agreements related to NR	Nokia	postpone	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001934	Running stage 2 CR on NR positioning ([108#84][NR Pos])	Intel Corporation,	revised	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001935	Summary of offline discussion #611 on non-periodic SRS for positioning	Huawei, HiSilicon	available	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001936	Summary of offline discussion #612 on spatial relationship for positioning	Huawei, HiSilicon	available	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001937	Introduction of PPP-RTK (SSR)	Qualcomm Incorporated	withdrawn	2020-03-12 06:13:56	
R2-2001938	Running CR for the introduction of NR positioning	Ericsson	available	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001939	(reserved)	Nathan's	reserved	2020-03-12 06:13:57	
R2-2001940	Sensor Provide Location Information Elements	Polaris	agreed	2020-02-26 23:56:10	2020-02-26 23:56:10
R2-2001941	LPP CR Capturing RAN1 parameters for positioning ([108#85][NR Pos])	Intel Corporation	merged	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001942	Introduction of Rel-16 NR positioning	Intel	revised	2020-03-12 06:13:58	
R2-2001943	Summary of [AT109e][617][POS] Single positioning	Ericsson	postpone	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001944	Summary of [AT109e][618][POS] Supported	Intel	postpone	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001945	[DRAFT] LS on uplink additional path reporting	Ericsson	revised	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001946	Text proposal on additional path reporting	Ericsson	merged	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001947	Summary of [AT109e][622][POS] Uplink capability for positioning	Huawei	postponed	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001948	[DRAFT] LS on positioning measurement range and	Intel	revised	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001949	Summary of [AT109e][634][POS] Open issues on UE-based downlink positioning assistance data	Qualcomm Incorporated	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001950	Summary of [AT109e][621][POS] Open issues on broadcast assistance data	CATT	postponed	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001951	Report of [AT109e][601][POS] Harmonise posSIB numbering across CRs (Intel)	Intel Corporation	endorsed	2020-03-02 02:35:15	2020-03-02 02:35:15
R2-2001952	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas	revised	2020-03-03 00:08:20	2020-03-03 00:08:20

R2-2001953	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs Private Limited, Tejas	revised	2020-03-03 00:08:20	2020-03-03 00:08:20
R2-2001954	CR of TS 36.305 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc., Huawei, CEWiT,	revised	2020-03-03 00:08:20	2020-03-03 00:08:20
R2-2001955	Addition of broadcast of barometric pressure assistance data	Polaris Wireless, FirstNet,	revised	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001956	Addition of broadcast of barometric pressure assistance data	Polaris Wireless, FirstNet,	agreed	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001957	Addition of broadcast of barometric pressure assistance data	Polaris Wireless, FirstNet,	agreed	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001958	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet,	agreed	2020-03-03 22:05:06	2020-03-03 22:05:06
R2-2001959	Report of [AT109e][615][POS] Update RAN1 parameters part of 37.355 CR (Intel)	Intel Corporation	noted	2020-03-05 07:24:41	2020-03-05 07:24:41
R2-2001960	RAN1 stage 2 agreements related to positioning	Intel	agreed	2020-03-08 01:33:23	2020-03-08 01:33:23
R2-2001961	Summary of NR V2X cell selection/reselection related contributions	ZTE Corporation,	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2001962	Summary of contributions to MAC for 5G V2X with NR Sidelink	LG Electronics	noted	2020-02-24 09:47:03	2020-02-24 09:47:03
R2-2001963	Report to Offline #701	Ericsson	noted	2020-02-27 13:37:01	2020-02-27 13:37:01
R2-2001964	[DRAFT] Reply LS on Sideline UE information	Ericsson	revised	2020-02-27 13:37:01	2020-02-27 13:37:01
R2-2001965	Report for the offline discussion on Category-2 proposals in RRC summary	Huawei (Rapporteur)	noted	2020-02-27 13:37:01	2020-02-27 13:37:01
R2-2001966	Introduction of 5G V2X with NR sidelink	Huawei,	agreed	2020-03-06 16:53:27	2020-03-06 16:53:27
R2-2001967	Introduction of 5G V2X with NR Sidelink in TS 36.331	Huawei,	agreed	2020-03-06 16:53:27	2020-03-06 16:53:27
R2-2001968	[Offline Disc#704] Identified proposals to V2X MAC	LG Electronics	noted	2020-02-27 13:37:01	2020-02-27 13:37:01
R2-2001969	[Running CR] Introduction of 5G V2X with NR	LG	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2001970	[Running CR] Introduction of 5G V2X with NR	LG	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2001971	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:16	
R2-2001972	Reply LS on Sideline UE information	RAN2	approved	2020-02-27 15:45:45	2020-02-27 15:45:45
R2-2001973	[DRAFT] LS to SA3 on NR V2X Security issues on	CATT	revised	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001974	Report of offline discussion 709	ZTE Corporation,	noted	2020-03-04 05:54:50	2020-03-04 05:54:50
R2-2001975	LS on Sidelink UE capability for (NG)EN-DC and NE	OPPO	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2001976	Report for offline discussion on RLC left issues	Ericsson	noted	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001977	Summary of offline discussion for open issues on V2X PDCP (CATT)	CATT (rapporteur)	noted	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001978	LS on Sidelink UE capability for (NG)EN-DC and NE	OPPO	revised	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001979	LS on Sidelink UE capability for (NG)EN-DC and NE	RAN2	approved	2020-03-04 08:39:27	2020-03-04 08:39:27
R2-2001980	LS to SA3 on NR V2X Security issues	RAN2	approved	2020-03-05 12:03:37	2020-03-05 12:03:37
R2-2001981	Introduction of NR operation with Shared Spectrum Access in RRC	Qualcomm Incorporated	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001982	Introduction of NR-U to 37.340	OPPO	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001983	Introduction of NR operation with Shared Spectrum Access to Stage-2	Qualcomm Incorporated	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2001984	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:20	
R2-2001985	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:20	
R2-2001986	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:20	
R2-2001987	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:20	
R2-2001988	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:20	
R2-2001989	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:20	
R2-2001990	(reserved)	Kyeongin's	reserved	2020-03-12 06:14:20	

R2-2001991	Email discussion report: [AT109e][803][MDT] MDT open issues	Huawei (Summary	noted	2020-03-02 19:19:33	2020-03-02 19:19:33
R2-2001992	Email discussion report: [AT109e][804][SON/MDT]SON open issues	Ericsson (email	noted	2020-03-02 19:19:34	2020-03-02 19:19:34
R2-2001993	Report for [AT109e][805][SON/MDT]L2 open issues (CMCC)	CMCC	available	2020-03-02 19:19:34	2020-03-02 19:19:34
R2-2001994	SON/MDT agreements from email discussions	Session	available	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2001995	SON/MDT agreements from email discussions part2	Session	noted	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2001996	Introduction of SON support	Nokia (rapporteur),	available	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2001997	Running TS 37.320 CR	CMCC, Nokia, Nokia Shanghai	revised	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2001998	CR on enhancements on LTE MDT and SON	Huawei, HiSilicon,	revised	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2001999	CR for introducing MDT and SON	Huawei, Ericsson,	revised	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2002000	TS 38.314, v0.0.5	CMCC	agreed	2020-03-11 13:04:14	2020-03-11 13:04:14
R2-2002001	CR on enhancements on LTE MDT and SON	Huawei, CMCC,	revised	2020-03-08 01:33:23	2020-03-08 01:33:23
R2-2002002	CR to Introduce NR MDT	CMCC, Nokia, Nokia Shanghai	revised	2020-03-11 13:04:14	2020-03-11 13:04:14
R2-2002003	CR for introducing MDT and SON	Huawei, Ericsson,	agreed	2020-03-10 13:12:06	2020-03-10 13:12:06
R2-2002004	Reply LS on Information Needed for MRO in UE RLF	RAN2	revised	2020-03-10 19:57:13	2020-03-10 19:57:13
R2-2002005	CR on enhancements on LTE MDT and SON	Huawei, CMCC,	agreed	2020-03-12 05:22:02	2020-03-12 05:22:02
R2-2002006	CR to Introduce NR MDT	CMCC, Nokia, Nokia Shanghai	agreed	2020-03-12 06:14:36	2020-03-12 18:18:14
R2-2002007	(reserved)	HuNan's	reserved	2020-03-12 06:14:36	
R2-2002008	(reserved)	HuNan's	reserved	2020-03-12 06:14:36	
R2-2002009	(reserved)	HuNan's	reserved	2020-03-12 06:14:36	
R2-2002010	(reserved)	HuNan's	reserved	2020-03-12 06:14:36	
R2-2002011	Summary document for AI 6.4.2.1 - RRC aspects	Huawei	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002012	Summary: Accurate reference timing	Nokia, Nokia Shanghai	noted	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2002013	Introduction of NR Industrial IoT features	Nokia, Nokia Shanghai	agreed	2020-03-06 12:17:20	2020-03-06 12:17:20
R2-2002014	Summary of contributions for connection to 5GC (AI 7.1.12)	Huawei	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002015	Summary of contributions for connection to 5GC (AI 7.2.10)	Huawei	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002016	CHO failure handling	Nokia	noted	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2002017	Summary of PDCP remaining issues on NR V2X	CATT	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002018	38.323 CR for NR V2X	CATT	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002019	Summary for NR V2X RLC left issues	Ericsson	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002020	Summary of submissions on Ethernet header	MediaTek	revised	2020-02-23 01:11:33	2020-02-23 01:11:33
R2-2002021	Summary of Other RRC-MAC-PHY interactions	Qualcomm Incorporated	available	2020-02-21 23:33:53	2020-02-21 23:33:53
R2-2002022	NR-U Control Plan Summary	Qualcomm Incorporated	noted	2020-03-09 16:06:56	2020-03-09 16:06:56
R2-2002023	Summary of sidelink capability related contributions	OPPO	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002024	Summary of Coexistence with NR	ZTE	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002025	Feature summary for SON contributions in AI 6.12.4	Ericsson	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002026	Summary of MCG SCell and SCG Configuration with RRC Resume	ZTE Corporation	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002027	Summary of Scheduling multiple DL/UL transmission blocks	Ericsson	withdrawn	2020-03-12 06:14:40	
R2-2002028	Summary of RRC in general and L1 signalling impact to RRC (including e.g. how/when to configure	Ericsson	available	2020-02-20 14:45:54	2020-02-20 14:45:54

R2-2002029	Summary of open issues from NR-U AI6.2.2.3 and	OPPO	noted	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2002030	Introduce SCG release indication in UAI for EN-DC	OPPO	available	2020-02-17 14:55:55	2020-02-17 14:55:55
R2-2002031	Running CR on 38.331 for 2-step RA	Ericsson (Email disc	revised	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002032	2-step RA control plane summary	Ericsson (Email disc	reserved	2020-03-12 06:14:42	
R2-2002033	Summary on RRC procedures during DAPS HO	Huawei, HiSilicon	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002034	Impact of RRM relaxation on ETWS&CMAS	ZTE corporation,	available	2020-02-18 15:37:49	2020-02-18 15:37:49
R2-2002035	Coexistance of mesurement relaxation and early measurements	ZTE corporation,	available	2020-02-18 15:37:49	2020-02-18 15:37:49
R2-2002036	SRS Capability report for SRS only Scell	Huawei, HiSilicon	postponed	2020-02-18 15:37:49	2020-02-18 15:37:49
R2-2002037	CR on alternative cell reselection priorities in 36.304	CMCC, Ericsson,	available	2020-02-18 15:37:49	2020-02-18 15:37:49
R2-2002038	CR on alternative cell reselection priorities in 36.331	CMCC, Ericsson,	available	2020-02-18 15:37:49	2020-02-18 15:37:49
R2-2002039	Discussion on MCG Failure Information Report	CATT	noted	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002040	Summary of CHO in AI 6.9.3.1 and 6.9.3.3	Intel	noted	2020-02-23 01:11:34	2020-02-23 01:11:34
R2-2002041	Summary of DAPS UE capabilities for DAPS HO in AI 7.3.2.2.2	Intel	revised	2020-02-23 01:11:34	2020-02-23 01:11:34
R2-2002042	Feature summary for DC and CA enhancements: organizational aspects	Ericsson	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002043	Feature summary for DC and CA enhancements: Early measurement reporting	Ericsson	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002044	Summary of IAB MAC impacts	Samsung	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002045	Summary on IAB IP address configuration	Samsung	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002046	RAN2 109-e Methods and Guidence	RAN2 chairman, RAN2 vice	endorsed	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002047	Real Settings Test of GoToWebinar	RAN2 Chairman (Mediatek),	noted	2020-02-24 15:26:51	2020-02-24 15:26:51
R2-2002048	Introduction of RRC parameters and UE capabilities for enhanced high speed scenario	NTT DOCOMO	revised	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002049	Unsecured UE capability handling	NTT DOCOMO	available	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002050	Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16	CMCC, Huawei, HiSilicon,	revised	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002051	[Pre109e][V2X] Summary on SDAP	vivo	withdrawn	2020-03-12 06:14:54	
R2-2002052	Summary for Positioning RRC running CR	Ericsson	noted	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002053	Summary for Broadcast of Assistance data	Ericsson	postpone	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002054	Remaining aspects of NR V2X Tx UE behavior	Lenovo, Motorola Mobility, Deutsche Telekom, Fraunhofer HHI and	available	2020-02-19 00:48:09	2020-02-19 00:48:09
R2-2002055	Summary on BAP functionality in AI 6.1.3	Huawei,	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002056	Correction to full configuration	Google Inc.	agreed	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002057	Summary of 6.1.5.2: IAB-MT Features List	Ericsson	available	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002058	Summary of 6.1.5.3: SI Broadcast, cell Restrictions/Reservation and Barring, Initial Access, and Connection Setup	Ericsson	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002059	Dummifying bandwidth class F for FR1	Nokia, Nokia Shanghai	available	2020-02-24 15:26:51	2020-02-24 15:26:51
R2-2002060	RRC signalling for Tx switching for UL MIMO	Nokia, Nokia Shanghai	available	2020-02-21 23:33:54	2020-02-21 23:33:54

R2-2002061	TS 38.331 Fixing NE-DC Band Combinations	Nokia, Nokia Shanghai	available	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002062	LTE-M coexistence with NR	Ericsson	available	2020-02-19 00:48:09	2020-02-19 00:48:09
R2-2002063	NB-IoT coexistence with NR	Ericsson	available	2020-02-19 00:48:09	2020-02-19 00:48:09
R2-2002064	Draft LS on Guidelines for UE capability definitions	Ericsson	revised	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002065	Clarification on the Operation of DRX Inactivity	Apple	available	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002066	Introduction of downgraded configurations for SRS antenna switching	OPPO	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002067	Introduction of downgraded configuration for SRS antenna switching	OPPO	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002068	Non-Public Networks	Nokia, China Telecom (Rapporteurs	revised	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002069	[DRAFT] Reply LS on CAG definition	Huawei	revised	2020-02-19 16:46:59	2020-02-19 16:46:59
R2-2002070	Summary of AI 6.9.3.4 (Fast handover failure recovery)	Samsung	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002071	Introduction of MIMO enhancements	Ericsson	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002072	Summary: UE features and capabilities	Nokia, Nokia Shanghai	available	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002073	Miscellaneous Corrections to UE capability parameters	Intel Corporation, Lenovo, Motorola Mobility, NTT	revised	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002074	Report on email discussion on [108#99][V2X] HARQ based TX side RLM/RLF	InterDigital	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002075	Correction on non-3GPP paging	Huawei, HiSilicon	revised	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002076	Summary on MDT	Huawei	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002077	Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-16	China Telecom, NTT DOCOMO,	agreed	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002078	Correction on H1 and H2 events	Samsung	agreed	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002079	Feature summary for miscellaneous topics in	Ericsson	revised	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002080	UE capability of intra-band requirements for inter-band EN-DC/NE-DC	NTT DOCOMO,	revised	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002081	UE capability of intra-band requirements for inter-band EN-DC/NE-DC	NTT DOCOMO,	revised	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002082	Feature summary for miscellaneous topics in	Ericsson	noted	2020-02-20 14:45:54	2020-02-20 14:45:54
R2-2002083	Summary of Data-Data Prioritization and SR-Data Prioritization	Samsung	noted	2020-02-24 09:47:04	2020-02-24 09:47:04
R2-2002084	Discussion on signalling for R16 NR HST	CMCC,	noted	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002085	38.331 CR on introduction of RRC parameters and UE capabilities for Rel-16 NR HST	CMCC, Huawei,	available	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002086	38.306 CR on introduction of UE capabilities for Rel-16 NR HST	CMCC, Huawei,	available	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002087	Summary of LTE contributions in AI 4.5	Summary rapporteur	available	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002088	Summary of LTE contributions in AIs 7.5 and 7.6	Summary rapporteur	available	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002089	Report on email discussion [108#67][NR Mob] Resolving open issues in CPAC and creating TP	CATT	noted	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002090	Introduction of Rel-16 eMTC enhancements	Nokia	revised	2020-02-23 11:52:25	2020-02-23 11:52:25
R2-2002091	Summary on Scheduling Enhancement for IIoT	Ericsson	noted	2020-02-24 15:26:52	2020-02-24 15:26:52
R2-2002092	Summary of IAB MAC impacts	Samsung	revised	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002093	Summary document for AI 6.4.2.1 - RRC aspects	Huawei	revised	2020-02-24 01:23:27	2020-02-24 01:23:27
R2-2002094	Security requirement for UE capability enquiry for LTE	Intel Corporation, NTT	agreed	2020-02-23 01:11:34	2020-02-23 01:11:34
R2-2002095	Reply LS on UAV positioning (S1-201089; contact:	SA1	available	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002096	Reply LS on manual CAG selection (S1-201084; contact: Qualcomm)	SA1	noted	2020-02-21 23:33:54	2020-02-21 23:33:54

R2-2002097	Reply LS on need for Ethernet padding compression (S1-201085; contact: Qualcomm)	SA1	noted	2020-02-21 23:33:54	2020-02-21 23:33:54
R2-2002098	Introduction of bandlist for ENDC for 5G indicator	HUAWEI, British	available	2020-02-23 01:11:34	2020-02-23 01:11:34
R2-2002099	Summary of DAPS MAC	vivo	noted	2020-02-24 15:26:52	2020-02-24 15:26:52
R2-2002100	Report of EmailDisc-79 on open issues for RRM measurement relaxation	vivo (rapporteur)	noted	2020-02-24 15:26:52	2020-02-24 15:26:52
R2-2002101	Summary of DAPS UE capabilities for DAPS HO in AI 7.3.2.2.2	Intel	noted	2020-02-24 15:26:52	2020-02-24 15:26:52
R2-2002102	PRACH prioritization parameters for MPS and MCS	Perspecta Labs, ECD, AT&T, FirstNet, T-	agreed	2020-02-24 09:47:04	2020-02-24 09:47:04
R2-2002103	PRACH prioritization procedure for MPS and MCS	Perspecta Labs, ECD, AT&T, FirstNet, T-	agreed	2020-02-24 09:47:04	2020-02-24 09:47:04
R2-2002104	NAS handling error of nas-Container for security key	Intel	agreed	2020-02-24 01:23:27	2020-02-24 01:23:27
R2-2002105	NAS handling error of nas-Container for security key derivation	Intel	agreed	2020-02-24 01:23:27	2020-02-24 01:23:27
R2-2002106	CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE	CMCC	revised	2020-02-24 09:47:04	2020-02-24 09:47:04
R2-2002107	CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE	CMCC	agreed	2020-02-24 09:47:04	2020-02-24 09:47:04
R2-2002108	Introduction of NeedForGap capability for NR measurement - 36.331	MediaTek Inc.	endorsed	2020-02-26 10:51:21	2020-02-26 10:51:21
R2-2002109	Report of email discussion power control for NR-DC	vivo	reserved	2020-03-12 06:15:39	
R2-2002110	Summary of fast SCell activation	OPPO	noted	2020-02-26 14:27:01	2020-02-26 14:27:01
R2-2002111	CR for the introduction of SSR positioning support	ESA, Intel	agreed	2020-02-25 00:37:37	2020-02-25 00:37:37
R2-2002112	Running CR for the introduction of NR positioning	Ericsson	revised	2020-02-25 10:38:11	2020-02-25 10:38:11
R2-2002113	draft TS for TS 38.340 (BAP)	Huawei	revised	2020-02-25 23:30:10	2020-02-25 23:30:10
R2-2002114	Minor corrections collected by Rapporteur	Samsung Telecommun	revised	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002115	Summary of [108#86][NR/Pos] Single positioning method approach in LPP	Ericsson	revised	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002116	Running CR to 38.321 on Integrated Access and Backhaul for NR	Samsung Electronics	revised	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002117	Correction of TS 38.304 to introduce IAB	Huawei,	revised	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002118	Correction of TS 36.304 to introduce IAB	Huawei,	revised	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002119	Correction of TS 37.340 on the support of MR-DC for	Huawei,	revised	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002120	Summary of IAB MAC impacts	Samsung	noted	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002121	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	agreed	2020-02-26 14:27:01	2020-02-26 14:27:01
R2-2002122	Running CR to TS 38.331 on IAB for NR	Ericsson	revised	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2002123	Running CR to TS 36.331 on IAB for NR	Ericsson	revised	2020-03-05 07:24:42	2020-03-05 07:24:42
R2-2002124	LS on FDD band capability signalling for uplink sharing (R4-1916180; contact: Nokia)	RAN4	available	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002125	Open issues for RRC	Ericsson (Email disc	noted	2020-02-25 16:00:46	2020-02-25 16:00:46
R2-2002126	[DRAFT] LS to RAN1 on NR-U PRACH root sequence for 2-step RA	Ericsson	revised	2020-02-25 17:43:15	2020-02-25 17:43:15
R2-2002127	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331)	Huawei, HiSilicon	agreed	2020-03-04 12:30:37	2020-03-04 12:30:37
R2-2002128	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306)	Huawei, HiSilicon	revised	2020-03-04 12:30:37	2020-03-04 12:30:37
R2-2002129	Correction on NZP-CSI-RS-ResourceSet	ASUSTeK	agreed	2020-02-27 09:36:27	2020-02-27 09:36:27
R2-2002130	CR on capability of maxUplinkDutyCycle for inter-band EN-DC PC2 UE	CMCC	agreed	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002131	Summary of [AT109e][045][DCCA] Early Measurements Reporting – Phase 1	Ericsson	noted	2020-02-26 23:56:11	2020-02-26 23:56:11

R2-2002132	Open issues regarding DCCA stage 3 running CRs	Ericsson	available	2020-02-26 14:27:01	2020-02-26 14:27:01
R2-2002133	Inclusion of 90MHz UE Bandwidth	VODAFONE, Sprint,	agreed	2020-02-26 14:27:01	2020-02-26 14:27:01
R2-2002134	[AT109e][008][NR15] Cap Discussion	Ericsson	noted	2020-02-26 14:27:02	2020-02-26 14:27:02
R2-2002135	Summary of MCG SCell and SCG Configuration with RRC Resume	ZTE Corporation	noted	2020-02-26 14:27:02	2020-02-26 14:27:02
R2-2002136	Mandatory User Plane Integrity for 5G (FSAG Doc 79_002; contact: DT)	GSMA	noted	2020-02-26 14:27:02	2020-02-26 14:27:02
R2-2002137	Fast MCG Recovery	Ericsson	noted	2020-02-26 23:56:11	2020-02-26 23:56:11
R2-2002138	LS to RAN1 on NR-U PRACH root sequence for 2-step RA	RAN2	approved	2020-02-27 09:36:28	2020-02-27 09:36:28
R2-2002139	Report of [AT109e][004][NR15] Potential Easies I	MediaTek	noted	2020-02-28 00:54:33	2020-02-28 00:54:33
R2-2002140	Summary of [AT109e][063][URLLC] L2 Parameters	Huawei	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002141	Correction on reporting of uplink TX direct current	MediaTek	agreed	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002142	report of [AT109e][007][NR15] Potential easies III (Huawei, Lenovo, NTT Docomo)	Huawei, HiSilicon	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002143	Correction on FR1-GP flag	Huawei, HiSilicon	merged	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002144	Autonomous gap support for CGI reading	vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel,	revised	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002145	Autonomous gap support for CGI reading	vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon,	agreed	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002146	Introducing autonomous gap in CGI reporting	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated,	revised	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002147	Introducing autonomous gap in CGI reporting	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated,	agreed	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002148	[AT109e][010][NR15] Potential easies IV (Huawei)	Huawei	noted	2020-02-28 17:57:25	2020-02-28 17:57:25
R2-2002149	CR on overheating assistance reporting in handover	Huawei,	agreed	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002150	CR on fallback BC reporting	Huawei, HiSilicon	revised	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002151	CR on the maximum stored number of deprioritisation frequencies	Huawei, HiSilicon	agreed	2020-03-02 19:19:35	2020-03-02 19:19:35

R2-2002152	CR to 38.331 on support of 70MHz channel bandwidth	Huawei, HiSilicon,	revised	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002153	CR to 38.306 on support of 70MHz channel bandwidth	Huawei, HiSilicon,	revised	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002154	Correction on p-maxNR-FR1 for NE-DC	Ericsson	agreed	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002155	Potential easies II	Ericsson	noted	2020-02-27 13:37:02	2020-02-27 13:37:02
R2-2002156	Proposed discussion order for dormant BWP	OPPO	noted	2020-02-27 15:45:46	2020-02-27 15:45:46
R2-2002157	Proposals for approval on BAP functionality (Set I)	Huawei	noted	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002158	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002159	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm	agreed	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002160	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002161	Introduction of DL RRC segmentation	Ericsson, Deutsche Telekom, Vodafone, AT&T, Apple, Qualcomm	agreed	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002162	IAB MAC impacts: Proposals for discussion and approval (Set I)	Samsung	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002163	IAB MAC impacts: Proposals for discussion and approval (Set II)	Samsung	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002164	IAB IP address allocation - Proposals for discussion and approval	Samsung	noted	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002165	Outcome of offline discussion 209 for closing UP issues (PDCP/RLC/MAC) and discussing remaining open items for DAPS	LGE	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002166	Correction of TS 38.304 to introduce IAB	Huawei, HiSilicon	revised	2020-02-28 00:54:33	2020-02-28 00:54:33
R2-2002167	Correction of TS 36.304 to introduce IAB	Huawei, HiSilicon	revised	2020-02-28 00:54:33	2020-02-28 00:54:33
R2-2002168	Correction of TS 37.340 on the support of MR-DC for IAB	Huawei, HiSilicon	revised	2020-02-28 00:54:33	2020-02-28 00:54:33
R2-2002169	PDCP running CR for NR IIOT	PDCP Rapporteur	revised	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002170	Introducing EHC in LTE PDCP	PDCP Rapporteur	revised	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002171	Summary of [AT109e][037][IIOT] PDCP Duplication Enhancements	LG Electronics	noted	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002172	[AT109e][204][LTE16] Agreeable CRs for LTE High-speed performance enhancement (NTT DOCOMO)	NTT DOCOMO	available	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002173	Introduction of RRC parameters and UE capabilities for enhanced high speed scenario	NTT DOCOMO	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002174	Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16	CMCC, Huawei, HiSilicon,	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06

R2-2002175	Introduction of NR IDC solution	vivo, Nokia, Nokia Shanghai Bell, Spreadtrum, ZTE Corporation, Sanechips, Huawei, HiSilicon, Fujitsu, NTT DOCOMO INC., NEC,	agreed	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002176	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002177	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002178	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002179	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002180	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002181	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm Incorporated	agreed	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002182	[AT109e][034][IIOT] EHC Phase 1 summary	MediaTek	noted	2020-02-28 17:57:26	2020-02-28 17:57:26
R2-2002183	Clarification on the PLMN-IdentityInfoList	ZTE Corporation,	revised	2020-02-28 17:57:26	2020-02-28 17:57:26
R2-2002184	CR to 38.331 on CSI-RS inter-node message	Huawei,	agreed	2020-02-28 17:57:26	2020-02-28 17:57:26
R2-2002185	(running)36.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporation,	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002186	(running)38.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporation,	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002187	[AT109e][214][NR MOB] Finalization of T312 for fast handover failure recovery	Samsung	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002188	Introduction of T312 for NR PSCell in (NG)EN-DC	Samsung	merged	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002189	Clarification on candidate NR frequencies for IDC in EN-DC	NTT DOCOMO, INC., Ericsson, MediaTek	agreed	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002190	Report of [Offline-036][IIOT] Data Data and Data SR prioritization	Samsung	noted	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002191	Addition of broadcast TBS assistance data	NextNav, AT&T, FirstNet,	agreed	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002192	[Draft] LS on DCP	Huawei	revised	2020-03-02 02:35:16	2020-03-02 02:35:16
R2-2002193	[Draft] LS on DCP	Huawei	revised	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002194	Running CR for 38.331 for Power Savings	MediaTek	revised	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002195	Running 38.304 CR on UE Power saving in NR	vivo	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002196	LS on random access procedure in NR-U	RAN2	approved	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002197	[Draft] LS on DCP	Huawei	revised	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002198	LS to RAN4 on RRM relaxation in power saving	RAN2	revised	2020-03-06 10:46:27	2020-03-06 10:46:27
R2-2002199	Summary of RRM measurement relaxation open	Huawei	noted	2020-03-03 11:05:06	2020-03-03 11:05:06
R2-2002200	LS to RAN1 on the starting point of MSGB window	ZTE	revised	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002201	LS on DCP	RAN2	approved	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002202	Running MAC CR for 2-step RACH	ZTE Corporation (email	revised	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002203	LS on dropping measurement results due to LBT	Qualcomm	revised	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002204	LS to RAN1 on preamble-to-PRU mapping for 2-step CFRA	RAN2	approved	2020-03-06 16:53:28	2020-03-06 16:53:28
R2-2002205	LS to RAN1 on the starting point of MSGB window	ZTE	revised	2020-03-04 05:54:51	2020-03-04 05:54:51

R2-2002206	(reserved)	Diana's	reserved	2020-03-12 06:16:51	
R2-2002207	Report of [AT109e][210][MOB] RRC procedural issues and remaining open items for DAPS CP	Huawei, HiSilicon	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002208	Report of LCID extension for Rel-16	Samsung	revised	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002209	CR to 38.331 on support of 70MHz channel bandwidth	Huawei, HiSilicon,	agreed	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002210	CR to 38.306 on support of 70MHz channel bandwidth	Huawei, HiSilicon,	revised	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002211	Reply LS on extended NAS timers for CE in 5GS (C1-200717; contact: Ericsson)	CT1	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002212	Reply LS on Rel-16 NB-IoT enhancements (C1-201024; contact: Ericsson)	CT1	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002213	Reply LS on sending CAG ID (C1-201027; contact:	CT1	available	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002214	LS on suspend indication to the NAS (C1-201040; contact: Samsung)	CT1	noted	2020-03-02 19:19:35	2020-03-02 19:19:35
R2-2002215	Security and RRC Resume Request	Nokia	agreed	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002216	Security and RRC Resume Request	Nokia	revised	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002217	IAB MAC impacts: Proposals for discussion and approval (Set III)	Samsung	noted	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002218	Summary of [AT109e][005][NR15] Coordination on number of measurment ID	ZTE Corporation	noted	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002219	Reply LS on CGI reading with autonomous gaps	RAN2	approved	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002220	CR on introduction of extended capabilities for NE-DC only BCs	ZTE Corporation,	postponed	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002221	LS on the applicability of UE capability for NE-DC	RAN2	approved	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002222	Draft LS on dormant BWP configuration and related operation	OPPO	revised	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002223	Introductin of dormant BWP operation	OPPO	revised	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002224	Email discussion[AT109e#46][DCCA] Scell Dormancy Open Issues	OPPO	noted	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002225	Running CR to 38.321 on Integrated Access and Backhaul for NR	Samsung Electronics	revised	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002226	Fast MCG recovery Phase 2	Ericsson	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002227	On-demand SIB in CONNECTED Functionality	Ericsson	revised	2020-03-04 12:30:37	2020-03-04 12:30:37
R2-2002228	Running CR on 38.331 for on-demand SI procedure in RRC_CONNECTED	Ericsson	revised	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002229	Running CR on 38.300 for on-demand SI procedure in RRC_CONNECTED	Ericsson	revised	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002230	Summary report: [AT109e][049][DCCA] - Remaining issues of Async CA”	Qualcomm	noted	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002231	CR to 38.331 on FR2 gap timing under Async CA	Qualcomm	merged	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002232	CR to 36.331 on rel-16 TDM pattern for dual UL and single UL operations in EN-DC	Qualcomm	revised	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002233	CR to 38.321 on clarifications of Async CA	Qualcomm	merged	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002234	38.323 CR for NR V2X	CATT	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002235	Report of [AT109e][215][NR MOB] Finalization of CPC and discussing remaining open issues	CATT	available	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002236	Terminology and other open issues for stage 3 capturing of CPC	CATT	available	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002237	Introduction of Conditional PSCell Change for intra-SN without MN involvement	CATT	revised	2020-03-03 00:08:21	2020-03-03 00:08:21

R2-2002238	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm	revised	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002239	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002240	CR of TS 36.305 for introducing NavIC in LTE	Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002241	Running CR for the introduction of NR positioning	Intel	revised	2020-03-08 01:33:24	2020-03-08 01:33:24
R2-2002242	Running CR for the introduction of NR positioning	Ericsson	revised	2020-03-06 16:53:28	2020-03-06 16:53:28
R2-2002243	Introduction of NR positioning	Intel	agreed	2020-03-08 01:33:24	2020-03-08 01:33:24
R2-2002244	LS on Additional path reporting with uplink timing measurements	RAN2	approved	2020-03-09 16:06:57	2020-03-09 16:06:57
R2-2002245	LS to RAN4 on measurement range and granularity	RAN2	approved	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002246	Running CR for the introduction of NR positioning on MAC spec	Huawei, HiSilicon	revised	2020-03-06 18:12:06	2020-03-06 18:12:06
R2-2002247	Running CR for the introduction of NR positioning	Ericsson	revised	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002248	Introduction of Conditional PSCell Change for intra-SN without MN involvement	CATT	revised	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002249	Reply LS on updates for TS 36.300 and TS 38.300 (R3-201297; contact: Ericsson)	RAN3	noted	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002250	Reply LS on QoS monitoring for URLLC (R3-201372; contact: Intel)	RAN3	available	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002251	Reply LS on assistance indication for WUS (R3-201397; contact: Huawei)	RAN3	noted	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002252	Reply LS on Rel-16 NB-IoT enhancements (R3-201417; contact: Huawei)	RAN3	noted	2020-03-03 00:08:21	2020-03-03 00:08:21
R2-2002253	LS on the inter donor DU re-routing and source IP configuration (R3-201418; contact: Huawei))	RAN3	available	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002254	LS to RAN1 on T-delta in IAB	RAN2	approved	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002255	Autonomous gap support for CGI reading	vivo, CMCC, NTT DOCOMO, CATT, Ericsson, Huawei, HiSilicon, Intel,	agreed	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002256	Summary of power Control NR DC	vivo	noted	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002257	Text proposal of power control NR-DC	vivo	available	2020-03-04 05:54:51	2020-03-04 05:54:51
R2-2002258	Open issue discussion for TS 38.304 and 36.304	Huawei	noted	2020-03-05 07:24:43	2020-03-05 07:24:43
R2-2002259	Proposals for approval on BAP functionality (Set II)	Huawei	noted	2020-03-04 12:30:37	2020-03-04 12:30:37
R2-2002260	Introduction of downgraded configuration for SRS antenna switching	OPPO, Intel	agreed	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002261	Introduction of downgraded configuration for SRS antenna switching	OPPO, Intel	agreed	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002262	Report of [AT109e][050][R16 Other WISI] NR HST	CMCC	available	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002263	Introduction of 5G V2X with NR Sidelink	LG	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002264	Introduction of 5G V2X with NR Sidelink	LG	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002265	Introduction of 5G V2X with NR Sidelink	LG	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21

R2-2002266	Introduction of 5G-SRVCC	R3 (Nokia, Nokia	not pursued	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002267	Propagation of Roaming and Access Restriction information in E-UTRAN in non-homogenous eNB	R3 (Ericsson,	agreed	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002268	Propagation of Roaming and Access Restriction information in E-UTRAN in non-homogenous eNB	R3 (Ericsson,	agreed	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002269	Propagation of Roaming and Access Restriction information in NG-RAN in non-homogenous NG-	R3 (Ericsson,	agreed	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002270	Propagation of Roaming and Access Restriction information in NG-RAN in non-homogenous NG-	R3 (Ericsson,	agreed	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002271	RAN3 inputs for RAN2 NB-IoT running CR	R3 (Huawei,	available	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002272	RAN3 inputs for RAN2 eMTC running CR	R3 (Huawei,	available	2020-03-03 11:05:07	2020-03-03 11:05:07
R2-2002273	Summary of [AT109e][058][TEI16] Downgraded configuration SRS antenna switching (Intel OPPO)	OPPO (Rapporteur)	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002274	Correction on removal of NR-DC and NE-DC band combinations when capabilityRequestFilterCommon	MediaTek Inc.	agreed	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002275	Capability coordination for NE-DC	Ericsson	agreed	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002276	Data rate for the case of single carrier standalone operation	Ericsson	revised	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002277	Report of LCID extension for Rel-16	Samsung	noted	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002278	Introducing autonomous gap in CGI reporting	ZTE Coporation, Sanechips, CATT, OPPO, CMCC, MediaTek Inc, Vivo, Ericsson, Qualcomm Incorporated,	agreed	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002279	UE radio access capabilities introduction for NR IIOT WI	Nokia, Nokia Shanghai	reserved	2020-03-12 06:17:56	
R2-2002280	UE feature list introduction for NR IIOT WI	Nokia, Nokia Shanghai	reserved	2020-03-12 06:17:57	
R2-2002281	Summary of [AT109e][032][IIOT] Accurate Reference Timing	Nokia, Nokia Shanghai	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002282	Summary of [AT109e][031][IIOT] IIOT UE capabilities	Nokia, Nokia Shanghai	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002283	RRC CRs 38331 36331	Ericsson	noted	2020-03-04 23:03:44	2020-03-04 23:03:44
R2-2002284	Summary of 6.1.5.2: IAB Configuration except IP	Ericsson	revised	2020-03-04 23:03:44	2020-03-04 23:03:44
R2-2002285	Email discussion to progress on: SI Broadcast, cell Restrictions/Reservation and Barring, Initial Access, and Connection Setup	Ericsson (rapporteur)	noted	2020-03-04 23:03:44	2020-03-04 23:03:44
R2-2002286	Report of [035][IIOT] Deprioritized transmissions	CATT	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002287	Running CR for 36.331 for CA/DC Enhancements	Ericsson	revised	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002288	Running CR for 38.331 on CA/DC Enhancements	Ericsson	revised	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002289	Summary of [AT109e][045][DCCA] Early Measurements Reporting – Part 2 (Ericsson)	Ericsson	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002290	[AT109e][065][R16] R16 NR RRC coordination Email discussion report	Ericsson	noted	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002291	Miscellaneous non-controversial corrections Set V	Ericsson	revised	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002292	[DRAFT] LS on Guidelines for UE capability	RAN2	revised	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002293	Rel-16 RRC 38331 CR Merge	Ericsson	reserved	2020-03-12 06:18:03	
R2-2002294	Summary on [AT109e][033][IIOT] Scheduling	Ericsson	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002295	Summary on [AT109e][064][URLLC] MAC CEs	Ericsson	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002296	[AT109e][034][IIOT] EHC Phase 2 summary	MediaTek	noted	2020-03-03 22:05:07	2020-03-03 22:05:07
R2-2002297	Miscellaneous Corrections to UE capability parameters	Intel Corporation, Lenovo, Motorola Mobility, NTT	agreed	2020-03-05 22:11:36	2020-03-05 22:11:36

R2-2002298	LS to RAN1 on the starting point of MSGB window	RAN2	approved	2020-03-04 23:03:45	2020-03-04 23:03:45
R2-2002299	(reserved)	Diana's	reserved	2020-03-12 06:18:05	
R2-2002300	LS on dropping measurement results due to LBT	RAN2	approved	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002301	Reply LS on signaling of Q for a serving cell in NR-U	RAN2	approved	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002302	Running 38.304 CR on UE Power saving in NR	vivo	revised	2020-03-08 01:33:24	2020-03-08 01:33:24
R2-2002303	Running CR to 37.340 for power saving	OPPO	revised	2020-03-06 23:48:11	2020-03-06 23:48:11
R2-2002304	Running CR for Introduction of Rel-16 NR UE power saving in TS 38.321	Huawei	revised	2020-03-06 23:48:11	2020-03-06 23:48:11
R2-2002305	Clarification on the PLMN-IdentityInfoList	ZTE Corporation,	agreed	2020-03-12 05:22:04	2020-03-12 05:22:04
R2-2002306	CR to 38.306 on support of 70MHz channel bandwidth	Huawei, HiSilicon,	agreed	2020-03-12 05:22:04	2020-03-12 05:22:04
R2-2002307	Security and RRC Resume Request	Nokia	agreed	2020-03-12 05:22:04	2020-03-12 05:22:04
R2-2002308	Report of [AT109e][080][TEI16] NeedForGap	MediaTek	noted	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002309	Introduction of NeedForGap capability for NR measurement - 38.331	MediaTek Inc.	available	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002310	[offline-070]]NR15]Unsecured UE capability handling (NTTDocomo)	NTT DOCOMO	noted	2020-03-04 08:39:28	2020-03-04 08:39:28
R2-2002311	CR for 38.322 for NR V2X	Ericsson	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002312	[DRAFT] Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2	MediaTek Inc	noted	2020-03-04 12:30:38	2020-03-04 12:30:38
R2-2002313	Introduction of NR eURLLC	Huawei,	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002314	Introduction of NR eURLLC	Huawei,	agreed	2020-03-06 16:53:28	2020-03-06 16:53:28
R2-2002315	Introduction of NR eURLLC	Huawei, HiSilicon,	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002316	Introduction of 5G V2X with NR Sidelink	LG	agreed	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002317	CR on cell selection/ reselection for NR V2X UE	ZTE Corporation,	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002318	CR on cell selection/ reselection for NR V2X UE	ZTE Corporation,	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002319	Running CR to 37324 for 5G_V2X_NRSL	vivo	reserved	2020-03-12 06:35:32	
R2-2002320	Introduction of a new MAC subheader for MAC Ces	Samsung	agreed	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002321	Correction of TS 38.304 to introduce IAB	Huawei,	revised	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002322	Correction of TS 36.304 to introduce IAB	Huawei,	revised	2020-03-06 12:17:21	2020-03-06 12:17:21
R2-2002323	Correction of TS 37.340 on the support of MR-DC for	Huawei,	agreed	2020-03-06 12:17:22	2020-03-06 12:17:22
R2-2002324	Summary of email discussion [AT109e][068][NR15] IODT issue in 1-symbol PUCCH configuration with frequency hopping	Nokia, Nokia Shanghai Bell	noted	2020-03-04 23:03:45	2020-03-04 23:03:45
R2-2002325	CR to 36.331 on rel-16 TDM pattern for dual UL and single UL operations in EN-DC	Qualcomm	merged	2020-03-04 23:03:45	2020-03-04 23:03:45
R2-2002326	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile USA, Verizon,	agreed	2020-03-04 23:03:45	2020-03-04 23:03:45
R2-2002327	Introdution of EPS voice fallback enhancement	Qualcomm Incorporated	agreed	2020-03-04 23:03:45	2020-03-04 23:03:45
R2-2002328	Running CR to TS 38.331 on IAB for NR	Ericsson	revised	2020-03-04 23:03:45	2020-03-04 23:03:45
R2-2002329	Running CR to TS 36.331 on IAB for NR	Ericsson	revised	2020-03-04 23:03:45	2020-03-04 23:03:45
R2-2002330	Running CR for the introduction of NR positioning on MAC spec	Huawei, HiSilicon	revised	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002331	Way forward on the AoD calculation	Huawei,	noted	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002332	Clarification on gap sharing configuration at handover and re-establishment	Huawei, HiSilicon	agreed	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002333	Clarification on gap sharing configuration at handover and re-establishment	Huawei, HiSilicon	agreed	2020-03-05 07:24:44	2020-03-05 07:24:44
R2-2002334	[AT109e][039][DCCA] UE capabilities (Huawei)	Huawei	reserved	2020-03-12 06:18:37	
R2-2002335	Running CR for 36.306 on introducing UE capability for eDCCA	Huawei	endorsed	2020-03-05 22:11:36	2020-03-05 22:11:36

R2-2002336	Support of inter-RAT handover from NR to EN-DC in TS 36.331	China Telecom, Huawei, ZTE, CATT, VIVO,	agreed	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002337	Support of inter-RAT handover from NR to EN-DC in TS 38.331	China Telecom, Huawei, ZTE, CATT, VIVO,	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002338	Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 38.306	China Telecom, Huawei, ZTE, CATT, VIVO,	agreed	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002339	Introduction of UE capability indicator of supporting inter-RAT handover from NR to EN-DC in 36.306.	China Telecom, Huawei, ZTE, CATT, VIVO,	agreed	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002340	Summary of offline discussion [AT109e][075][TEI16]	China	noted	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002341	Introduction of NR IIOT	Samsung	agreed	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002342	Introduction of 5G V2X with NR Sidelink	LG	agreed	2020-03-06 12:17:22	2020-03-06 12:17:22
R2-2002343	On-demand SIB in CONNECTED Functionality	Ericsson	available	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002344	Corrections on maxMeasIdentitiesSCG-NR in MR-DC	ZTE Corporation, Sanechips,	agreed	2020-03-05 12:03:38	2020-03-05 12:03:38
R2-2002345	draft TS for TS 38.340 (BAP)	Huawei	agreed	2020-03-06 12:17:22	2020-03-06 12:17:22
R2-2002346	Non-Public Networks	Nokia, China Telecom	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002347	CR on fallback BC reporting	Huawei, HiSilicon	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002348	Introduction of 2-step RACH	Nokia (rapporteur),	agreed	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002349	UE capability of intra-band requirements for inter-band EN-DC/NE-DC	NTT DOCOMO, INC.,	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002350	UE capability of intra-band requirements for inter-band EN-DC/NE-DC	NTT DOCOMO, INC.,	agreed	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002351	Extension of CSI-RS capabilities per codebook type	NTT	postpone	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002352	Extension of CSI-RS capabilities per codebook type	NTT	postpone	2020-03-06 10:46:28	2020-03-06 10:46:28
R2-2002353	[DRAFT] Reply LS on CSI-RS capabilities (FG 2-33/36/40/41/43)	NTT DOCOMO,	revised	2020-03-12 06:19:02	2020-03-15 19:20:42
R2-2002354	Running CR to 38.321 on Integrated Access and Backhaul for NR	Samsung Electronics	revised	2020-03-06 12:17:22	2020-03-06 12:17:22
R2-2002355	Summary of IIOT WI agreements and open issues	Nokia, Nokia	available	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002356	Introduction of NR Industrial IoT features	Nokia, Nokia Shanghai	agreed	2020-03-06 12:17:22	2020-03-06 12:17:22
R2-2002357	38.331 CR on Integrated Access and Backhaul for	Ericsson	revised	2020-03-10 19:57:15	2020-03-10 19:57:15
R2-2002358	36.331 CR on Integrated Access and Backhaul	Ericsson	agreed	2020-03-10 19:57:15	2020-03-10 19:57:15
R2-2002359	Introduction of NR IIoT	Ericsson	agreed	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002360	Introduction of NR IIoT	Ericsson	agreed	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002361	LS to RAN2 on NR-U related changes for 38.300 running CR (R1-2001300; contact: Qualcomm)	RAN1	available	2020-03-06 00:08:20	2020-03-06 00:08:20
R2-2002362	LS on SSB index and candidate SSB index for NR-U (R1-2001357; contact: Samsung)	RAN1	available	2020-03-06 00:08:20	2020-03-06 00:08:20
R2-2002363	LS on NR-U enhancements to initial access procedures (R1-2001375; contact: Charter	RAN1	available	2020-03-06 00:08:20	2020-03-06 00:08:20
R2-2002364	Reply LS on consistent Uplink LBT failure detection mechanism (R1-2001397; contact: Nokia)	RAN1	available	2020-03-06 00:08:20	2020-03-06 00:08:20
R2-2002365	CR to 38.300 on Integrated Access and Backhaul for	Qualcomm	revised	2020-03-06 16:53:29	2020-03-06 16:53:29

R2-2002366	Introduction of NR IIOT	PDCP Rapporteur	revised	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002367	Introducing EHC in LTE PDCP	PDCP Rapporteur	revised	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002368	Running CR to 37.340 for CA_DC enhancements	vivo, Ericsson	revised	2020-03-06 12:17:22	2020-03-06 12:17:22
R2-2002369	Introduction of UE Power Saving in NR	CATT	revised	2020-03-06 18:12:07	2020-03-06 18:12:07
R2-2002370	Introduction of SRVCC from 5G to 3G	Ericsson, China	agreed	2020-03-08 01:33:25	2020-03-08 01:33:25
R2-2002371	CR for 36.300 on CA/DC enh	Ericsson	revised	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002372	CR for 38.300 for CA/DC Enhancements	Ericsson	revised	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002373	Running CR for 36.331 for CA/DC Enhancements	Ericsson	revised	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002374	Running CR for 38.331 on CA/DC Enhancements	Ericsson	revised	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002375	Summary of 6.1.5.2: IAB Configuration except IP	Ericsson	noted	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002376	Clarification of UE requirements for early measurement performance and reporting	RAN2	approved	2020-03-11 13:04:15	2020-03-11 13:04:15
R2-2002377	Miscellaneous non-controversial corrections Set V	Ericsson	agreed	2020-03-06 12:17:22	2020-03-06 12:17:22
R2-2002378	Guidelines for UE capability definitions	RAN2	approved	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002379	Introduction of 2-step RACH in 38.321	ZTE Corporation,	revised	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002380	Introduction of 2-step RA	Ericsson	agreed	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002381	LS on dormant BWP configuration and related operation	RAN2	approved	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002382	Introduction of dormant BWP operation and Async CA	OPPO	agreed	2020-03-06 16:53:29	2020-03-06 16:53:29
R2-2002383	RAN2#109e agreements and remaining Issues for Power Saving	CATT	available	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002384	Running CR for 38.331 for Power Savings	MediaTek	revised	2020-03-06 23:48:11	2020-03-06 23:48:11
R2-2002385	Introduction of NR operation with Shared Spectrum Access in Idle/Inactive mode	Qualcomm Incorporated	agreed	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002386	Introduction of UE Power Saving in NR	vivo	revised	2020-03-11 13:04:15	2020-03-11 13:04:15
R2-2002387	CR for supporting UE Power Saving in TS 37.340	OPPO	agreed	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002388	Introduction of Rel-16 NR UE power saving in 38.321	Huawei, Nokia, Nokia	agreed	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002389	CR for 38.331 for Power Savings	MediaTek	agreed	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002390	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306)	Huawei, HiSilicon	agreed	2020-03-10 13:12:08	2020-03-10 13:12:08
R2-2002391	CR for 36.331 for CA&DC enh	Ericsson	agreed	2020-03-10 19:57:15	2020-03-10 19:57:15
R2-2002392	CR for 38.331 for CA&DC enh	Ericsson	agreed	2020-03-10 19:57:15	2020-03-10 19:57:15
R2-2002393	Reply LS on Information Needed for MRO in UE RLF	RAN2	approved	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002394	LS to RAN4 on RRM relaxation in power saving	RAN2	approved	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002395	Introduction of CA/DC enhancements to 37.340	vivo, Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002396	Introduction of on-demand SI procedure in RRC_CONNECTED	Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002397	Introduction of on-demand SI procedure in RRC_CONNECTED	Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002398	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, CEWiT, Huawei, ISRO, MediaTek Inc., Qualcomm	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002399	Introduction of NR positioning	Intel	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05

R2-2002400	Introduction of NR positioning on MAC spec	Huawei,	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002401	Introduction of NR positioning	Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002402	Data rate for the case of single carrier standalone operation	Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002403	Correction of TS 38.304 to introduce IAB	Huawei,	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002404	Correction of TS 36.304 to introduce IAB	Huawei,	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002405	Introduction of Integrated Access and Backhaul for NR	Samsung Electronics	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002406	38.331 CR on Integrated Access and Backhaul for	Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002407	CR to 38.300 on Integrated Access and Backhaul for	Qualcomm	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002408	Introduction of NR IIOT	PDCP Rapporteur	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002409	Introducing EHC in LTE PDCP	PDCP Rapporteur	withdrawn	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002410	Introduction of UE Power Saving in NR	CATT	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002411	CR for 36.300 on CA/DC enh	Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002412	CR for 38.300 for CA/DC Enhancements	Ericsson	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002413	Introduction of 2-step RACH in 38.321	ZTE Corporation,	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002414	Introduction of UE Power Saving in NR	vivo	agreed	2020-03-12 05:22:05	2020-03-12 05:22:05
R2-2002415	Reply LS on CSI-RS capabilities (FG 2-33/36/40/41/43)	RAN2	approved	2020-03-16 19:57:09	2020-03-17 00:26:00
R2-2002416	LS on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs	RAN2	revised	2020-03-17 11:44:42	2020-03-17 11:46:19
R2-2002417	LS on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs	RAN2	approved	2020-03-20 10:46:09	2020-03-21 22:43:14

APPENDIX G

3GPP TSG-RAN WG2 meeting #108 **R2-1914301**
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ORGANISATION OF THE MEETING 9

STATISTICS/EXECUTIVE SUMMARY 9

1 OPENING OF THE MEETING (9 AM) 9

1.1 Call for IPR 9

1.2 Network usage conditions 10

1.3 Other 10

1.4 Statement Regarding Engagement with Companies Added to the U.S. Export Administration Regulations (EAR) Entity List in 3GPP Activities 10

2 GENERAL 11

2.1 Approval of the agenda 11

2.2 Approval of the report of the previous meeting 11

2.3 Reporting from other meetings 12

2.4 Others 13

3 INCOMING LIAISONS 13

4 EUTRA CORRECTIONS REL-15 AND EARLIER 15

4.1 NB-IoT corrections Rel-15 and earlier 15

4.3 V2X and Sidelink corrections Rel-15 and earlier 16

4.4 Positioning corrections Rel-15 and earlier 17

4.5 Other LTE corrections Rel-15 and earlier 18

5 WI: NEW RADIO (NR) ACCESS TECHNOLOGY 21

5.1 Organisational 21

5.2 Stage 2 22

5.2.1 Stage 2 corrections for TS 38.300 22

5.2.2 Stage 2 corrections for TS 37.340 23

5.2.3 Positioning 25

5.3 Stage 3 user plane 26

5.3.1 MAC 26

5.3.2 RLC 27

5.3.3 PDCP 27

5.3.4 SDAP 27

5.4 Stage 3 control plane 27
5.4.1 NR RRC 27
5.4.1.3 Connection control procedures 27
5.4.1.3.1 Corrections to L1 Parameters 27
5.4.1.3.2 Corrections to L2 Parameters 28
5.4.1.3.3 Connection establishment procedure 29
5.4.1.3.4 Connection reconfiguration procedure 29
5.4.1.3.5 Connection re-establishment procedure 31
5.4.1.3.6 Connection resume procedure and RRC_INACTIVE state 31
5.4.1.3.7 Connection release procedure 32
5.4.1.3.8 Security procedures 32
5.4.1.3.10 Access control 33
5.4.1.3.11 Other 33
5.4.1.4 RRM 36
5.4.1.6 System information 38
5.4.1.9 Inter-Node RRC messages 38
5.4.2 LTE changes related to NR 40
5.4.4 UE capabilities 41
5.4.5 Idle/inactive mode procedures 45
5.4.5.1 Cell selection/reselection 45
5.4.5.2 Idle/inactive paging 46

5.5 Late Drop 46
5.5.1 Stage 2 CRs 46
5.5.2 UE capabilities and capability coordination 46
5.5.3 Measurements and measurement coordination 48
5.5.4 Other 48

6 REL-16 NR WORK ITEMS 50

6.1 Integrated Access and Backhaul for NR 50
6.1.1 Organisational 50
6.1.2 Stage-2 and general 51
6.1.3 BAP functionality 54
6.1.3.1 Routing 54
6.1.3.2 Bearer Mapping 55
6.1.3.3 Flow Control 55
6.1.3.4 Other 56
6.1.4 User plane aspects 57
6.1.4.1 Scheduling and QoS 57
6.1.4.2 LCID extension 59
6.1.4.3 Other 60
6.1.5 Control plane aspects 60
6.1.5.1 RLF handling 60
6.1.5.2 Configuration 62
6.1.5.3 Other 64

6.2 NR-based Access to Unlicensed Spectrum 65
6.2.1 General 65
6.2.2 User plane 66
6.2.2.1 4-step RACH 66
6.2.2.2 Handling UL LBT failures 68
6.2.2.3 2-step RACH 70
6.2.2.4 DRX 70
6.2.2.5 Configured grant operation 71

6.2.2.6 CAPC 73
6.2.2.7 Other 74
6.2.3 Control plane 75
6.2.3.1 Paging 75
6.2.3.2 Mobility 76
6.2.3.3 RRM 77
6.2.3.4 RLM/RLF 78
6.2.3.5 Other 78

6.4 NR V2X 79

6.5 Optimisations on UE radio capability signalling 109
6.5.1 Organisational 109
6.5.2 UE radio capability signalling using UE capability identity 109
6.5.3 Segmentation of UE radio capabilities 110

6.6 Study on NR non-terrestrial network 111
6.6.1 General 111
6.6.2 Requirements and Scenarios 112
6.6.3 User Plane 112
6.6.3.1 MAC Enhancements 112
6.6.3.2 RLC and PDCP Enhancements 113
6.6.4 Control Plane 114
6.6.4.1 Mobility 114
6.6.4.2 Idle mode 116
6.6.4.3 Other 117

6.7 NR Industrial Internet of Things (IoT) 117
6.7.1 General 117
6.7.2 TSC 118
6.7.2.1 Accurate reference timing 118
6.7.2.2 Scheduling Enhancements 121
6.7.2.2.1 CG and SPS for TSC - General and configuration impact 121
6.7.2.2.2 CG and SPS for TSC - L2 impacts 123
6.7.2.2.3 Other 125
6.7.2.3 Ethernet Header Compression 126
6.7.3 Intra-UE prioritization and multiplexing 128
6.7.3.1 Handling of deprioritized transmissions 128
6.7.3.2 Data Data prioritization with CG 130
6.7.3.3 SR Data prioritization 131
6.7.3.4 Other 131
6.7.4 PDCP duplication enhancements 132
6.7.4.1 Network Controlled Duplication 132
6.7.4.2 UE controlled Duplication 134
6.7.4.3 Other 134

6.8 NR Positioning Support 134
6.8.1 Organisational 134
6.8.2 Architecture and protocol aspects 135
6.8.2.1 Support of NR RAT-dependent positioning 135
6.8.2.2 Support of SSR phase 2 (PPP-RTK) 139
6.8.2.3 Broadcast assistance data 140
6.8.2.4 UE-based positioning 140
6.8.3 Other 140

6.9 NR mobility enhancements 141
6.9.1 Organisational 141
6.9.2 Reduction in user data interruption during handover 141

6.9.3 Handover robustness improvements 141
6.9.3.1 Conditional handover – configuration and execution details 141
6.9.3.2 Conditional handover – failure handling 144
6.9.3.3 Conditional handover - other aspects 145
6.9.3.4 Fast handover failure recovery 146
6.9.3.5 Conditional handover - beam specific aspects 147
6.9.4 Conditional PSCell addition/change 147

6.10 DC and CA enhancements 149
6.10.1 Organisational 149
6.10.2 NR-NR Dual Connectivity 151
6.10.3 Early measurement reporting 151
6.10.4 Efficient and low latency configuration signalling 154
6.10.4.1 Direct SCell activation 154
6.10.4.2 Fast SCell activation 155
6.10.4.3 MCG SCell and SCG Configuration with RRC Resume 156
6.10.4.4 Other 158
6.10.5 Fast MCG link Recovery 158
6.10.6 Cross-Carrier scheduling with different numerologies 160
6.10.7 Other 160

6.11 UE Power Saving in NR 161
6.11.1 Organisational 161
6.11.2 PDCCH-based power saving signals/channel Additional stage-3 RAN2 aspects 161
6.11.3 Efficient transition from RRC_CONNECTED to RRC_IDLE/RRC_INACTIVE 164
6.11.4 MIMO layer adaptation 165
6.11.5 UE assistance 165
6.11.6 RRM measurement relaxation 167

6.12 SON/MDT support for NR 168
6.12.1 General 168
6.12.2 MDT 169
6.12.3 L2 measurements 173
6.12.4 SON 174
6.12.5 Others 176

6.13 2-step RACH for NR 176
6.13.1 General 176
6.13.2 Stage-2 open issues 177
6.13.3 MAC PDU formats 181
6.13.4 RRC stage-3 related aspects 183
6.13.5 Stage-3 aspects 183
6.13.6 Other 184

6.14 Single Radio Voice Call Continuity from 5G to 3G 184
6.14.1 Organisational 184
6.14.2 Inter RAT handover to UTRAN for SRVCC 185
6.14.3 Other 185

6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR 186

6.16 Enhancements on MIMO for NR 188
6.16.1 Organisational 188
6.16.2 Single-PDCCH multi-TRP operation 189
6.16.3 Multi-PDCCH multi-TRP operation 190
6.16.4 General beam management enhancements 191

6.18 Private Network Support for NG-RAN 192

6.18.1 Organisational 192
6.18.2 Idle and inactive mode 193
6.18.3 Connected mode 196

6.19 Other NR Rel-16 WIs/SIs 196

6.20 NR TEI16 enhancements 198
6.20.1 RAN2 led TEI16 enhancements - Control plane related 199
6.20.2 RAN2 led TEI16 enhancements - User plane related 203
6.20.3 TEI16 enhancements led by other WGs 206

6.21 On demand SI in connected 207

7 REL-16 LTE WORK ITEMS 209

7.1 Additional MTC enhancements for LTE 209

7.2 Additional enhancements for NB-IoT 227
7.2.1 Organisational 227
7.2.2 Mobile-terminated (MT) early data transmission (EDT) 229
7.2.3 UE-group wake-up signal (WUS) 229
7.2.4 Transmission in preconfigured resources 233
7.2.5 Scheduling multiple DL/UL transport blocks 238
7.2.6 Network management tool enhancement 238
7.2.7 Improved multi-carrier operation 239
7.2.8 Inter-RAT cell selection 241
7.2.9 Coexistence with NR 241
7.2.10 Connection to 5GC 241
7.2.10.1 Indication of supported CIoT features and other common aspects 241
7.2.10.2 Other 244
7.2.11 UE specific DRX 244
7.2.12 Other 245

7.3 Even further mobility enhancement in E-UTRAN 245
7.3.1 Organizational 245
7.3.2 Reduction in user data interruption (RUDI) during handover for dual active protocol stack (DAPS) 246
7.3.2.1 User plane aspects of RUDI HO 246
7.3.2.1.1 PDCP/RLC aspects of RUDI HO 246
7.3.2.1.2 MAC and UL transmission aspects of RUDI HO 252
7.3.2.2 Control plane aspects of RUDI HO 255
7.3.2.2.1 RRC procedures during RUDI HO 255
7.3.2.2.2 UE capabilities for RUDI HO 257
7.3.2.3 Other aspects of RUDI HO 259
7.3.3 Conditional Handover 259

7.4 Further performance enhancement for LTE in high speed scenario 259

7.5 Other LTE Rel-16 WIs 259

7.6 LTE TEI16 enhancements 260

7.7 Support of Indian Navigation Satellite System (NavIC) 264

7.8 Breakout session reports 265
7.8.1 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility 265
7.8.2 Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS 266
7.8.3 Report from eMTC breakout session 266
7.8.4 Report from NR-U, Power Savings, NTN and 2-step RACH sessions 266

7.8.5 Report from session on Rel-15 and 16 LTE and NR positioning 266
7.8.6 Report from SON/MDT session 266
7.8.7 Report from NB-IoT breakout session 266
7.8.8 Report from session on LTE V2X and NR V2X 267

CLOSING OF THE MEETING (17:00) 267

ANNEX A: LIST OF PARTICIPANTS 267

ANNEX B: LIST OF TDOCS 267

ANNEX C: INCOMING LIAISON STATEMENTS 267

ANNEX D: OUTGOING LIAISON STATEMENTS 272

ANNEX E: LIST OF AGREED-IN-PRINCIPLE CRS AND DRAFTCRS 273

ANNEX F: EMAIL APPROVALS 274

ONE WEEK DISCUSSIONS: DEADLINE THURSDAY, 2019-10-24, 23:59 PACIFIC TIME (UNLESS STATED) 274

TWO WEEK DISCUSSIONS: DEADLINE THURSDAY, 2019-10-31, 23:59 PACIFIC TIME (UNLESS STATED) 275

NEXT MEETING DISCUSSIONS: DEADLINE THURSDAY, 2019-11-07, 23:59 PACIFIC TIME (UNLESS STATED) 277

ANNEX G: HISTORY 283

Organisation of the meeting

Meeting:	3GPP TSG RAN2#107bis
Meeting location:	Chongqing, China
Duration:	14.10 - 18.10.2019
Host:	CF3
TSG RAN WG2 Chairman:	Johan Johansson (MediaTek) (johan.johansson@mediatek.com)
TSG RAN WG2 Vice chairman:	Tero Henttonen (Nokia) (tero.henttonen@nokia.com)
TSG RAN WG2 Vice chairman:	Sergio Parolari (ZTE) (sergio.parolari@zte.com.cn)
TSG RAN WG2 MCC Support:	Juha Korhonen (ETSI MCC) (juha.korhonen@etsi.org)
Email reflector:	3GPP_TSG_RAN_WG2@LIST.ETSI.ORG
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_107bis/Docs
Next meetings:	TSG RAN2#108, 18.11 - 22.11.2019, Reno, USA
	TSG RAN2#109, 24.02 - 28.02.2019, Athens, Greece

Statistics/Executive Summary

TSG RAN2#107bis was held in Chongqing, China, hosted by CF3. The meeting had 8 breakout sessions in addition to the main session. The main session was mainly about NR. The breakout sessions were:

- LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility
- SRVCC, CLI, PRN, eMIMO, RACS
- eMTC
- NR-U, Power Savings, NTN and 2-step RACH sessions
- Rel-15 and 16 LTE and NR positioning
- SON/MDT session
- NB-IoT breakout session
- LTE V2X and NR V2XNR idle/inactive mobility, NR SON/MDT, LTE TEI16

The statistics from this meeting are:

- 307 participants checked in (registered: 382 participants).
- 2229 Tdoc numbers allocated with 2162 available contributions. (See the attached tdoc list)
- 74 incoming liaison statements, out of which 69 were noted, and one postponed. The remaining liaison is to be treated in RAN2#108 meeting.
- 30 outgoing liaison statements.
- 96 email approvals/discussions scheduled after RAN2#107bis meeting, see Annex F for details.
- Number of CRs submitted: 260. Out of these, 49 were agreed-in-principle. See Annex E for details.

Note that RAN2#107bis meeting did not formallly agree any CRs. All agreed-in-principle CRs from this meeting have to be resubmitted to RAN2#108 for formal agreeent.

1 Opening of the meeting (9 AM)

1.1 Call for IPR

The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners **to inform their respective Organizational Partners of Essential IPRs** they become aware of.
The delegates were asked to take note that they were hereby invited:

- to investigate whether their organization or any other organization owns IPRs which

were, or were likely to become Essential in respect of the work of 3GPP.
- to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Statement and the Licensing declaration forms (https://www.etsi.org/images/files/IPR/etsi-ipr-form.doc)

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

1.2 Network usage conditions

The PCG has laid down the following network usage conditions

1. **Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.**

2. **Users shall not engage in non-work related activities that consume excessive bandwidth** or cause significant degradation of the performance of the network.
Since the network is a shared resource, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

1. DON'T place your WiFi device in ad-hoc mode
2. DON'T set up a personal hotspot in the meeting room
3. DO try 802.11a if your WiFi device supports it
4. DON'T manually allocate an IP address
5. DON'T be a bandwidth hog by streaming video, playing online games, or downloading huge files
6. DON'T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)

1.3 Other

In accordance with the Working Procedures it is reaffirmed that:
(i) compliance with all applicable antitrust and competition laws is required;
(ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and
(iii) the chairman will conduct the meeting with strict impartiality and in the interests of 3GPP

Note on (i): In case of question please contact your legal counsel.
Note on (ii): WIDs don't need to be submitted to the RAN2 meeting and will typically not be discussed here either.

1.4 Statement Regarding Engagement with Companies Added to the U.S. Export Administration Regulations (EAR) Entity List in 3GPP Activities

1. Public Information is Not Subject to EAR

3GPP is an open platform where all contributions (including technology protected or not by patent) made by the different Individual Members under the membership of each respective Organizational Partner are publicly available. Indeed, contributions by all and any Individual Members are uploaded to a public file server when received and then the documents are effectively in the public domain.

In addition, since membership of email distribution lists is open to all, documents and

emails distributed by that means are considered to be publicly available.

As a result, information contained in 3GPP contributions, documents, and emails distributed at 3GPP meetings or by 3GPP email distribution lists, because it is made available to the public without restrictions upon its further dissemination, is not subject to the export restrictions of the EAR.

Meeting minutes are maintained for 3GPP meetings. Such meeting minutes for 3GPP meetings are made available to the public without restrictions upon its further dissemination. As a result, information, including information conveyed orally, contained in 3GPP meetings is not subject to the export restriction of the EAR; this would include information conveyed during side meetings that may occur during the main meetings, if these meetings are open to any participants and the results of all said meetings are publicly available without restrictions upon their further dissemination.

2. Non-Public Information

Non-public information refers to the information not contained or not intended to be contained in 3GPP contributions, documents or emails. Such non-public information may be disclosed during informal meetings, exchanges, discussions or any form of other communication outside the 3GPP meetings and email distribution lists, and may be subject to the EAR.

3. Other Information

Certain encryption software controlled under the International Traffic in Arms Regulations (ITAR), even if publicly available, may still be subject to US export controls other than the EAR.

4. Conduct of Meetings

The situation should be considered as "business as usual" during all the meetings called by 3GPP.

5. Responsibility of Individual Members

It should be remembered that contributions, meetings, exchanges, discussions or any form of other communication in or outside the 3GPP meetings are of the accountability, integrity and the responsibility of each Individual Member. In addition, Individual Members remain responsible for ensuring their compliance with all applicable export control regulations, including but not limited to EAR.

Individual Members with questions regarding the impact of laws and regulations on their participation in 3GPP should contact their companies' legal counsels.

2 General

2.1 Approval of the agenda

R2-1912000 Agenda for RAN2#107bis Chairman agenda Late

⇒ **approved**

2.2 Approval of the report of the previous meeting

R2-1912001 RAN2#107 Meeting Report MCC report Late

⇒ **approved**

2.3 Reporting from other meetings

RAN2 impact summary from RP-85

Rel-15

1/ Rel-15: Synchronous NR-NR DC, in RP-192345 (endorsed)
Introduction of a UE capability is agreed.

Rel-16

2/ TEI16
IDC can be treated at R2 meeting in February (briefly, max 15 min online time). Proponents has until then to convince opponents.
UDC is not part of Rel-16 and will not be treated in R2

3/ Power saving Enhancements, NR DC CA enhancements, Guidance in RP-192326 (endorsed)
The guidance on signalling for power saving, mainly with R1 impact, clarifies the following:
1. RANP tasks RAN2 to define dormancy behavior under MR-DC/CA WI
2. In parallel, in the next quarter, RAN1, in consultation with RAN2, specifies L1 based mechanism for transitioning between 'dormancy-like' and 'non-dormancy-like' behavior on activated SCells under MC-DC/CA WI.
3. Further study will be conducted if any additional UE behavior is needed when UE is also configured for receiving PDCCH based power saving signal/channel outside active time, and, if agreed, the additional UE behavior will be specified.
a. RAN1 chair will treat this together with dormancy discussion under MR-DC/CA WI
b. RAN2 will wait for RAN1 conclusion. If it is agreed that additional behavior is needed for outside of active time, RAN2 chair will decide how to split the work between MC-DC/CA and Power Saving.

4/ WID update: NR DC CA Enhancements, WID in RP-192336
Two R1 led objectives were added: *Support for Aperiodic CSI-RS triggering with different numerology between PDCCH and CSI-RS*, and *support for unaligned frame boundary with slot alignment for inter-band CA*

5/ WID update: NR Mobility enhancements WID in RP-192277
Clarification that the study objectives are finished, and instead new R2 led WI objectives on A) *to reduce interruption time during HO:* by *Dual active protocol stack based HO interruption time reduction solution*; and *To improve HO/SCG change reliability and robustness:* B) by *Conditional handover for NR PCell change;* C) by *Conditional handover based NR PSCell addition/change for any architecture option with NR PSCell;* and D) by *T312 based fast failure recovery (similar to LTE).*
NOTE that RACH-less is no longer mentioned, and that C) involves a slight increase in scope (as expected).

6/ WID update: 2-step RACH WID in RP-192330
CFRA for handover is added, no R1 impact is allowed.

7/ WID update: Industrial IoT WID in RP-192324
UE based PDCP duplication has lower priority. For intra-UE prioritization, L1 multiplexing of different services is excluded from the R1 objective. LTE impacted specs for Ethernet Header Compression were added.

8/ WID update EUTRA: NB-IoT WID in RP-192313
Introduction of UE based DRX.

9/ New WI EUTRA: NavIC, WID in RP-192350
Support of Indian navigation satellite system (NavIC) for LTE

10/ Time budget – no change except for addition of 0.5 TUs for the next two WG meetings for the new LTE NAVIC work item.

11/ Other, Can trigger work in R2 by LS
R4 WID RP-192227 Addition: Possible R2 aspects of Enhancements methods for avoiding radio link failures and connection releases due to significant and unpredictable UE P-MPRs due to the FR2 UE RF exposure compliance reasons.
R4 WID RP-192157 Addition: Possibly Mandating additional Gap patterns.
R4 WID RP-192282 Addition: R2 TSes impact, if needed.

Rel-17

Interesting, but no impact to R2 in the next quarter.

2.4 Others

Rapporteur changes

Spec	former rapporteur	proposed new rapporteur
38.306	Kyeongin Jeong(Intel)	Naveen Palle (Intel)

⇒ **rapporteur change is approved**

Isolated impact analysis

Note that an isolated impact analysis is required for Rel-8 to Rel-15 CRs from Q3 2018 onwards.
Only corrections where there is a proven problem are allowed for frozen releases (Rel-8 to Rel-15).

RAN2 WG Handbook

Latest version can always be found at ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Org/RAN2_Handbook/

Drafting rules

Note that specification drafting rules in TR 21.801 must be followed when drafting a CR and draft TS/TR.
Latest version can always be found at http://www.3gpp.org/ftp/specs/archive/21_series/21.801/

Time Budget

The time budget endorsed at RAN-85 can be found in RP-192351.

Tdoc Limitation

A limit of max number of allowed tdocs for a company for submission towards an Agenda Item and its sub-agenda-items. Co-source documents counts towards the tdoc limitation of the presenting company, which is assumed to be the first in the list if not presented. The following is not counted towards the tdoc limitation:
- Rapporteur input (TS rapporteur, TR rapporteur, WI/SI rapporteur)
- One Draft Reply LS by contact company.
- Pre-agreed volunteer input (email discussion report, update of running CRs etc)
- At-Meeting-decided input (revisions, offline discussion reports, LS outs etc).

Offline discussions during RAN2 meeting

Chairs will allocate a number for offline discussions during the meeting. Create a folder starting with this number within inbox/drafts and use this to share any documents relating to the offline discussion (please use format "[Offline-nnn] ....", i.e. a 3 digit number). Also use this number in the title of any reflector emails relating to this offline discussion. (please use format "[RAN2#107bis Offline-nnn]....."). Do not share documents over the reflector during the meeting.

The outcome of offline discussions need to be clear and public. One way to achieve that is to provide the outcome in a tdoc (e.g. discussion paper, CR, LS). Verbal-only reporting need to be captured by the session chair, and is suitable only for very simple outcomes, e.g. discussion didn't happen, no result, or a very simple result.

Efficient handling of comebacks

Please allocate tdoc numbers for comebacks as soon as possible. Allocate tdoc numbers for your Friday comebacks on Thursday.

3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

For Information

R2-1912007 LS on O-RAN Alliance & 3GPP Coordination on O-RAN Alliance Outputs (ORAN_3GPP_Liaison_Statement_final; contact: AT&T, CMCC) IEEE 802.3 LS in Rel-16 To:SA, CT, RAN, SA1, SA2, SA3, SA5, SA6, RAN1, RAN2, RAN3 Cc:3GPP PCG

R2-1912064 Reply LS to “O-RAN Alliance & 3GPP Coordination on O-RAN Alliance Outputs” (SP-190947; contact: Intel) SA LS in To:O-RAN Alliance Cc:CT, RAN, SA1, SA2, SA3, SA5, SA6, RAN1, RAN2, RAN3, PCG

⇒ **2 above noted wo presentation**

R2-1912063 LS on aspects of Mission Critical Services over 5MBS (S6-192003; contact: AT&T) SA6 LS in Rel-17 FS_MC5MBS To:SA, RAN, SA2, RAN2, RAN3Cc:SA1

⇒ **postponed next meeting**

4 EUTRA corrections Rel-15 and earlier

See Appendix A for reference to Work items, work item codes and WIDs.

4.1 NB-IoT corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.2. Including output of email discussion [107#56][NB-IoT R15] When PDCCH monitoring starts/ends for Timers Started in the Middle of a PDCCH Period (DoCoMo)

R2-1912228 Report of email discussion [107#56][NB-IoT R15] NTT DOCOMO INC. discussion Rel-15

⇒ **Capture in the MAC specification, at least for the OnDuration timer, a note to confirm the understandings made in Observations 2 and 3 about when monitoring should start and end.**

R2-1913067 Clarification of PDCCH monitoring period with non-zero DRX-startoffset for NB-IoT NTT DOCOMO INC. CR Rel-15 36.321 15.7.0 1458 - F NB_IOTenh2-Core

⇒ **Revised in R2-1914097**

Offline discussion #705 (DoCoMo) – to finalise the wording of the note in this CR.

R2-1914097 Clarification of PDCCH monitoring period with non-zero DRX-startoffset for NB-IoT NTT DOCOMO INC. CR Rel-15 36.321 15.7.0 1458 1 F NB_IOTenh2-Core

- Huawei don't think we should have a general statement and only address what we have discussed.
- Sequans would be OK with the previous version, this is too general.
- QC thinks there are other timers specified in a similar way and they do not specify where the PDCCH monitoring starts, and don't think OnDuration timer should be handled differently to others.
- Fujitsu think we need to check before agreeing a general solution.
- ZTE thinks only this timer has an issue so we should fix only this.
- Nokia thinks we should fix this issue now and other timers only if we identify an issue.
- Intel wonders if other timers will have a backwards compatibility issue.
- Huawei thinks all other timers are clear.

✉ **[107bis#88][NB-IoT R15] NPDCCH monitoring start/stop timers (NTT DoCoMo)**
Check whether there is impact to timers other than OnDuration timer for NPDCCH monitoring start/stop
Intended outcome: Report and CR to be submitted to the next meeting.
Deadline: Next Meeting

R2-1912998 Reselection to a Cell with Valid Dedicated Frequency Offset MediaTek Inc, LG Electronics discussion

- Huawei agrees there is a problem. The intention is to make the UE stay on the frequency once redirected there, so only really for the initial case. Mediatek think this provides a preferred frequency over a period of time.
- Intel wonders if we can apply positive offset to the preferred carrier instead.
- LG thinks if the NW redirects to a carrier it is not the intention to make UE stay there.
- Nokia have the same view as Huawei. Ericsson think we have to correct this and Mediatek way seems reasonable.
- QC think we need to be careful about backwards compatibility, and are not sure really what the problem is.
- ZTE think this is a corner case so probably doesn't happen often.

- Mediatek thinks this can happen if there is a temporary coverage problem on the preferred carrier, so UE reselects away then it gets better and could move back.

⇒ **We will clarify one way or another – either UE keeps the offset to be applied after reselecting away from the preferred carrier, or UE discards the offset after reselecting away from the preferred carrier**

Offline discussion #701 (Mediatek) decide which of the above options to go with
- After offline Mediatek reports that there is no consensus which way to correct the issue.

⇒ **Postponed**

R2-1912999 Reselection to a Cell with Valid Dedicated Frequency Offset MediaTek Inc., LG Electronics
draftCR Rel-15 36.304 15.4.0 C NB_IOT-Core

R2-1913191 Correction on T322 Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.12.0 4112
- F NB_IOTenh-Core
- Huawei thinks the CR is UE only so cover page and impact analysis needs an update.
- Ericsson think the section title could also be updated
- Intel think the timer is described in the table

⇒ **Revised in R2-1914091**

Offline discussion #700 (Nokia) – update the CR on T322

R2-1914091 Correction on T322 Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.12.0 4112
1 F NB_IOTenh-Core

⇒ **Interoperability should be updated to "none".**

⇒ **With the above change the CR is agreed in principle**

R2-1913192 Correction on T322 Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.7.0 4113
- A NB_IOTenh-Core

4.2 eMTC corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.1.

R2-1912605 Clarification on UP-EDT Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4104 -
F LTE_eMTC4-Core, NB_IOTenh2-Core

- QC clarifies that if user plane data is transmitted in the DL with the RRC release message, it should be on DRB.

[CB Offline discussion #300] To decide whether the change is needed, and if it is what the proper wording would be (Huawei)

The outcome can be provided in R2-1914043.

R2-1914043 Clarification on UP-EDT Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4104 1 F
LTE_eMTC4-Core, NB_IOTenh2-Core

- Intel prefers not to remove any legacy text. ZTE agrees.
- QC suggests checking further to be careful with the changes.
- LG suggests updating the title with "Clarification in default configuration for UP-EDT"
-

⇒ **Postponed**

4.3 V2X and Sidelink corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

R2-1912450 Discussion on priority value in LTE V2X SHARP Corporation discussion

[Ericsson]: There has not been RAN1 LS to ask RAN2 to fix it. It would be easier to fix it in RAN1 specifications. Just to map 0 to 7 in L1 instead of 1 to 8. [Huawei]: It is clear for PPPP, the lower number means higher priority, so there is no difference regardless of whether it maps 0 to 7 or 1

to 8. [ZTE]: Priority information will be indicated to the lower layer and how to map the information is RAN1 issue as long as it keeps the ascending order. [OPPO, Qualcomm, LG]: Shares the view with all companies. It should be ok to do nothing or just to capture RAN2 understanding in minutes. [Ericsson, OPPO]: Propose to send LS to RAN1 to solve it in RAN1 specification [Intel]: If we see RAN1 notes, it clearly indicated RAN2 should solve the issue. [Huawei]: Anyway it should not impact to Rel-14. [Ericsson]: At least we should wait for official RAN1 LS.

⇨ Noted.

R2-1912451 Correction on priority values in LTE V2X SHARP Corporation draftCR Rel-14 36.331 14.12.0 F LTE_V2X-Core

R2-1912452 Correction on priority values in LTE V2X SHARP Corporation draftCR Rel-15 36.331 15.7.0 A LTE_V2X-Core

R2-1912453 Correction on value of sensing priority for sidelink mode 3 sensing measurement SHARP Corporation draftCR Rel-15 36.331 15.7.0 F LTE_eV2X

R2-1912911 Avoid ping pong state transition for sidelink UE Beijing Xiaomi Software Tech discussion

[LG, Intel]: NW may not configure inactive timer, then it can be solved. [ZTE]: Rel-15 UE actually sends CBR MR or others, so it can be rarely happen. [Ericsson]: If problem exists in NR, we need to discusss the issue in NR V2X and common solution can be applied to both NR and LTE. [Apple]: It is not correction, it is for new enhancement so it should be discussed in TEI-16. [Ericsson]: NW can also send some information/data to the UE, then it can be solved.

⇨ Noted

R2-1913966 Discussion on priority misalignment issue OPPO, Apple discussion LTE_V2X-Core

⇨ Noted

R2-1912803 Issue on ping pong state transition for sidelink UE Beijing Xiaomi Software Tech discussion Withdrawn

4.4 Positioning corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

R2-1913420 posSIBs on a selective carrier Ericsson discussion Rel-16

Nokia think this is not a correction and they do not see how it addresses the resource optimisation aspects. It seems more to affect load distribution.
Ericsson think it reduces overhead on the carriers that do not broadcast the AD.
Qualcomm wonder what the UE behaviour would be if it reads SIB1 and finds itself on the wrong carrier, since the UE cannot autonomously switch to whichever carrier it prefers. Ericsson understand that the UE would be able to know if it is on the wrong carrier and switch. Chair thinks this would require a change to idle mode behaviour.
Intel think it would lead to all UEs being concentrated on the AD carrier and this impacts the load distribution. Ericsson intend it to be used when an operator has multiple carriers and not so many UEs needing the assistance data.
Deutsche Telekom see value in the proposal.
Intel think broadcast is intended for the case where many UEs need the AD and this proposal targets the opposite scenario. Ericsson think there is value in broadcast even for small numbers of UEs, to prevent having to send dedicated AD frequently.
Nokia think this is a bit like MBMS where we needed a frequency interest indication to redirect the involved UEs to the concerned frequency layer.
Qualcomm see this as a deployment question. In cases like a small cell layer the UE would need to be moved to the macro layer to receive the AD. Ericsson think this can be influenced by the existing dedicated priority mechanism.

Chair thinks the existing dedicated priority mechanism could be used to prioritise the carrier with the AD. Ericsson agree but think the UE should be aware of where the AD are.
Nokia think we should limit these corrections to serious problems and this solution does not really address the stated problem. Also it has the side effect of concentrating all the positioning-interested UEs onto one frequency layer.
⇨ Noted

R2-1913421 PosSIB Broadcast carrier Ericsson CR Rel-15 36.331 15.7.0 4122 - C
LCS_LTE_acc_enh-Core

4.5 Other LTE corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

Rel-13 CA enhancements

R2-1913543 On Scell AddMod and Release lists Ericsson discussion Rel-13
LTE_CA_enh_b5C-Core

Example 1
UE is configured with SCells indexed {1, 2, 4, 6} using sCellToAddModList-r10.
Another SCell indexed {8] is added using sCellToAddModListExt-r13.
Scell indexed {4} is released.
Now, UE has 4 SCells, but only 3 are configured with sCellToAddModList-r10.

1. *Is it allowed to add an Scell with ScellIndex in the range 1-7 using SCellToAddModListExt-r13?*
2. *Is it allowed to delete an SCell (originally added with SCellToAddModList-r10) with sCellIndex 4 using SCellToReleaseListExt-r13?*
3. *Is the configuration in Example 1 in conflict with Restriction 2?*
4. *If another SCell is now to be added, should it be added using sCellToAddModList-r10 (this list is not "full") or sCellToAddModListExt-r13 (UE has already 4 SCells)? Or can any be used?*
5. *Is Restriction 2 relevant in eNB to UE signalling?*

Discussion
- Nokia thinks the release case is clear and any list is allowed.
- Qualcomm thinks both addition and release with either R10 or R13 are allowed. Intel agrees. Huawei also agrees.
- Intel thinks addition could use the restriction if needed. Qualcomm doesn't see that necessary.
- Huawei thinks the restriction could be there for only initial setup. Nokia wonders why that would be necessary.
- Ericsson wonders if the first SCell can be added using R13 extension. The restriction is quite vague. Nokia thinks there is no need for the restriction from UE viewpoint, only network. Could just remove it.

⇨ **General agreement that restriction on addition/release is not needed.**
⇨ **SCellIndex sentence is trying to clarify all SCells need unique identifiers.**
⇨ **Companies are asked to provide CRs to next meeting according to above agreements.**

Rel-14 Voice/Video enhancements

R2-1913553 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR
Rel-14 36.321 14.11.0 1456 2 F LTE_VoLTE_ViLTE_enh R2-1910720
Late
(moved from 4)
⇨ **Typo: performaning --> performing**

⇨ **Remove extra word: “methods techniques”**
⇨ **Inter-operability analysis could be improved (if UE follows RAN1 specs, no issues)**
⇨ **Move the second change to be before “For NB-IoT...”**
⇨ **Remove first change**

- Qualcomm thinks first change shouldn’t change TTI bundling for CFRA. Nokia thinks this doesn’t change legacy but clarifies the functionality. Ericsson thinks the first message only concerns initial acccess but is fine not to have first change.
- Ericsson wonders if inter-operability is correct. Nokia explains there are noproblems if YE implements RAN1, but if it only does MAC there could be issues.
- Ericsson thinks the second part looks odd since it now refers to SI configuration, whereas the new part refers to dedicated configuration.

CB: Revised CR can be provided in R2-1913981

R2-1913981 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR Rel-14 36.321 14.11.0 1456 3 F LTE_VoLTE_ViLTE_enh R2-1913553
⇨ **Agreed in principle.**

R2-1913554 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR Rel-15 36.321 15.7.0 1457 1 A LTE_VoLTE_ViLTE_enh R2-1910721 Late
(moved from 4)

CB: Revised CR can be provided in R2-1913982

R2-1913982 Clarification on RA and Msg3 with PUSCH Enhancements Nokia, Nokia Shanghai Bell CR Rel-15 36.321 15.7.0 1457 2 A LTE_VoLTE_ViLTE_enh R2-1913554
⇨ **Agreed in principle**

Rel-15 LAA

R2-1912982 Missing QCI to CAPC mapping Nokia, Nokia Shanghai Bell CR Rel-16 36.300 15.7.0 1240 2 F LTE_unlic-Core R2-1911628
(moved from 4)
⇨ Remove Rel-15 from consequences if not approved.
⇨ **Agreed in principle unseen in R2-1913983**

Rel-15 euCA

R2-1913314 Correction to SIB5 acquisition for idle mode measurements Ericsson CR Rel-15 36.331 15.7.0 4120 - F LTE_5GCN_connect-Core

R2-1913315 Correction on inter-frequency neighbour cell measurements Ericsson CR Rel-15 36.300 15.7.0 1252 - F LTE_5GCN_connect-Core

⇨Add euCA WID code to cover page
⇨ **CRs agreed in principle unseen in R2-1913984 and R2-1913985**

R2-1913984 Correction to SIB5 acquisition for idle mode measurements Ericsson CR Rel-15 36.331 15.7.0 4120 1 F LTE_5GCN_connect-Core

R2-1913985 Correction on inter-frequency neighbour cell measurements Ericsson CR Rel-15 36.300 15.7.0 1252 1 F LTE_5GCN_connect-Core

Rel-15 UDC

R2-1913411 Specify UDC Header is part of Data Field Ericsson CR Rel-15 36.323 15.4.0 0276 - F LTE_UDC-Core
- LG indicates they are OK with the CR now.
- Huawei think this was the original wording but companies didn’t agree at that time.

- Nokia thinks intent is fine but is not essential.
- LG thinks the main discussion was about cover page previously, not need.

⇨**Postponed (should bring CRs showing which changes are needed if RAN2 agrees to this CR or if RAN2 does not agree to this CR).**

Rel-15 eLTE

R2-1912758 Correction to the handling of stored AS context upon CN type change Huawei, HiSilicon
CR Rel-15 36.304 15.4.0 0772 - F LTE_5GCN_connect-Core
- Qualcomm agrees with intent. Ericsson thinks this is for resume only.
- Nokia thinks this has not network impact and this is just specs alignment.

⇨ **Untick "network"**
⇨ **Correct specification to 36.304.**
⇨ **Reason for change should be checked**

CB: Offline discussion 100: Work on the cover page reason for change. Revised CR can be provided in R2-1913986

R2-1913986 Correction to the handling of stored AS context upon CN type change Huawei, HiSilicon
CR Rel-15 36.304 15.4.0 0772 1 F LTE_5GCN_connect-Core, LTE_euCA-Core
⇨ Huawei reports more time is needed to check whether this relates to another Rel-16 WID.
⇨ **Postponed**

Rel-13 LAA

R2-1912974 Clarification on RSSI and Channel Occupancy measurement in LAA Qualcomm Incorporated
CR Rel-13 36.331 13.14.0 4109 - F LTE_LAA-Core

R2-1912975 Clarification on RSSI and Channel Occupancy measurement in LAA Qualcomm Incorporated
CR Rel-14 36.331 14.12.0 4110 - A LTE_LAA-Core

R2-1912976 Clarification on RSSI and Channel Occupancy measurement in LAA Qualcomm Incorporated
CR Rel-15 36.331 15.7.0 4111 - A LTE_LAA-Core
- Nokia asks if this is RAN2 matter but should be in 36.214. Qualcomm indicates RAN4 thought this should be in RAN2.
- Intel agrees with Nokia that this is RAN1 or RAN4 matter. Nokia thinks some clarification may be needed but not in RAN2.
- Ericsson thinks this is NBC change and doesn't agree with the change. Qualcomm disagrees and thinks we need to make the UE behaviour clear: What does the current specification indicate?
- Intel wonders if RAN4 agreed something. Qualcomm thinks there was no agreement.

CB: Offline discussion 101 (Qualcomm): Check what RAN4 agreement is and whether RAN2 can clarify anything on the expected behaviour. Result can be provided in R2-1913987.

R2-1913987 Result of offline discussion 101 on RSSI and channel occupancy measurement in LAA, Qualcomm Incorporated discussion LTE_LAA-Core
- Not available (withdrawn)
- Intel thinks RAN1 could do it, Nokia thinks RAN1 or RAN4 could do, no conclusion to send LS.
- Qualcomm indicates RAN4 had discussed this but hasn't concluded. Some issue seems possible.

=> There is an issue that needs to be clarified but no conclusion where/how to fix it. We may come back to this if needed.
=> Noted

5 WI: New Radio (NR) Access Technology

(NR_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

5.1 Organisational

Incoming LSs, etc.

UP

R2-1912021 Reply LS to RAN 2 on CSI reporting in C-DRX (R1-1909889; contact: Qualcomm) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **Noted**

UE capabilities

R2-1912016 Reply LS on RAN1/4 feature lists R1-1909856; contact: NTT DOCOMO) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2 Cc:RAN4

⇒ **Noted**

R2-1912040 Reply LS on RAN1/4 feature lists (R4-1909845; contact: Intel) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2 Cc:RAN1

⇒ **noted**

R2-1912047 LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 (R4-1910239; contact: Apple) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **noted**

Supported BW

R2-1912026 Reply LS on supported BW for initial BWP (R1-1909900; contact: Nokia) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2, RAN4

- Nokia indicate that this is already included in TS (106#28)
- Huawei have some related documents and think some issues still need to be fixd

⇒ **Noted**

R2-1912049 LS reply on supported BW for initial BWP (R4-1910522; contact: Nokia) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN1, RAN2

⇒ **noted**

Idle etc

R2-1912015 Reply LS on transmission of short message with multiple beams (R1-1909852; contact: Qualcomm) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **Noted**

FR2

R2-1912048 LS on FR2 Pmax (R4-1910262; contact: Huawei) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2

⇒ **Noted**

MR-DC

R2-1912012 Reply LS on SFTD measurement (R1-1909819; contact: Huawei) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2, RAN4

- Huawei expect that we need to reply.

⇒ **Noted**

R2-1912046 Reply LS on SFTD measurement (R4-1910179; contact: ZTE) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2
- ZTE expect that we need to capture in R2 TS.

⇒ **Noted**

R2-1912008 Reply LS on PDCCH monitoring for NR-DC (R1-1909550; contact: Samsung) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN2 Cc:RAN3
- Samsung think it is now clear we need to capture something in our TS

⇒ **Noted**

R2-1912020 LS on SFN sync (R1-1909882; contact: Nokia) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN, RAN2
- Nokia indicate this was resolved at RP. ZTE think we can discuss if to have a stage-2 CR.

⇒ **noted**

Offline 03, Stage-2 CR, in R2-1913976 (ZTE)

R2-1913976 Clarification of NR-DC synchronization ZTE CR Rel-15 37.340 0163 - F NR_NewRAT-Core

⇒ **Agreed in principle**

R2-1912033 LS on full configuration during SN Modification procedure (R3-194758; contact: Huawei) RAN3 LS in Rel-15 NR_newRAT-Core To:RAN2
- There are contributions on this. HW think we need to reply regardless.

⇒ **Noted**

R2-1912051 Reply LS on reporting criteria limitation in MR-DC (R4-1910570; contact: Huawei) RAN4 LS in Rel-15 NR_newRAT-Core To:RAN2
- there are contributions. Huawei think there is no need to impact R2

⇒ **noted**

Misc

R2-1913972 Update LS on Release-with-Redirect in 2-step resume procedure (C1-196902; contact: OPPO) CT1 LS in Rel-15 NR_newRAT-Core To:RAN2
- Oppo think we need to update TS for Rel-15 then and there are proposals

⇒ **noted**

R2 cc

R2-1912014 Reply LS on Tx DC location (R1-1909849; contact: Huawei) RAN1 LS in Rel-15 NR_newRAT-Core To:RAN4 Cc:RAN2

⇒ **Noted wo presentation**

5.2 Stage 2

5.2.1 Stage 2 corrections for TS 38.300

CRs to correct errors in stage 2 are still appropriate, but CRs to tidy up the specifications or add additional cases covered by stage 3 but not stage 2 are no longer appropriate for Rel-15. As at previous meetings you should discuss your stage 2 CRs with the specification rapporteurs before submission.

R2-1912326 Correction on PUCCH transform precoding vivo, Nokia (rapporteur) draftCR Rel-15 38.300 15.7.0 F NR_newRAT-Core
- vivo think this is agreed in R1. Nokia think this is correct
- Samsung suggest to have further details on the coversheet on the R1 conclusion.
- Huawei think we can remove the line. Vivo would also be ok.

⇒ **Agree the contents, can polish the coversheet for next meeting, a CR is expected next meeting.**

R2-1913834 Clarification on measurement gap for LTE inter-RAT measurement in NR SA MediaTek Inc, Nokia (rapporteur) CR Rel-15 38.300 15.7.0 0173 - F NR_newRAT-Core
- Ericsson think this is a copy paste from inter-freq, and Ericsson think the wording need to be modified, as frequency range need then to be specified for LTE.
- ZTE think the intention is ok, but we need to remove the last part

⇒ **Will have a correction, need to work on the wording**

Offline 04 to find agreeable wording (MTK), revision in R2-1913978

R2-1913978 Clarification on measurement gap for LTE inter-RAT measurement in NR SA MediaTek Inc., Nokia (Rapporteur) CR Rel-15 38.300 15.7.0 0173 1 F NR_newRAT-Core
- Samsung think this is also applicable for intra-NR. Can consider this for next meeting

⇒ **Agreed in principle (can consider whether anything need to be added for intra-RAT for next meeting)**

5.2.2 Stage 2 corrections for TS 37.340

CRs to correct errors in stage 2 are still appropriate, but CRs to tidy up the specifications or add additional cases covered by stage 3 but not stage 2 are no longer appropriate for Rel-15. As at previous meetings you should discuss your stage 2 CRs with the specification rapporteurs before submission.

Including output of email discussion [107#25][NR/R15] PDCP configuration generation for MR-DC cases (Huawei)

Including output of email discussion [107#26][NR/R15] SMTC setting in MR-DC PSCell change (Nokia)

Corrections

R2-1913273 PDCP configuration generation (email discussion of 107#25) Huawei, HiSilicon CR Rel-15 37.340 15.7.0 0158 - F NR_newRAT-Core
- Ericsson think we should tell R3 about this. Huawei think that R3 can also work off the R2 agreements.
- Samsung wonder if anything is broken in the current TS. Huawei think that if this is not correctly by the network the will be a failure
- Intel think there may be the case that DRB with a certain ID is released by both MN and SN, and wonder if this is acceptable (there is a stage-3 Note). Huawei think this can be captured in the cover sheet.
- Nokia think this is related to LTE connect to 5GC.
- ZTE think there are some editorial upgrades that can be done
- Oppo think we need to add interoperability analysis to the cover sheet

⇒ **Agreed in principle with additional changes: Double DRB release added in the cover sheet acc to comment, also allowed to fix editorials and other possible cover sheet problems, see this CR next meeting.**

R2-1913017 Report for email discussion [107#26] [NR/R15] SMTC setting in MR-DC PSCell change (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core
DISCUSSION
- Nokia indicate that we can agree P3 and work offline on wording
- Ericsson think possibly no clarification is needed
- Huawei think the text proposed is strange

⇒ **P3 is agreed**

Offline 05, to find an agreeable wording for Stage-2, CR revision in R2-1913979 (Nokia)
Nokia proposes an email discussion, not clear if to correct stage-2 or stage-3.
- Ericsson think we can close it here and just update the stage-2. Vivo agrees.
- ZTE think the wording suggested by ZTE over email would be ok. Nokia would be ok with this. Huawei are ok to compromise.

R2-1913018 SMTC setting in MR-DC PSCell change Nokia, Nokia Shanghai Bell CR Rel-15
37.340 15.7.0 0157 - F NR_newRAT-Core

⇒ **revised** in R2-1913979

R2-1913979 SMTC setting in MR-DC PSCell change Nokia, Nokia Shanghai Bell CR Rel-15
37.340 15.7.0 0157 1 F NR_newRAT-Core

⇒ **agreed in principle**

R2-1913312 Correction on sending Failure Information via SRB3 Ericsson, ZTE Corporation
(Rapporteur) CR Rel-15 37.340 15.7.0 0159 - F NR_newRAT-Core
=> Revised in R2-1913980

R2-1913980 Correction on sending Failure Information via SRB3 Ericsson, ZTE Corporation
(Rapporteur) CR Rel-15 37.340 15.7.0 0159 1 F NR_newRAT-Core

⇒ **agreed in principle**

R2-1913612 Sending FailureInformation message on SRB3 Huawei, HiSilicon CR Rel-15
37.340 15.7.0 0162 - F NR_newRAT-Core
DISCSUSION on the 2 tdocs above
- LG think SRB3 is not used for this.
- Ericsson think this is for CA duplication case, and think “SN” is used because SCG is not used on Stage-2, and think the second change is needed because we then introduce ambiguity. Intel agrees that a clearification is neeed if we have the first change
- Ericsson also noticed an error on the cover sheet
- Nokia and LG think “RLF” might not be exactly correct as this is about the RLC error.
- MTK Samsung and Oppo think the second change is not needed.

⇒ **We will capture some change**

Offline 06, on finding agreeable wording, revision of 3312 in R2-1913980 (Ericsson).

R2-1913482 Clarification on security key change and bearer termination point change ZTE Corporation, Ericsson, Intel CR Rel-15 37.340 15.7.0 0160 - F NR_newRAT-Core
- Nokia think this is ok, but the cover sheet interop statement should be changed. ZTE think we can also soften the problem statement.
- Oppo wonder why not key change due to master key change is included. ZTE think it is the intention of these texts to Not handle that case.
- Huawei support this, and think it is correct.

⇒ **Agreed in principle, but can consider cover page update for the next meeting.**

R2-1913523 Correction on capability coordination terminology (37.340) Ericsson CR Rel-15
37.340 15.7.0 0161 - F NR_newRAT-Core
- Huawei think this is just editorial.
- Nokia think this text may cause inconsistency with stage-3
- ZTE think this is editorial
- Ericsson think another way it to remove the text within brackets.

⇒ **Not pursued**

R2-1913589 Clarification regarding QoS handling in MRDC with 5G CN Samsung, ZTE Corporation draftCR Rel-15 37.340 15.7.0 F NR_newRAT-Core

- Huawei think the second part need modifications. Samsung would be ok to e.g. align with handover wording in 38300.
- intel think the cover page need updating.
- Oppo think the last part of second change is not correct and it is already captured elsewhere.

Offline 07, revision in R2-1914121, on the wording (e.g. acc to comments above) (Samsung)

R2-1914121 Clarification regarding QoS handling in MRDC with 5G CN Samsung, ZTE Corporation draftCR Rel-15 37.340 15.7.0 F NR_newRAT-Core

⇒ **Agreed in principle**

Enhancements

R2-1912363 PDCP version in EN-DC Ericsson discussion Rel-15 NR_newRAT-Core DISCSUSSION

- Huawei think this is allowed already. ZTE think the stage-2 is not clear on this.

⇒ **Proposal is already intended to be supported, i.e. P1 is confirmed**

R2-1912364 PDCP version in EN-DC Ericsson CR Rel-15 37.340 15.7.0 0155 - F NR_newRAT-Core

Offline 08, revision in R2-1914122, agreeable CR (Ericsson)

R2-1914122 PDCP version in EN-DC Ericsson CR Rel-15 37.340 15.7.0 0155 1 F NR_newRAT-Core

⇒ **Agreed in principle**

5.2.3 Positioning

Corrections to both the stage 2 and stage 3 aspects related to positioning.

R2-1913280 Correction on EUTRAN terminology Huawei, HiSilicon CR Rel-15 38.305 15.4.0 0014 - F NR_newRAT-Core

Qualcomm think the changes in the E-CID section are not correct. There is a reference to 36.214 that is proposed to be changed to 38.215, but the TA, AoA measurements etc. are not in 38.215. Huawei agree there are no such measurements but understand that RAN1 are in the process of adding them.

Nokia wonder if the LTE measurements in Rel-15 originally included only neighbouring eNBs or also ng-eNBs.

⇨ Back out the change of the reference for now

⇨ Agreed in principle with this change

R2-1913425 Corrections for Positioning Architecture Ericsson CR Rel-15 38.305 15.4.0 0015 - F NR_newRAT-Core

Nokia think the change to NOTE 2 under the architecture figure to add the reference to 37.340 is not needed.

Ericsson think the NOTE is confusing as it is. Intel agree but think the clarification is still unclear.

⇨ Offline discussion to converge on a clear wording. Offline 401 (Ericsson), revision in R2-1914072.

R2-1914072 Corrections for Positioning Architecture Ericsson CR Rel-15 38.305 15.4.0 0015 1 F NR_newRAT-Core

Huawei are OK with the removal of the note but think the change from E-UTRAN to E-UTRA may collide with a Huawei CR. After checking there is no collision.

⇨ Agreed in principle

5.3 Stage 3 user plane

Essential functional corrections.

5.3.1 MAC

R2-1913281 Remaining issues for the MAC specification Huawei, HiSilicon CR Rel-15 38.321 15.7.0 0667 - F NR_newRAT-Core
- Oppo think gaps are per UE or per FR and the first change is not needed
- Oppo think the second change is not needed, this is old text since LTE. Oppo think also the third change is not needed.
- LG thnk no change needed. QC could consider the second change, but none of then are needed. ZTE agrees.
- Chair: Some limited support for the second change, no support for the others. Ericsson think the second change is good and related to the different of UL harq in NR cmp to LTE. Lenovo think that anyway the proposal do not change the behaviour. Vivo agrees
- Samsing think change 1 and 2 could be useful.

⇒ **Not pursued**

R2-1913311 Correction on handover terminology Ericsson CR Rel-15 38.321 15.7.0 0669 - F NR_newRAT-Core
- Samsung think we don't need to change and think the current text is deliberate. LG think we don't need this change.
- Ericsson would like to align,
- Huawei think the change involves UE behaviour change

⇒ **Not Pursued**

R2-1913897 Clarification to CSI reporting in C-DRX Qualcomm Inc CR Rel-15 38.321 15.7.0 0672 - F NR_newRAT-Core
=> Revised in R2-1913936

R2-1913936 Clarification to CSI reporting in C-DRX Qualcomm Inc CR Rel-15 38.321 15.7.0 0672 1 F NR_newRAT-Core
- Samsung think this is not BW compatible. And it can be avoided by network configuration. ZTE agrees
- Huawei don't know about the issue, and think the issue might be covered by the current TS. CATT also think this is covered.
- Ericsson support the CR.
- Oppo think there are 2 changes. The first change is a clarification. Oppo would like to think about this.
- Lenovo wonders when the overlap is determined and point out that this need to be detected 4ms in advance. QC think this is not so related.
- QC think that we can discuss if to have mandatory text or a note.
- MTK think the CSI masking becomes redundant in this case.
- vivo wonder if this happens bothe for periodic and aperiodic CSi reporting

Offline 29, find agreeable CR if any revision in R2-1914175 (QC), f2f offline during afternoon coffe break today Tuesday in the back of main room.

R2-1914175 Clarification to CSI reporting in C-DRX Qualcomm Inc. CR Rel-15 38.321 15.7.0 0672 2 F NR_newRAT-Core

⇒ **Agreed in principle**

R2-1913898 Correction to PHR in dual connectivity Qualcomm Inc, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-15 36.321 15.7.0 0660 2 F NR_newRAT-Core R2-1911305
- LG think NE-DC case is needed. LG wonders if dyn power sharing is specified for this case.
- QC indicates that there is also a CR to define what is NE-DC power sharing.
- Samsung the reference shall not be hard coded in the CR.

⇒ **Agreed in principle, reference should be changed to [xx], Change for next meeting.**

Not Available

R2-1913890 Clarification to CSI reporting in C-DRX Qualcomm Inc CR Rel-15 38.321 15.7.0 0671 - F NR_newRAT-Core Late

R2-1913891 Correction to PHR in dual connectivity Qualcomm Inc, Nokia, Nokia Shanghai Bell, Ericsson CR Rel-15 36.321 15.7.0 0660 2 F NR_newRAT-Core R2-1911305 Late

5.3.2 RLC

5.3.3 PDCP

R2-1912997 PDCP uplink transmit operation for split-bearer Qualcomm Incorporated CR Rel-15 38.323 15.6.0 0036 - F NR_newRAT-Core

- Vivo think that this was discussed earlier, for LTE, and it was agreed to not modify. LG think this would typically happen at the end of data, and we decided earlier to not fix this, and think this do not resolve the issue of overallocation.
- Google think a UE implementation could possibly avoid this, and think we designed this with pre-processing in mind and think we shouldn't have this.
- Huawei also would not like this, Ericsson neither.
- Sequans think this would be ok for the LTE leg as we haven't agreed pre-processing for LTE.
- Lenovo think this is already allowed for NR.

⇒ **Not pursued**

5.3.4 SDAP

5.4 Stage 3 control plane

5.4.1 NR RRC

5.4.1.3 Connection control procedures

No documents should be submitted to 5.4.1.3. Please submit to 5.4.1.3.x.

5.4.1.3.1 Corrections to L1 Parameters

UP related

R2-1912199 CR to 38.331 on configuration of rach-ConfigCommon in initial UL BWP for RRC triggered BWP switch Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1344 - F NR_newRAT-Core
=> Revised in R2-1913944

R2-1913944 CR to 38.331 on configuration of rach-ConfigCommon in initial UL BWP for RRC triggered BWP switch Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1344 1 F NR_newRAT-Core
=> Revised in R2-1913957

R2-1913957 CR to 38.331 on configuration of rach-ConfigCommon in initial UL BWP for RRC triggered BWP switch Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1344 2 F NR_newRAT-Core

- Huawei think this is the common understanding and otherwise it doesn't work, and think nothing need to be clarified. Samsung agrees that this is obvious from MAC, and think the CR is not 100% correct.
- Vivo are ok to clarify the second part.
- Nokia agreed for the Pcell and the PScell and think we don't need to specify this.
- QC think that this is a IODT problem and some network vendor doesn't do this.
- Oppo think that the first change is needed.
- Ericsson are ok to clarify.
- Nokia think this is just a misconfiguration.

Offline 02, find a clarification wording, either for chair notes or for a CR (QC)
- QC think we may need an email discussion
- Samsung think this is just a misconfiguration and think we don't need a CR. Nokia would be fine to capture a clarification circulated by email in Chair notes. Docomo as well. Samsung cannot agree with the Nokia clarification.
- Nokia proposes the following clarification "Network always configures rachconfigcommon for initial BWP"
- QC think that we shall capture in Chair notes for now and can think about CR next meeting.

  ⇒ **R2 understands that the Network configures rachconfigcommon for initial BWP, if the RACH procedure need to be performed in the initial UL BWP. Otherwise the UE behaviour is not specified.**

BW handling

R2-1913255 Correction on initial DL BWP and CORESET#0 Huawei, MediaTek, HiSilicon CR Rel-15 38.331 15.7.0 1293 - F NR_newRAT-Core
- QC think it is ok to remove the may, but the additional text should not be added. Intel think this is UE implementation so why do we need this. Nokia think this involves a change, and now the UE has to retune.
- MTK think that the intention is to clarify that the UE keeps monitoring corset 0 until msg4
- Ericsson think the wording now looks strange.
- Intel think that anyway the UE need to monitor corset 0 until receiving MSG4.

  ⇒ **Agreed change: Remove "may" and "the bandwidth of", merged with the rapporteur CR**

R2-1913256 Correction on capabilities of BWP bandwidth Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0180 - F NR_newRAT-Core
- Docomo think we discussed the same issue yesterday, and think there was no conclusion yesterday.
- CATT support these CRs.
- Ericsson think that the text need to placed somewhere else and it need to be rephrased.
- Nokia are ok with the CRs.
- Docomo wonders if UE vendors can support this. QC disagree with the CR. MTK think this was agrees in R1 and R4 and can support this.
- Vivo think this is different to the other discussion.
- ZTE think we will need to implement this as it was agreed, and it can be resolved in R5. Samsung want to have time to check.

  ⇒ **postpone**

R2-1913257 Correction on camping conditions Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1294 - F NR_newRAT-Core

  ⇒ **postpone**

Other

R2-1913283 Correction on PUSCH frequency hopping Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1297 - F NR_newRAT-Core
- Nokia wonder if we really need this in our specs. Samsung also think this is not needed as FD refers to R1 TS. ZTE agrees.
- Vivo think the first change is nice but is editorial.

  ⇒ **First change is agreed, merged with the rapporteur CR**

5.4.1.3.2 Corrections to L2 Parameters

Corrections

R2-1913305 Remaining issues for correction on the condition of RBTermChange Ericsson discussion Rel-15 NR_newRAT-Core

R2-1913304 Remaining issues for correction on the condition of RBTermChange Ericsson CR Rel-15 38.331 15.7.0 1307 - F NR_newRAT-Core
- Huawei wonders if this impacts EN-DC (as cov sheet). The proposed proc text is ok but, Huawei think we need a wider discussion on when this field need to be included.
- Ericsson think there could be an email discussion.
- MTK think these are needed, and only the third change may have UE impl impact. No email discussion is needed.

Offline 09, to find agreeable change, revision in R2-1914123 (Ericsson).

R2-1914123 Remaining issues for correction on the condition of RBTermChange Ericsson CR Rel-15 38.331 15.7.0 1307 1 F NR_newRAT-Core
- Huawei has some comments that have not been addressed
- Huawei wonder still if this impacts EN-DC
- Ericsson proposes an email discussion.

✉ **[107bis#30][NR R15] Correction on the condition of RBTermChange (Ericsson)**
Intended outcome: Agreeable CR 38331
Deadline: Next Meeting

Text enhancements

R2-1913730 Corrections on the PDCP duplication (de)activation Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1339 - F NR_newRAT-Core

R2-1913731 Corrections on the condition of PDCP for split SRB Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1340 - F NR_newRAT-Core

5.4.1.3.3 Connection establishment procedure

Access control and establishment cause are discussed in the access control agenda item 5.4.1.3.10

5.4.1.3.4 Connection reconfiguration procedure

Including corrections related to handover (i.e. reconfig with sync)

Corrections

R2-1913285 Correction on delta signalling for handover Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1299 - F NR_newRAT-Core
- Samsung think that at HO failure there will be reestablishment and this CR is not needed.
- MTK think this is not needed. Ericsson agrees. QC agrees as well on the first change but would accept a discussion on the intention of the second change for rel-16.
- Vivo think that for the PScell part vchange is not needed, but for the reconfiguration, some change is needed.

⇒ **Not pursued**

R2-1913310 Correction to integrity protection in DRB addition and modification Ericsson CR Rel-15 38.331 15.7.0 1309 - F NR_newRAT-Core
- Intel wonders if there is interoperability problems. Ericsson are not sure. Huawei think there are no interoperability problems. Huawei suggest to merge with rapporteur CR.
- Nokia think there is no impact to EN-DC
- LG support this CR

⇒ **Agreed in principle, change the cover-sheet to “no interoperability problems foreseen”, and remove EN-DC**

R2-1912671 Clarification on the RRCReconfiguration for unauthenticated emergency call ZTE Corporation, Sanechips CR Rel-15 38.331 15.7.0 1271 - F NR_newRAT-Core
- Huawei think this is not needed.

- ZTE think we can also remove the word “unprotected”. QC think we should use the word activated.

  ⇒ **The interpretation “Protected = Security activation has been done” is confirmed, but no clarification in the TS needed**

  ⇒ **Not pursued**

R2-1913518 Correction to field conditions in NE-DC Ericsson CR Rel-15 36.331 15.7.0 4128 - F NR_newRAT-Core
- Huawei think this should be treated with R2-1913632

=> Revised in R2-1914124

R2-1914124 Correction to field conditions in NE-DC Ericsson CR Rel-15 36.331 15.7.0 4128 1 F NR_newRAT-Core

⇒ **Agreed in principle**

R2-1913632 Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4132 - F NR_newRAT-Core
- Ericsson think that we could split more clearly, and keep the conditions “connected the EPC” could be kept in the Ericsson CR, and the other part in the Huawei CR.

=> Revised in R2-1914125

R2-1914125 Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4132 1 F NR_newRAT-Core

⇒ **Agreed in principle**

Offline 10, arrive at to agreeable CRs based on the above two, Revisions in R2-1914124 and R2-1914125 (Huawei, Ericsson).

R2-1913613 Clarification on SRB3 release Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1329 - F NR_newRAT-Core
- Samsung think this is not an essential correction. Ericsson agrees that this is not needed. Huawei think the problematic word is “present”

⇒ **Merged with the rapporteur CR**

R2-1913614 sk-counter presence in RRC(Connection)Reconfiguration Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core
- Huawei don’t have a good solution but think this is a problem. It need to be clear what cases the UE can handle. MTK are not sure anything need to be changed
- Huawei think the issue is whether the UE is implemented acc to FD or proc text.
- Ericsson think that the network is allowed to provide a Skcnt without Sec alg etc.
- Ericsson has a CR in 3958

⇒ **noted**

R2-1913958 Correction to AS security key update Ericsson CR Rel-15 38.331 15.7.0 1348 - F NR_newRAT-Core
- MTK think the note contradicts the procedure text. MTK proposes that the network shall always provide this at the same time.
- Huawei think the UE might already know the security algorithm.
- Intel wonders if there really is an issue. MTK think it is clear. Samsung agrees.
- Huawei think that if the UE follows the procedure text the network behaviour in the FD doesn’t make sense. Ericsson think that in such case, some other change may be needed.

⇒ **R2 assumes that the UE will follow the procedure text.**

Offline 12, based on the above two tdcos, clarify if conditions / cases / network restrictions need to be updated for consistency, Revision in R2-1914126 (Ericsson/Huawei)

R2-1914126 Correction to AS security key update Ericsson CR Rel-15 38.331 15.7.0 1348 1 F NR_newRAT-Core
- Ericsson think this need to be moved to email

✉ **[107bis#31][NR R15] Correction to AS security key update (Ericsson)**
Intended outcome: CR 38331 for next meeting
Deadline: Next Meeting

R2-1913481 Correction to RRCReconfigurationComplete in NR-DC Ericsson CR Rel-15 38.331 15.7.0 1318 - F NR_newRAT-Core

⇒ **Withdrawn**

R2-1913284 Correction on synchoronous reconfiguration Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1298 - F NR_newRAT-Core
- MTK think the original text is correct and the change is incorrect. Samsung agrees, and think it has been like this since Rel-8. Nokia agrees as well, and think that if anything is needed we just add a note.
- Samsung don't think TA is a suitable condition.
- Huawei think there is a similar NOTE for LTE.
- Intel think that UE can do RACH without knowing SFN.
- Huawei propose to anyway keep the modification CQI -> CSI

⇒ **The editorial change CQI -> CSI is agreed, merged with the rapporteur CR**

Text enhancements

R2-1912138 Corrections on the premises of HO to E-UTRA CATT CR Rel-15 36.331 15.7.0 4101 - F NR_newRAT-Core

R2-1912139 Corrections on the premises of E-UTRA HO to NR CATT CR Rel-15 38.331 15.7.0 1266 - F NR_newRAT-Core

R2-1913014 Addition of indication for successful Random access procedure Ericsson CR Rel-15 38.321 15.7.0 0665 - F NR_newRAT-Core

R2-1913385 Full configuration in inter-RAT handover Google Inc. CR Rel-15 38.331 15.7.0 1311 - F NR_newRAT-Core

Withdrawn

R2-1913729 Corrections on the reconfiguration with sync Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1338 - F NR_newRAT-Core

5.4.1.3.5 Connection re-establishment procedure

5.4.1.3.6 Connection resume procedure and RRC_INACTIVE state

Corrections

R2-1913542 Presence and absence of TAC in NR cell Ericsson CR Rel-15 38.331 15.7.0 1325 - F NR_newRAT-Core
- LG support the intention but think we need to add more cases.
- Huawei think camping is in 331, and think this text is not needed at all as the UE don't need to act on this. LG would be ok to also remove the text.
- Samsung agrees with this clarification, but think it doesn't impact NE-DC.
- Oppo think this interpretation info is used for ANR.
- Ericsson agrees that the UE behaviour is clear, the UE will regard the cell as barred is TAC is not present.

Offline 13, agreeable change (if any), revision in R2-1914127 (Ericsson)

R2-1914127 Presence and absence of TAC in NR cell Ericsson CR Rel-15 38.331 15.7.0 1325 1 F NR_newRAT-Core

⇒ **Agreed in principle**

Text Enhancements

R2-1912327 Cell re-selection during RRC connection resume vivo draftCR Rel-15 38.331 15.7.0 F NR_newRAT-Core

R2-1912404 Correction on RRC Resume procedure OPPO CR Rel-15 38.331 15.7.0 1269 - F NR_newRAT-Core

5.4.1.3.7 Connection release procedure

Including release from connected to inactive and connected to idle.

R2-1912290 Configuration limitation for RRCRelease message in R15 OPPO CR Rel-15 38.331 15.7.0 1268 - F NR_newRAT-Core

- Huawei think that the network shouldn't respond with RRC release message at all in Rel-15.
- Nokia think nothing need to be captured.
- Ericsson think that if we capture something we should capture as normative text, or a field description.
- Huawei don't have a strong opinion on where to put it.
- Samsung would prefer either normative text or field descry.

⇒ **R2 think that the CT1 LS means that release with redirection and suspend is not supported for NAS triggered resume in Rel-15**

Offline 14, to make an agreeable CR, revision in R2-1914128 (Oppo).

R2-1914128 Configuration limitation for RRCRelease message in R15 OPPO CR Rel-15 38.331 15.7.0 1268 1 F NR_newRAT-Core

⇒ **Agreed in principle**

5.4.1.3.8 Security procedures

Including initial security activation and counter check procedure.

Corrections

R2-1912418 Correction to applicability of UP IP in NR Ericsson discussion Rel-15 NR_newRAT-Core

⇒ **noted**

R2-1912419 Correction to applicability of UP IP in NR Ericsson draftCR Rel-15 38.331 15.7.0 F NR_newRAT-Core

- Huawei think this change is only for NE-DC, and for integrity protection it cannot be configured for LTE. Ericsson agrees that this is fir NE-DC, and would be ok with other wording.
- QC are worried that this may mean to support IP for DRBs,
- Intel think the general description covers the cases, and this doesn't need to be present for every field. Samsung agrees
- Nokia think keytouse is not strictly indicating wether a bearer is terminated in MN vs SN.
- ZTE think what is allowed is clear in any case, by applying Stage-2. Intel agrees.
- Huawei think that there is no ambiguity to resolve.
- Chair: it seems everyone agrees in principle this is how the system work but there is no agreement to update the TS as it should be clear by e.g. applying stage-2.

⇒ **Not pursued**

R2-1913394 ARFCN used for security key derivation Qualcomm Incorporated discussion Rel-15 NR_newRAT-Core

DISCUSSION

- MTK wonders which IE defines CD-SSB. QC think this has been used before.
- Ericsson think we can just state SSB frequency.
- Samsung think SA3 don't need an LS.

Offline 15, details on implementation, agreeable CR, in R2-1914129 (QC)

⇒ **R2 confirm that Both gNB and UE, use CD-SSB frequency as DL ARFCN for security key (K_{NG-RAN}*) derivation in Xn handover and RRC resume/reestablishment.**

R2-1914129 KgNB derivation upon mobility Qualcomm Incorporated CR Rel-15 38.300 0174 - F NR_newRAT-Core

⇒ **Agreed in principle**

R2-1913516 Correction to secondary key derivation Ericsson CR Rel-15 38.331 15.7.0 1319 - F NR_newRAT-Core

- MTK are not sure why this is needed, the presence conditions should resolve this. ZTE agrees. Intel agrees.
- Huawei think that this is already clear

⇒ **Not Pursued**

R2-1913672 Security Algorithms for all Radio Bearer in NR-DC Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1332 - F NR_newRAT-Core
=> Revised in R2-1913935

R2-1913935 Security Algorithms for all Radio Bearer in NR-DC Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1332 1 F NR_newRAT-Core

- MTK think we should avoid "terminated in the same node" as this is a network perspective. Would be better to write from UE perspective.

Offline 16, find agreeable wording, revision IN R2-1914130 (QC)

R2-1914130 Security Algorithms for all Radio Bearer in NR-DC Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1332 2 F NR_newRAT-Core

- Samsung are ok with the change but think it should affect the last paragraph.
- Huawei prefers this version

⇒ **Revision in R2-1914225**

R2-1914225 Security Algorithms for all Radio Bearer in NR-DC Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1332 3 F NR_newRAT-Core

⇒ **Agreed in pricnciple**

5.4.1.3.10 Access control

5.4.1.3.11 Other

Including RRC processing delay requirements

Corrections

R2-1913540 Miscellaneous non-controversial corrections Set IV Ericsson CR Rel-15 38.331 15.7.0 1323 - F NR_newRAT-Core

- Ericsson recommends that for UE capabilities, FD for fields used to link UE capabilities are kept in 331, but FD for the parameters indicating specific capability is in 306. Ericsson will discuss offline with 306 rapporteur.

⇒ **postponed**

Offline 17, Offline to progress the rapporteur CR (Ericsson). Result expected to be input to next meeting.

- Ericsson proposes an email discussion and suggest to coordinate with 306

✉ **[107bis#32][NR R15] Miscellaneous CR 331 (Ericsson)**
Intended outcome: Agreeable CR 38331 to next meeting, including coordination with 306 changes.
Deadline: Next Meeting

R2-1913541 Definition of NR standalone Ericsson CR Rel-15 38.331 15.7.0 1324 - F NR_newRAT-Core
- Huawei think that NR SA is only used to denote a network configuration, not a UE configuration. Huawei think the number of occurrences is small.
- MTK support clarification and think it should not include NR DC.
- Nokia think we use NR SA in CR cover pages but not so much in TS.
- Oppo also think SA NSA etc is about network.
- ZTE also think we shouldn't clarify too much and instead try to avoid using it.
- LG support a clarification a'la Ericsson

Offline 18, discuss problem and resolution for possible ambiguity of "NR standalone", revision in R2-1914139 (Ericsson).

R2-1914139 Definition of NR standalone Ericsson CR Rel-15 38.331 15.7.0 1324 1 F NR_newRAT-Core
- Ericsson indicate that there is a comment that in other contexts NR standalone sometimes includes NR NR DC. Ericsson think we can clarify that the definition is only for this TS.
- Huawei think we should say NR without SCG configuration when we mean that ..
- MTK support this CR, and think this is general.

⇒ **postpone**

R2-1913578 Correction of RRC procedure upon expiry of DataInactivityTimer Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1327 - F NR_newRAT-Core
- Oppo support the intention but think we don't need a new release cause.
- Nokia think the timer is to resolve state mismatch between UE and network, and think we cannot define a new NAS release cause without asking CT1. MTK agree with Nokia. Huawei agrees.

⇒ **Not pursued**

R2-1913579 Draft LS on RRC indication to NAS upon expiry of DataInactivityTimer Qualcomm Incorporated LS out To:CT1

R2-1913685 Clarification for aggregated bandwidth for overheating Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.7.0 1335 - F NR_newRAT-Core
- Nokia think we ned to be careful
- Vivo support this, and think UE RF bw = active BWP bw
- ZTE wonders about how to count non-contiguous frequencies
- Apple support to clarify, and think the wording should contain the word "maximum"
- Chair: there is support to clarify this

Offline 19, find agreeable CR wording, revision in R2-1914140 (Huawei).

R2-1914140 Clarification for aggregated bandwidth for overheating Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.7.0 1335 1 F NR_newRAT-Core
- Ericsson think this is not correct, btu agrees this need to be clarified.

⇒ **Postpone**

R2-1913851 Correction to mobility from NR Google Inc. CR Rel-15 38.331 15.7.0 1346 - F NR_newRAT-Core

- Intel don't agree with this CR, and think the Note describes the current agreement, Ericsson and Huawei agrees.

  ⇒ **Not pursued**

R2-1913586 Remaining issues regarding UE assistance information Samsung, Ericsson discussion Rel-15 NR_newRAT-Core

DISCSUSSION
- MTK support P1
- Intel think that for LTE the prohibit timer is not always started, e.g. for PPI. Samsung clarifies that the proposal is to keep the timers independent. Intel are ok with the proposal with this clarification.
- Huawei can agree this for NR but not for LTE. We should not change old LTE features.

P2
- Samsung explains that the intention is that the UE reports values/state only at change, i.e. no repetition of the same thing. A problem is that the UE reports values / states for all features when one feature triggers reporting.
- Nokia think it is too late to change this now, and this would be a major change.
- Ericsson think that the network don't act on the "additional" values reports
- Intel point out that if we go with delta then we need to have a mechanism to release a previously reported preference.
- Chair: there seems to be quite wide support to apply this for NR Rel-15, but also some concerns were expressed. Final decision on release/feature after CB.

  ⇒ **At least for NR, Prohibit mechanisms are feature specific, e.g. prohibit timer handling**

  ⇒ **At least for NR, For UE assistance reporting features use delta as the general approach.**

  ⇒ **At least for NR, specify that UE repeats UE assistance reported within 1 second prior to change of PCell**

  ⇒ **For LTE, the intention is to apply this to new features (rel-16 and later)**

R2-1913587 Correction of UE assistance information Samsung, Ericsson draftCR Rel-15 38.331 15.7.0 F NR_newRAT-Core
- Intel think that for UE delay budget there is a need to report also release of reported value.
- Nokia think we should not change so late.
- Huawei think that if we need ASN.1 change we should go for rel-16 instead

R2-1913588 Correction of UE assistance information Samsung, Ericsson draftCR Rel-15 36.331 15.7.0 F NR_newRAT-Core Late
- Samsung indicate that for LTE there is no new features so only timer handling is affected.

Offline 20, Based on the 3 tdocs above, find an agreeable CR for NR, revision in R2-1914161, check if possible to agree to change anything for LTE (Samsung)

R2-1914211 Report of offline discussion 020 on Correction of UE assistance information Samsung report Rel-15 NR_newRAT-Core

  ⇒ **noted**

R2-1914161 Correction of UE assistance information Samsung, Ericsson draftCR Rel-15 36.331 15.7.0 F NR_newRAT-Core
- Huawei think there is a compatibility problem. Ericsson think there is no compatibility problem. Nokia also would like to check
- Chair; Yes it is ok to be careful

  ⇒ **Postpone**

Text enhancement

R2-1913678 Clarification on informative timer table Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1334 - F NR_newRAT-Core

R2-1913814 Clarification on the using of RRCSetup Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1345 - F NR_newRAT-Core

5.4.1.4 RRM

SFTD

R2-1913732 Discussion on SFTD measurement based on RAN1 LS Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

R2-1913733 [draft] Reply LS to RAN1 on SFTD measurement Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:RAN1 Cc:RAN4

- Several companies think R4 should reply to Q1-Q3.
- MTK think we can await the other offline on NR SA definition.
- Samsung think we can reply to Q1-Q3. ZTE agrees. QC prefer to leave it to R4.
- ZTE think that from UE point of view it doesn't matter if the measurement is inter- intra- etc.
- LG think we don't need to reply, as R4 understanding anyway has priority in these kind of matters.
- P1: MTK think this is an intra-freq measurement. MTK doesn't understand why R1 need this discrimination.
- Huawei proposed that we just list the cases that we want to cover and we reply that we believe that discrimination between Intra- Inter- etc is not important.

⇒ **we list the cases that we want to cover and we reply that we believe that discrimination between Intra- Inter- etc is not relevant from R2 point of view. For the definition of NR SA await outcome of offline 18**

Offline 21, Draft LS revision in R2-1914162 (Huawei)

R2-1914162 [draft] Reply LS to RAN1 on SFTD measurement Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:RAN1 Cc:RAN4

⇒ **Approved in R2-1914221**

R2-1912767 CR to introduce timer for DRX based SFTD measurement ZTE Corporation, Sanechips, MediaTek Inc. CR Rel-15 38.331 15.7.0 1273 - F NR_newRAT-Core

- Intel think another way is to let R4 define the times instead of specify in RRC.
- ZTE think the R4 LS is due to R4 thinking that R2 should capture
- Huawei think that for the LTE measurement of NR cell there is no timer and think it can be left to implementation. LG agrees and think we need confirmation from R4 to define a timer in R2 spec.
- Ericsson are ok with the CR, but think timer should be renamed.
- Samsung think this CR is not correct, start and stop conditions should be different.
- QC are ok with the CR.

⇒ **Agreed in principle, timer should be called T3xx in the CR.**

Other Corrections

R2-1913158 Correction to nrofSS-BlocksToAverage and nrofCSInrofCSI-RS-ResourcesToAverage description Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1289 - F NR_newRAT-Core

- Samsung agrees with this but as it is a clarification it can be merged with the rapporteur CR. LG think it is not needed. Intel agrees as well, and it is clear from proc text, Huawei agrees, and think the proposed text is less clear than current text.

⇒ **Not pursued**

R2-1913159 Missing reportAddNeighMeas in periodic measurement reporting Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1290 - F NR_newRAT-Core

- Huawei think this is a new requirement

- MTK prefer to not have this in Rel-15. QC agrees and think this is not so important for periodic measurements.
- LG think there is no conflict between proc text and asn.1 in current TS.
- Ericsson support to have it but think it should be Rel-16

⇒ **Not pursued (for Rel-15)**

R2-1913429 CR to 36.306 on FR2 related ANR capability Ericsson CR Rel-15 36.306 15.6.0 1718 - F NR_newRAT-Core

R2-1913430 CR to 36.331 on FR2 related ANR capability Ericsson CR Rel-15 36.331 15.7.0 4124 - F NR_newRAT-Core

R2-1913431 CR to 38.306 on FR2 related ANR capability Ericsson CR Rel-15 38.306 15.7.0 0182 - F NR_newRAT-Core

R2-1913432 CR to 38.331 on FR2 related ANR capability Ericsson CR Rel-15 38.331 15.7.0 1314 - F NR_newRAT-Core

- QC think the intention is to introduce a new capability for FR2 and let the existing capability apply for FR1 and support this, but think this should be made clear.
- MTK think that we shouldn't change definition of an existing capability. Huawei agrees. ZTE agrees.
- Nokia think current capability is sufficient. Oppo agrees.
- Ericsson would be ok to change the CR to keep compatibility with old TS but would then need one more capability.
- Chair: think proponents need to better convince other companies, there is significant opposition.

⇒ **Not pursued (4 CRs above)**

R2-1913433 CR to 36.331 on performing L3 filtering for NR related measurements Ericsson CR Rel-15 36.331 15.7.0 4125 - F NR_newRAT-Core

- CATT think that the first part is not correct as the filtering is also for InterRAT measurements such as UTRA, and suggest to use "except for NR" for the first part

⇒ **Agreed in principle with the change to use "except for NR", change included for next meeting.**

R2-1913434 CR to 36.331on NR CGI reporting related to cellReservedForOtherUse Ericsson CR Rel-15 36.331 15.7.0 4126 - F NR_newRAT-Core

R2-1913435 CR to 38.331 on NR CGI reporting related to cellReservedForOtherUse and LTE CGI reporting related to CSG cells Ericsson CR Rel-15 38.331 15.7.0 1315 - F NR_newRAT-Core

- MTK think this is a too late change, and would prefer to not have this in Rel-15. Nokia agrees, and think this is a R3 discussion.
- ZTE think the second change is not needed, as it is already supported.
- Oppo also think we shouldn't do this now.

⇒ **Not pursued**

R2-1913736 CR to 36.331 on CGI information Huawei, HiSilicon, Ericsson CR Rel-15 36.331 15.7.0 4133 - F NR_newRAT-Core

- Nokia think this isn't essential and we shouldn't add this now. LG agrees, MTK as well ..

⇒ **Not pursued**

R2-1913737 CR to 38.331 on CGI information Huawei, HiSilicon, Ericsson CR Rel-15 38.331 15.7.0 1341 - F NR_newRAT-Core

- Intel think that if the IE is mandatory, we don't need to explain that the UE shall set it. Huawei think we might need to explain how it is set.

⇒ **Agreed in principle**

Text enhancements

R2-1913466 SSB-ToMeasure related clarification Ericsson LM discussion Rel-15

R2-1913427 CR to 38.331 on SSB-ToMeasure clarifications Ericsson CR Rel-15 38.331 15.7.0 1313 - F NR_newRAT-Core

R2-1913428 CR to 36.331 on SSB-ToMeasure clarifications Ericsson CR Rel-15 36.331 15.7.0 4123 - F NR_newRAT-Core

R2-1913436 CR to 38.331 on A2 event definition clarification Ericsson CR Rel-15 38.331 15.7.0 1316 - F NR_newRAT-Core

R2-1913437 CR to 36.331 on A2 event definition clarification Ericsson CR Rel-15 36.331 15.7.0 4127 - F NR_newRAT-Core

5.4.1.6 System information

R2-1913193 Correction on the actions for frequencyBandList in SIB1 and SIB2 Ericsson, MediaTek CR Rel-15 38.331 15.7.0 1291 - F NR_newRAT-Core

R2-1913279 Correction on the frequency indication in SIB2 Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1296 - F NR_newRAT-Core

DISCUSSION
- MTK think the last change in the Huawei CR, the field description, can be a separate CR, the rest is covered by / overlapped with the Ericsson CR.
- Ericsson think the CRs are overlapping and there are different ways to write it
- Samsung think the important change in the ericsson cr is the change in section 52243 and an offline should focus on that. Huawei agrees. Ericsson think that for this change we would have either the condition in ASN.1 or the proc text change and not both of them.

Offline 22, arrive at agreeable solution, in one or two CRs, include from the Ericsson CR the second and third change, in addition to impact to SIB2. For the Ericsson CR last change, only include if it resolves a problem. (Huawei, Ericsson)

=> Revised in R2-1914209

R2-1914209 Correction on the frequency indication in SIB2 Huawei, HiSilicon, Ericsson, MediaTek CR Rel-15 38.331 15.7.0 1296 1 F NR_newRAT-Core
- Samsung think there is a problem on the cover sheet, summary of change includes “however for FDD … “ where “for FDD” shall be removed.

  ⇒ **Agreed in principle, address the coversheet change for the next meeting version.**

R2-1913673 Correction on the Msg3 based on demand system information Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1333 - F NR_newRAT-Core

⇒ **Agreed in principle**

R2-1913912 Correction on common search space Google Inc. CR Rel-15 38.331 15.7.0 1347 - F NR_newRAT-Core
- Samsung think this is not needed, Vivo agrees, MTK agrees, LG agrees

  ⇒ **Not pursued**

Text Enhancements

R2-1913671 Clarification on essential system information acquisition Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1331 - F NR_newRAT-Core

5.4.1.9 Inter-Node RRC messages

Including output of email discussion [107#27][NR/R15] Determining L2 buffer size (Ericsson)

R2-1913532 Email Discussion [107#27][NR/R15] Determining L2 buffer size (Ericsson) Ericsson discussion

⇒ **RAN2 understanding is that it is not critical that MN and SN determine how to share the UE's total L2 buffer size for Rel-15. No solution will be provided for Rel-15.**

R2-1912768 Correction on absence of gapPurpose ZTE Corporation, Sanechips CR Rel-15 38.331 15.7.0 1274 - F NR_newRAT-Core

⇒ **Agreed in principle**

R2-1913234 Conditional presence on ue-CapabilityInfo and servCellIndexRangeSCG for inter-MN handover without SN change NTT DOCOMO, INC. draftCR Rel-15 38.331 15.7.0 F NR_newRAT-Core

R2-1913298 Corrections on scg-RB-Config in CG-Config Ericsson CR Rel-15 38.331 15.7.0 1301 - F NR_newRAT-Core

- Huawei think that the first change may bring problems. Ericson think we can clarify that this is to enable delta configuration in MN
- ZTE think the CR is correct and support it. Samsung also support.
- Huawei wonder if we should refer to a network procedure rather than bearer type change.
- After checking Huawei indicate that the CR is agreeable.

⇒ **Agreed in principle**

R2-1913313 Correction on inter-node messages from CU to DU Ericsson CR Rel-15 38.331 15.7.0 1310 - F NR_newRAT-Core

- ZTE think SCG is not correct.

⇒ **Not pursued**

R2-1912141 Corrections on CG-Config CATT CR Rel-15 38.331 15.7.0 1267 - F NR_newRAT-Core

- Huawei and ZTE prefer the CATT CR

⇒ **Agreed in principle**

Above tdoc moved from 5.5.4

R2-1913609 Further issues of not up-to-date SN configuration at handover Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

Proposal 1: For handover in EN-DC, when there are SN terminated bearers and the source MN does not have the updated configuration of the SN terminated bearers, the source MN indicates to the target the list of DRB IDs of SN terminated bearers, so that the target can release them.

Proposal 2: For late drop, at DRB addition/release, the SN provides the list of SN DRB IDs to the MN.

R2-1913610 Exchanging used IDs of SN terminated DRBs Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4131 - F NR_newRAT-Core

R2-1913611 Exchanging used IDs of SN terminated DRBs Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1328 - F NR_newRAT-Core

DISCUSSION

- ZTE think that in R3 for HO request, all the ERAB-IDs are included, and it is up to the target how to handle these. Huawei think DRB IDs are not included.
- Samsung think that the RB related information is supposed to be in the R3 specs.

Offline 23, How to handle this, whether the proposed CRs are agreeable (Huawei),

- Huawei suggest an email discussion as companies need to check more

✉ **[107bis#33][NR R15] Exchanging used IDs of SN terminated DRBs (Huawei)**
Intended outcome: Agreeable CRs 36331 38331, if none agreeable: Report
Deadline: Next Meeting

LS on full config at SN modification

R2-1913607 Discussion on the SN modification trigger Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core

DISCUSSION

- Intel think the LS was not so clear, and it is not clear that this is needed. E.g. a release and add could be done. Huawei agrees that release/add could work.
- Huawei think the intention is to avoid several reconfigurations taking time.
- Nokia think we don't need to optimize, Ericsson agrees.

Offline 24, assuming we don't optimize (e.g. use release add), a Draft reply LS to RAN3, revised in R2-1914164 (Huawei)

R2-1914164 Draft reply LS on full configuration during SN Modification procedure Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:RAN3

⇒ **Approved in R2-1914218**

- [MCC}: removed "Draft" from the LS title

⇒ **Approved in R2-1914228**

R2-1913608 Draft reply LS on full configuration during SN Modification procedure Huawei, HiSilicon LS out Rel-15 NR_newRAT-Core To:RAN3

5.4.2 LTE changes related to NR

Corrections

R2-1913308 Correction to connection resume in EN-DC Ericsson CR Rel-15 36.331 15.7.0 4118 - F NR_newRAT-Core

- Huawei wonders what is the restore of PDCP state. MTK think this is a Rel-13 procedure and we don't need to change. CATT agrees with MTK and think PDCP state is ROHC state.

Allow time to check

- MTK still think the CR is not needed.

⇒ **Not pursued**

R2-1913309 Correction to power limitations in (NG)EN-DC Ericsson CR Rel-15 36.331 15.7.0 4119 - F NR_newRAT-Core

- Huawei think change 2 and 3 is in the scenario of release/add and there is no effect of the changes.
- Nokia think one of the fields are already released, and that maybe another field TDM pattern would need to be released.
- Huawei think the network can do anything, possibly the resume case need to be looked at.

Offline 25, address comments, determine what is needed if anything, Revision in R2-1914167

R2-1914167 Correction to power limitations in (NG)EN-DC Ericsson CR Rel-15 36.331 15.7.0 4119 1 F NR_newRAT-Core

- Ericsson think there is a risk that too low power would be applied when the UE resumes in non-DC.
- Huawei point out that the tdm-pattern is delta configured so releasing it can cause a mismatch between the network and UE knowledge about the configuration.

⇒ **Postpone**

R2-1913300 Corrections to power limitations in NE-DC Ericsson CR Rel-15 38.331 15.7.0 1303 - F NR_newRAT-Core
- Chair: CB together with the other power limitation CR

=> Revised in R2-1914190

R2-1914190 Corrections to power limitations in NE-DC Ericsson CR Rel-15 38.331 15.7.0 1303 1 F NR_newRAT-Core
- Huawei think there is no UE impact this is just removal of duplicates. Should be merged with rapporteur CR

⇒ **Merged with rapporteur CR**

R2-1913521 Clarification to radio bearer handling for intra-5GC HO from LTE to NR (38.331) Ericsson CR Rel-15 38.331 15.7.0 1320 - F NR_newRAT-Core

R2-1913522 Clarification to radio bearer handling for intra-5GC HO from NR to LTE (36.331) Ericsson CR Rel-15 36.331 15.7.0 4129 - F NR_newRAT-Core
- Ericsson think it is not clear whether the PDCP configuration is intended to include security configuration or not in the current text.

Offline 26, check whether this is needed or not (Ericsson)
- Ericsson think this is related to offline 9 that was decided for email. MTK think we can wait.

⇒ **2 CRs postponed**

Text enhancements

R2-1912140 Correction on reestablishRLC CATT CR Rel-15 36.331 15.7.0 4102 - F NR_newRAT-Core

R2-1913386 Full configuration in inter-RAT handover Google Inc. CR Rel-15 36.331 15.7.0 4121 - F NR_newRAT-Core

R2-1913857 Correction to mobility from E-UTRA Google Inc. CR Rel-15 36.331 15.7.0 4135 - F NR_newRAT-Core

5.4.4 UE capabilities

Including output of email discussion [107#28][NR/R15] Ambiguity of UE FDD&TDD FR1&FR2 RAN2 capabilities (ZTE)

R2-1913687 Clarification on the feature set report in EUTRAN Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1337 - F NR_newRAT-Core

⇒ **In principle agreed**

R2-1913447 Miscellaneous corrections on UE capability fields Intel Corporation, NTT DoCoMo CR Rel-15 38.306 15.7.0 0186 - F NR_newRAT-Core
- Intel explains that the LS input from R1 and R4 is included.

Offline 32, for comments to the above rapporteur CR, if any (Intel)

=> Revised in R2-1914193

R2-1914193 Miscellaneous corrections on UE capability fields Intel Corporation, NTT DoCoMo CR Rel-15 38.306 15.7.0 0186 1 F NR_newRAT-Core
- Intel report that there were no comments received. Ericsson change to be merged has also been included.

⇒ **Agreed in principle**

R2-1912771 Report of [107#28][NR R15] Ambiguity of UE FDD&TDD FR1&FR2 RAN2 capability ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-15 NR_newRAT-Core

R2-1912772 Correction on ambiguity of UE FDD/TDD FR1/FR2 capabilities ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd CR Rel-15 38.306 15.7.0 0172 - F NR_newRAT-Core

- Ericsson think we should add to Note 1 that for Configured Grants configuration for only FDD, only the FDD capability need to be considered, and same for TDD.
- Qualcomm has a similar comment for Note 2.
- Huawei think we should remove FGI in the text.
- Intel think that for voice over NR it currently says per serving cell which is not entirely correct. Suggest it should be per FR. QC think the text is clear. Possibly add a note on the associated UE behaviour.
- Ericsson think we can say “all serving cells in a cell group”

Offline 33, Update the CR according to comments, Revision in R2-1914180 (ZTE)

R2-1914180 Correction on ambiguity of UE FDD/TDD FR1/FR2 capabilities ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd CR Rel-15 38.306 15.7.0 0172 1 F NR_newRAT-Core

- ZTE indicate that more time is needed.
- QC think that if R1 send an LS we can take it into account.

✉ **[107bis#34][NR R15] Ambiguity of UE FDD/TDD FR1/FR2 capabilities (ZTE)**
Intended outcome: Agreeable CR 38306, can take into account also R1 LS
Deadline: Next Meeting

R2-1913696 Summary on email discussion 107#05 BWCS for inter-ENDC BC with intra-ENDC BC Huawei, HiSilicon discussion Rel-15 NR_newRAT-Core Late DISCUSSION

- MTK think R4 has already discussed this, and think they should not discuss again, so Option 4 is not a valid variant. Docomo think that R4 can indeed discuss again. MTK think R2 need to update signalling.
- Ericsson think option 3 is best. Huawei think option 3 is not backwards compatible and cannot accept option 3. QC agrees with Huawei. Nokia too.
- Nokia prefers option 1. MTK also think Option 1 is best.

⇒ **Option 1 is agreed: introduce a new field indicating the BWCS of intra-band EN-DC component for inter-band EN-DC combination with intra-band EN-DC component. No changes on the current field “supportedBandwidthCombinationSet” and “supportedBandwidthCombinationSetEUTRA”.**

R2-1914181 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331) Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1349 - F NR_newRAT-Core

R2-1914182 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306) Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0195 - F NR_newRAT-Core

⇒ **2 CRs above postponed**

Offline 34, CRs for the above 38331 R2-1914181 (CR1349) and 38306 R2-1914182 (CR0195) (Huawei)

- Huawei indicate that a LS to R4 is needed

R2-1914220 DRAFT LS to R4 on BWCS for inter-ENDC BC with intra-ENDC BC Huawei

⇒ **Approved in R2-1914226**

R2-1913019 Clarification regarding the supportedSRS-TxPortSwitch capability Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.7.0 0175 - F NR_newRAT-Core

- Intel think this is already supported, and nothing is needed. Huawei agrees. Samsung too. QC think that indeed if the UE includes fallback combinations for other purpose this parameter can be different.

- Chair: The intended behaviour is already supported.

  ⇒ **Not pursued**

R2-1913517 Miscellaneous corrections to 38.306 Ericsson CR Rel-15 38.306 15.7.0 0187 - B NR_newRAT-Core
- Huawei think we should not have duplication between 306 and 331 and we may need to discuss offline. Ericsson agrees that for the 2nd and 3rd change this need to be discussed.
- Intel think the first change can be included into the miscellaneous CR

  ⇒ **Change 1 merged with rapporteur misc CR**

R2-1913446 Clarification on the restriction of maximum SRS resource sets configuration for uplink beam management. Intel CR Rel-15 38.306 15.7.0 0185 - F NR_newRAT-Core
- Samsung think this is already in TR 822. Intel think we shouldn't rely on TR for restrictions, and the drafting rules don't allow referring to TR. QC agrees for this case, as this is a normative requirement.

  ⇒ **Agreed in principle**

R2-1913663 channelBWs parameter and legacy channel bandwidths Sprint Corporation discussion 38.306

DISCUSSION
- Intel think this may change within a release. Intel think we can align based on release.
- Ericson think this need to be discussed, and that the easiest may be to define new bit string. Huawei agrees this need to be discussed, as new bandwidths are added in a release independent way.
- MTK agrees current signalling is broken.
- QC has a R4 paper, on a new table, and the old table will not be used for new bandwidths. We could wait for R4 discussion.
- Docomo think we should consider futureproofness by frequency.
- Intel think the R2 signalling is not broken, but R4 usage is the problem. Intel think we should send an LS to R4 explaining what we want.

  ⇒ **Noted, expect to resume discussion at next meeting**

R2-1913686 Correction on procedural text for appliedFreqBandListFilter Huawei, HiSilicon CR Rel-15 38.331 15.7.0 1336 - F NR_newRAT-Core
- MTK think there is no problem as the signalled information can't be misunderstood. Intel agrees.

  ⇒ **Not pursued**

Text Enhancement

R2-1913229 Clarification to CA fallback band combinations Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.7.0 0179 - F NR_newRAT-Core

R2-1913524 Correction to Feature Set Combinations for NR-DC (38.331) Ericsson CR Rel-15 38.331 15.7.0 1321 - F NR_newRAT-Core

38.822

R2-1913020 Importing consequences if not approved from RAN1 and RAN4 excel files Nokia, Nokia Shanghai Bell, NTT Docomo Inc. CR Rel-15 38.306 15.7.0 0176 - F NR_newRAT-Core
=> Revised in R2-1913964

R2-1913964 Importing consequences if not approved from RAN1 and RAN4 excel files Nokia, Nokia Shanghai Bell, NTT Docomo Inc. CR Rel-15 38.306 15.7.0 0176 1 F NR_newRAT-Core

- Intel agrees with the intention, but think some of the clarifications are not needed. Docomo also agree with the intention. QC too.
- QC think the CR title should be changed.
- Samsung think this can be merged into a rapporteur CR.

⇒ **There is agreement for the intention, the details need to be checked**

✉ **[107bis#35][NR R15] Consequences if not supported (Nokia)**
Intended outcome: Agreeable CR 38306, based on R2-1913964
Deadline: Next Meeting

R2-1913021 Importing feature index numbers from TR 38.822 Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.7.0 0177 - D NR_newRAT-Core
- Docomo think we can still use the current TR.
- Docomo think we could use the TR also for Rel-16.
- Huawei and Samsung think we don't do this.

⇒ **Not pursued**

R2-1913697 Clarification on description for mandatory capability without capability signalling Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0193 - F NR_newRAT-Core
- Intel wonder if this is really needed. MTK agrees with Intel.
- MTK and Nokia think we need to discuss this on case by case.

⇒ **Not pursued**

R2-1913783 Correction on parameter description of beamManagementSSB-CSI-RS in 38.306 Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0194 - F NR_newRAT-Core
- Nokia suggest to also add ref to R1 TS. Huawei agrees

⇒ **Agreed in principle with the change to add ref to R1 TS, to be seen next meeting,**

FR2 CA fallbacks

R2-1913022 On FR2 CA fall-backs Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core
=> Revised in R2-1913965

R2-1913965 On FR2 CA fall-backs Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core
- Another Option: Intel proposes that R4 defined new BW classes for the fallbacks.

R2-1913525 Handling of fallback band combinations Ericsson, NTT DOCOMO discussion
DISCUSSION
- Apple think there are good reasons for the R4 decision. The UE have to implement the fallback combinations, which is not realistic for the concerned cases. Intel agrees, and think there are ways to solve this, e.g. as indicated in the Nokia paper. Samsung agrees and agrees we need to discuss in R2.
- Samsung think option 2 Nok is not possible and prefer option 3.
- Docomo think we should not change our signalling.
- Samsung think this is just for FR2 intra-band.
- Apple think the non-backwards compatibility is not an issue as the issue relates to band combinations not yet in the field.
- QC agrees the current scheme shall be kept, and new signalling shall be used for the new cases.

✉ **[107bis#36][NR R15] FR2 CA Fallbacks (Nokia)**
Intended outcome: Report to next meeting, Identify possible options, pave the way for discussions next meeting
Deadline: Next Meeting

R2-1913383 Handling of fallbacks for combined contiguous and non-contiguous CA in FR2 Apple discussion Rel-15 NR_newRAT-Core
=> Revised in R2-1913974

R2-1913974 Handling of fallbacks for combined contiguous and non-contiguous CA in FR2 Apple discussion Rel-15 NR_newRAT-Core

R2-1913384 CR to TS38.306 on FR2 intra band contiguous and non-contiguous CA fallback Apple CR Rel-15 38.306 15.7.0 0181 - F NR_newRAT-Core

R2-1913526 [DRAFT] Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 Ericsson LS out Rel-15 NR_newRAT-Core To:RAN WG4 Cc:-

Not Available

R2-1913445 Correction on the usage of the TCI capability Intel CR Rel-15 38.306 15.7.0 0184 - F NR_newRAT-Core Late

5.4.5 Idle/inactive mode procedures

This AI addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions or other behaviour triggered by cell reselection, out of coverage, etc) are covered under RRC agenda items (5.4.1.x)

5.4.5.1 Cell selection/reselection

Pmax for FR2

R2-1913194 RAN2 impact of undefined Pmax for FR2 in REL-15 Ericsson, NTT Docomo Inc. discussion Rel-15 NR_newRAT-Core

R2-1913195 Correction for P-Max in FR2 Ericsson, NTT DOCOMO INC. CR Rel-15 38.331 15.7.0 1292 - F NR_newRAT-Core

⇒ **Agreed in principle**

R2-1912985 Pcompensation and FR2 Nokia, Nokia Shanghai Bell discussion Rel-15 NR_newRAT-Core

- Ericsson wonder about the definition of P, was not decided by R4.

⇒ **noted**

R2-1913565 Correction to Pcompensation for FR2 Huawei, HiSilicon CR Rel-15 36.304 15.4.0 0773 - F NR_newRAT-Core

- Wrong spec in cover-sheet.
- Nokia think we don't have FR1 FR2 descriptions in 304

⇒ **Revised into a new CR for 38.304 (cover sheet change), in R2-1914169 (CR0140), which is agreed in principle unseen.**

DISCUSSION

- Samsung think that all the proposals could work.
- ZTE think R4 will not specify anything for Rel-15, and support that Pcompensation is set to 0
- Ericsson think that it is good to not set Pcomp to zero to allow high power class UE to have more coverage.
- Docomo think the main problem is about future compatibility, how a Rel-15 behaves when Pmax is used for Rel-16 UEs, and as baseline the Ericsson proposal is needed.
- Nokia think Pcompensation = 0 might be ok, but would like to check with R4
- Huawei proposes to agree the CRs now and attach in an LS to R4

⇒ **R2 assumes that for FR2, Rel-15 UE ignores broadcasted Pmax if any**

⇒ **R2 assumes that for FR2, Rel-15 UE set Pcompensation = 0**

Offline 27, DRAFT reply LS to R4 asking to feedback if the R2 agreements are problematic, In R2-1914170 (Huawei)

R2-1914170 [DRAFT] Reply LS on FR2 Pmax Huawei LS out Rel-15 NR_newRAT-Core To:RAN4

⇒ **Approved in R2-1914222**

Other

R2-1912899 Correction of cell reselection parameters for multi-beam operation Qualcomm Incorporated, Ericsson CR Rel-15 38.304 15.5.0 0139 - F NR_newRAT-Core

R2-1913566 Correction to the parameter descriptions for cell measurement quallity derivation in multi-beam operation Huawei, HiSilicon CR Rel-15 36.304 15.4.0 0774 - F NR_newRAT-Core

R2-1912893 Correction on field description of cellReselectionInfoCommon Qualcomm Incorporated, Ericsson CR Rel-15 38.331 15.7.0 1278 - F NR_newRAT-Core

R2-1913567 Correction to the field description of cellReselectionInfoCommon for cell measurement quallity derivation in multi-beam operation Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4130 - F NR_newRAT-Core

5.4.5.2 Idle/inactive paging

R2-1912986 Clarification on PO calculation Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1281 - F NR_newRAT-Core

R2-1913928 NR Paging Frame Calculation when SearchSpaceId is Zero MediaTek Inc. discussion

5.5 Late Drop

Corrections that only impact the late drop architecture options (NE-DC, NGEN-DC and NR-DC) should be submitted to 5.5.x. If a correction also impacts EN-DC and/or SA then it should be submitted to an earlier AI.

5.5.1 Stage 2 CRs

5.5.2 UE capabilities and capability coordination

R2-1913024 Clarifying the alignment of capability filtering across LTE and NR in MR-DC Nokia, Nokia Shanghai Bell CR Rel-15 38.306 15.7.0 0178 - F NR_newRAT-Core

- Huawei wonder is we can merge with rapporteur CR.

⇒ **To be merged with rapporteur CR**

R2-1913023 Clarifying the alignment of capability filtering across LTE and NR in MR-DC Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1283 - F NR_newRAT-Core

- Ericsson think that the new ordering have unwanted consequences, and prefer to clarify in the FD. Samsung agrees and think the current procedure works ok.
- Nokia agrees something in the CR has to be corrected

⇒ **Revised**

R2-1914219 Clarifying the alignment of capability filtering across LTE and NR in MR-DC Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1283 1 F NR_newRAT-Core

- Huawei are ok

⇒ **Agreed in principle**

Offline 35, clarify the need for these CRs, if possible, come up with agreeable CR(S) (Nokia)

R2-1913025 Clarifying the interpretation behind the encapsulation of the filter extensions - Option 1
Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1284 - F NR_newRAT-Core

R2-1913026 Clarifying the interpretation behind the encapsulation of the filter extensions - Option 2
Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1285 - F NR_newRAT-Core

R2-1913027 Clarifying the interpretation behind the encapsulation of the filter extensions - Option 3
Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1286 - F NR_newRAT-Core

R2-1913028 Clarifying the interpretation behind the encapsulation of the filter extensions - Option 4
Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1287 - F NR_newRAT-Core

⇒ **postponed**

DISCUSSION
- Huawei think there is no problem to resolve.

Offline 42, offline resolve which option is correct, if any.
- Nokia think this is controversial. At least ASN.1 changes seems not agreeable.
- No conclusion at this meeting expected.
- Docomo think the ASN1 works, but think we should think about this and the beahivour is different from LTE.
- Ericsson think we also have NBs that are not the latest version.

✉ **[107bis#37][NR R15] Clarifying the interpretation behind the encapsulation of the filter extensions (Nokia)**
Intended outcome: Report to next meeting, possibly agreeable CR 38331 (dep on progress)
Deadline: Next Meeting

R2-1913520 Addition of dynamic power sharing for NE-DC Ericsson discussion

⇒ **noted**

R2-1913519 Addition of dynamic power sharing for NE-DC (38.306) Ericsson CR Rel-15 38.306 15.7.0 0188 - B NR_newRAT-Core

⇒ **not pursued**

R2-1913669 NE-DC dynamic power sharing capability Qualcomm Incorporated CR Rel-15 38.331 15.7.0 1330 - F NR_newRAT-Core

R2-1913670 NE-DC dynamic power sharing capability Qualcomm Incorporated CR Rel-15 38.306 15.7.0 0190 - F NR_newRAT-Core

DISCSUSSION on the 4 docs above.
- QC think we should create a new capability for NE-DC.
- Huawei think QC proposal is clearer.
- QC think the Ericsson proposal comes with too much overhead.
- Samsung support the QC CR. LG too.
- Huawei think there are other capabilities that are conditional based on dynamic power sharing, they need to be checked.
- Chair: there is support for QC CRs expect to agree.

Offline 43, check for conditional capabilities, whether update is needed (QC)
- QC reports that there is another capability that depends on this so CRs need to be further revised. Suggest email discussion

✉ **[107bis#38][NR R15] NE-DC dynamic power sharing capability (QC)**
Intended outcome: Agreeable CRs 306 331
Deadline: Next Meeting

R2-1913688 Corrections on PDCCH blind decoding in NR-DC Huawei, HiSilicon CR Rel-15 38.306 15.7.0 0191 - F NR_newRAT-Core

5.5.3 Measurements and measurement coordination

R2-1912765 Measurement coordination on maxMeasIdentitiesSCG in MR-DC ZTE Corporation, Sanechips, Ericsson discussion Rel-15 NR_newRAT-Core

R2-1912766 Corrections on maxMeasIdentitiesSCG-NR in MR-DC ZTE Corporation, Sanechips, Ericsson CR Rel-15 38.331 15.7.0 1272 - F NR_newRAT-Core

R2-1913302 Correction on MCG measurements in SCGFailureInformation Ericsson CR Rel-15 38.331 15.7.0 1305 - F NR_newRAT-Core

R2-1913303 Correction on SCGFailureInformation Ericsson CR Rel-15 38.331 15.7.0 1306 - F NR_newRAT-Core

5.5.4 Other

R2-1913268 Reconfiguration with sync for NE-DC Google Inc. CR Rel-15 38.331 15.7.0 1295 - F NR_newRAT-Core
=> Revised in R2-1913970

R2-1913970 Reconfiguration with sync for NE-DC Google Inc., Ericsson CR Rel-15 38.331 15.7.0 1295 1 F NR_newRAT-Core
- MTK think this is a corner case, and we don't need to overspecify. Samsung agrees this is a corner case.

  ⇒ **Not pursued**

R2-1913270 Reconfiguration failure in NE-DC Google Inc. CR Rel-15 36.331 15.7.0 4115 - F NR_newRAT-Core
- Huawei agrees with the CR

  ⇒ **Agreed in pricnciple**

R2-1913297 Handling of AS-Config in HandoverPreparationInformation Ericsson CR Rel-15 38.331 15.7.0 1300 - F NR_newRAT-Core
- Huawei think the field description is different to the 36.331

  ⇒ **Agreed in principle**

R2-1913299 Correction on candidateCellInfoListSN-EUTRA in HandoverPreparationInformation Ericsson CR Rel-15 38.331 15.7.0 1302 - F NR_newRAT-Core
- Huawei think the CR is not needed but the change is ok

  ⇒ **Merge with rapporteur CR**

R2-1913301 Correction of SRB3 handling at full configuration (Alt1) Ericsson CR Rel-15 38.331 15.7.0 1304 - F NR_newRAT-Core

R2-1913306 Correction of SRB3 handling at full configuration (Alt2) Ericsson CR Rel-15 38.331 15.7.0 1308 - F NR_newRAT-Core
DISCUSSION
- Huawei think the current note is clear. Intel also think there is no risk for wrong impl.
- MTK think this is not clear and prefer Alt2.
- Google think that there is anyway no Lower layer configuration so nothing can be sent.
- Intel think the very first normative line is very clear. LG agrees.

Offline 28, attempt to find an agreeable wording, Revision in R2-1914172 (ericsson)

R2-1914172 Correction of SRB3 handling at full configuration (Alt2) Ericsson CR Rel-15 38.331 15.7.0 1308 1 F NR_newRAT-Core
- Huawei think we shojld remove NE-DC on the cover sheet

⇒ **Agreed in principle, remove NE-DC on cover sheet, for next meeting**

R2-1913307 Miscellaneous correction for late drop Ericsson CR Rel-15 36.331 15.7.0 4117
- F NR_newRAT-Core
- Ericsson indicate that the CR overlaps with a Huawei CR and those parts can be removed.
Revised in R2-1914173

R2-1914173 Miscellaneous correction for late drop Ericsson CR Rel-15 36.331 15.7.0 4117
1 F NR_newRAT-Core

⇒ **Agreed in principle**

R2-1913577 Clarification on SRB3 usage ZTE Corporation CR Rel-15 38.331 15.7.0 1326
- F NR_newRAT-Core

R2-1913971 Handover in (NG)EN-DC Google Inc., Ericsson CR Rel-15 36.331 15.7.0 4138 -
F NR_newRAT-Core

Not available

R2-1913271 Reconfiguration failure in NE-DC Google Inc. CR Rel-15 36.331 15.7.0 4116 -
F NR_newRAT-Core Late

6 Rel-16 NR Work Items

Organisational

⇒ **R2 Rel-16 CRs for all WI, NR and LTE agreed in February (both Stage-3 and Stage-2), until then for TEI CRs may be agreed in principle. Agreed in principle CRs to be submitted for agreement in February**

- ZTE think that there will be a lot of work in Feb for merging and do consistency checking

R2-1914163 Work plan for Rel-16 UE Capability feature list Intel Corporation discussion

DISCUSSION
- Ericsson think it is too optimistic to know the real capabilities in Nov.
- Huawei think we need to find the features first,
- Docomo think it is sufficient to finalize in June, and we can start in Feb. QC think it is better to have ASN.1 sooner than June.
- Samsung agrees the time plan is too aggressive.
- Chair: most seems to expect that the first step is identifying features and this can possibly start Nov, likely Feb.
- Docomo think we can ask other groups to use a certain format

P3
- Ericsson hope thay always do this
- Samsung think signalling is less important than features
- Huawei think they arelady know the cost.

⇒ **Revisit the plan in Dec**

✉ **[107bis#01][NR R16] LS on feature list format for Rel-16 (Intel)**
Intended outcome: Approved LS on feature list format for Rel-16 to R1, R4, cc: R3
Deadline: 1 week

=> Approved in R2-1913997.

RRC

- RRC rapporteur think we need to work on merge of WI CRs before FEB. Huawei point out that there is Chinese and Korean holidays before FEB meeting which
- Docomo think L1 parameter discussions should be coordinated.

⇒ **Continue the planning next meeting**

6.1 Integrated Access and Backhaul for NR

(NR_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: RP-192188)
Time budget: 3 TU
Tdoc Limitation: 12 tdocs

6.1.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

LS in

R2-1912037 LS on the IAB-indication to core network (R3-194787; contact: Qualcomm) RAN3 LS in Rel-16 NR_IAB To:SA2, RAN2 Cc:SA3, SA5
- On the last part, parent node selection, LG wonders why R3 excluded other options, e.g. OAM etc?
- QC think R3 hasn't excluded other options.

- Huawei think R2 can confirm that IAB node indication is in MSG5.

  ⇒ **Noted, we reply after discussion.**

R2-1914206 LS on NR IAB case-1 timing (R1-1911548; contact: ZTE) RAN1 LS in Rel-16 NR_IAB-core To:RAN2 Cc:RAN4

Work Plan

R2-1912797 IAB workplan update Qualcomm Incorporated (Rapporteur) Work Plan Rel-16 R2-1909641

⇒ **Noted**

✉ **[107bis#02][IAB] 38300 (Qualcomm)**
Intended outcome: Endorsed Running CR. Agreements incl 107bis
Deadline: 1 week
=> Endorsed in R2-1913998.

✉ **[107bis#03][IAB] 38340 (Huawei)**
Intended outcome: Endorsed Running CR. Agreements incl 107bis
Deadline: 1 week
=> Endorsed in:
R2-1914006 (v0.0.0).
R2-1914008 (v0.1.0).

✉ **[107bis#39][IAB] 38321 (Samsung)**
Intended outcome: Draft running CR to the next meeting, including agreements incl 107bis
Deadline: Next Meeting

6.1.2 Stage-2 and general

Including principles and higher level aspects e.g. that involve both user plane and control plane, multi-connectivity etc.
Including output of email discussion [107#51][NR IAB] F1 over LTE (AT&T)

F1AP transport in EN-DC

R2-1913557 Report for [107#51][NR IAB] F1 over LTE (AT&T) AT&T discussion Rel-16 DISCUSSION

- Futurewei think that architectural implications were not discussed. Solutions 1a and 1b and possible 2a seems not compatible with usage of security gateways.
- LG think 1 is reusing as much as possible of current solutions. LG don't see an issue. QC think the whole stack is transported by RRC in 1a.
- Huawei think 1a introduce a new protocol stack for CP which changes the whole idea.
- Verizon think there is no security issue, the whole stack including IP etc is transported on top of RRC.
- Futurewei think this is about securing outgoing connections from the data center, no normal security gateway could work with the current protocol stack. LG don't see the problem.
- Samsung think we don't need to consider IPsec, and PDCP gives sufficient security. Nokia think that with solution 1a we need to discuss PDCP.
- Huawei would suggest solution 2b, and ask R3 to do the solution down selection. KDDI wonder why 2b need to be
- Chair: there seems to be only Huawei and Futurewei that has concerns.
- QC suggest that R2 can assume solution 1a and ask SA3 in an LS
- Chair wonder about solution 2b. Samsung think this means a UP entity wold then be present in the CP. LG think 2b is completely up to implementation.
- Futurewei object to solution 1a. // Chair offline friday: Futurewei withdraw formal objection and are ok to have the suggested working assumption. //

⇒ **Working assumption: R2 assumes to use solution 1a (or possibly 1b) (agreement in R2). Security can be addressed by SA3, Architecture can be addressed by R3, we expect to send an LS**

R2-1913628 IAB with NSA operation Sequans Communications discussion Rel-16 NR_IAB-Core Late

Proposal 1: If solution 1a is adopted, consider including NR PDCP for future proofness

R2-1913802 F1AP over LTE LG Electronics France discussion NR_IAB-Core

In-sequence delivery/duplication detection, if needed beyond existing RAN2 specifications, is offered by SCTP,

DISCUSSION on the 2 docs above

- Nokia think there is no need for PDCP below RRC, even sequans admits it is not really needed for this case.
- Futurewei wonders if we then don't need an additional PDCP layer why do we need to use the NR RRC at all, can't we just use the LTE RRC. Nokia think this could work as well, but think there is more reuse in 1a, i.e. more impact to X2. Futurewei think this is a R3 issue. Ericsson think we can add this as a question to the LS.

⇒ **Ask R3 about 1b/1a X2 impact, i.e. to use NR RRC as a tunnelling layer or not.**

R2-1913954 [DRAFT] LS on F1 over LTE KDDI Corporation LS out Rel-16 NR_IAB-Core To:RAN3 Cc:-

- Futurewei wonders if we can ask about 2b. QC think R3 is overloaded and we should not ask non-neccesary questions.

Offline 30, agreeable LS to R3 cc SA3, inform about R2 working agreement, ask for feedback, ask about X2 impacts (i.e. 1a1b), Revision in R2-1914179 (KDDI)

R2-1914179 [R2#107bis-offline-30] IAB LS on F1 over LTE KDDI Corporation discussion Rel-16 NR_IAB-Core

R2-1914179 Offline 30 KDDI

DISCUSSION

- Huawei think it is strange to use LTE SRB1 for F1AP (+ SCTP IP etc) transfer, and think SRB1 is sometimes not available, e.g. SRB1 is suspended at reestablishment, cleared at reconfig with synch. Chair wonders if SRB2 would resolve the Huawei issues. Chair indicate that SRB2 is used for transport of most NAS messages. Huawei would like to specify a new SRB.
- Samsung point out that when there are link breaks e.g. at re-establishment, the communication is broken so what to do.
- LG don't see problems with this, and think the tunnelling is already assumed.
- On P3 Futurewei think there is no technical motivation for this. Nokia think the main reason is just the R3 impact.
- KDDI think it is important to decide in R2 as this consumes time in R3.
- Chair think we can keep open SRB1 or SRB2, similar to 1a1b (also open)

⇒ **R2 understanding is that the protocol stacks in R2-1914179 are the ones applicable to solution 1a and solution 1b.**

⇒ **Whether to use LTE SRB1 or SRB2 for solution 1a/1b is open but it is not foreseen the specification of a new SRB for this.**

R2-1912585 Control plane signalling deliver in NSA deployment ZTE Corporation, Sanechips discussion

R2-1913960 CR to 36.331 on support of F1AP over LTE for IAB AT&T, KDDI draftCR Rel-16 36.331 15.7.0 NR_IAB-Core

R2-1913961 CR to 38.331 on support of F1AP over LTE for IAB AT&T, KDDI draftCR Rel-16 38.331 15.7.0 NR_IAB-Core

Terminology

R2-1913463 IAB-MT terminology Nokia, Nokia Shanghai Bell, Vodafone discussion Rel-16 NR_IAB-Core

- Futurewei think we deliberately decided on the term MT. Ericsson agrees with Futurewei. QC think that P2 is needed.
- LG agree with the intention.
- Huawei think IAB MT can be used. Samsung think we should keep IAB MT
- ZTE think IAB MT can be used.
- Nokia think SA2 will use “IAB UE”

⇒ **From R2 specifications point of view, IAB MT (or other term if changed) is equivalent to UE, unless otherwise stated.**

R2-1913190 Draft CR to 38.300 on IAB to add definitions for IAB-MT and IAB-DU Ericsson draftCR Rel-16 38.300 15.7.0 NR_IAB-Core

- Huawei think we should discuss this in the running CR email discussion.

⇒ **Include this discussion in running CR email discussion (38300)**

Load reporting

R2-1912802 IAB load reporting to IAB-donor CU-CP Qualcomm Incorporated discussion Rel-16 R2-1909647

Moved here from 6.1.3

Stage-2 L2 Description

R2-1912798 IAB (TP to CR on 38300) L2 structures Qualcomm Incorporated discussion Rel-16

⇒ **Include L2 structure capture into running CR discussion (38300)**

Multi-Connectivity

R2-1912535 EN-DC support in IAB (srb, drb, data flow) Samsung R&D Institute UK discussion

R2-1912536 NR DC support (which link is MCG link, SCG link, MN, SN role in DU Samsung R&D Institute UK discussion

R2-1913185 On Multi-connectivity for IAB Ericsson discussion Rel-16 NR_IAB-Core

Routing

R2-1912707 Multi-route support in IAB Intel discussion Rel-16 NR_IAB-Core

R2-1913004 Considerations on IAB multi connectivity KDDI Corporation discussion

Topology

R2-1912706 Initial Access and Network Setup for IAB Intel discussion Rel-16 NR_IAB-Core

Other Enhancements

R2-1913189 Support for LTE Deployment at IAB Node Sites Ericsson discussion Rel-16 NR_IAB-Core

Moved here from 6.1.5.3

R2-1913629 Support for LTE deployment at IAB node sites Sequans Communications discussion Rel-16 NR_IAB-Core R2-1911388

Not available

R2-1913922 Discussion on supporting SN terminated Split SRB for IAB CP in NSA deployments Futurewei discussion R2-1911803 Late

6.1.3 BAP functionality

Including output of email discussion [107#08][NR IAB] Running BAP CR (Huawei)

CRs

R2-1913253 Report of email discussion [107#08][NR IAB] Running BAP CR Huawei, HiSilicon discussion Rel-16 NR_IAB-Core Late

- Huawei proposes to discuss P1. LG think 1a need to be discussed as well.

P1, P1a

- Ericsson think header may be removed.
- Chair think that in stage-3 we always have some small text on how we use incoming information and how to set outgoing information, so this is not a Stage-3 issue. IT could be usedful to discuss whether some fields would not be the same in outgoing vs incoming packets.
- QC think this is nonsense. Nokia agree we don't need to optimize. Intel agree.
- LG point out that we then need to specify how routing works in the case of Rerouting in case of RLF.

⇒ **BAP address of forwarded packet is the same as in the incoming PDU**

⇒ **R2 assumes that BAP path ID of forwarded packet is the same as in the incoming PDU (need to agree routing behaviour at rerouting, e.g. at RLF)**

R2-1913254 Running CR for TS 38.340 (BAP) Huawei, HiSilicon pCR Rel-16 38.340 0.0.0 NR_IAB-Core Late

- Huawei want to agree not to remove the header, transmit operation, is a PDU or SDU received from receive side.

⇒ **Endorsed as baseline**

6.1.3.1 Routing

Including output of email discussion [107#53][NR IAB] Routing (Ericsson)

General

R2-1913179 Summary for Email Discussion [107#53] [NR_IAB-Core] Routing Ericsson discussion Rel-16 NR_IAB-Core Late

DISCUSSION

- Ericsson think we start w P2

P2

- Samsung think the BAP routing ID etc can be agrees, but we may need additional discussion about additional fields.
- Huawei think the proposed size can be considered a min size.
- LG think 14 bits routing ID shall be used. Ericsson wonder if we need more than one R bit.
- Futurewei wonder if we have two different partitions of address/path id wheter we need additional indication bit. QC and Huawei think no. Huawei think that also 13 bits routing ID could work. Futurewei would be ok with 13bits

P3

- Futurewei propose 4/9 for UL. LG think we should use same as for UL.

BAP header:

⇒ **Routing ID is 13bits**

⇒ **There is a C/D bit**

⇒ **Length of the BAP address and BAP path ID sub-fields of the BAP routing ID to be fixed/predefined**

⇒ **For the DL, BAP address is 10bits and BAP path ID is 3bits**

⇒ **For the UL, BAP address is FFS bits and BAP path ID is FFS bits**

⇒ **R2 expects that there will be no restrictions in the TS to restrict configuration of routing ID and its components. The network has to ensure that e.g. there is no path confusion.**

R2-1912365 Remaining issues for routing Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-1912125 Remaining issues with IAB Routing CATT discussion Rel-16 NR_IAB-Core
R2-1912582 Consideration on routing in IAB ZTE Corporation, Sanechips discussion
R2-1912978 Downstream Next hop ID design NEC Telecom MODUS Ltd. Discussion
R2-1913538 Open Issues for IAB Routing Futurewei Technologies discussion R2-1910904
R2-1913295 Routing details in IAB Sony Europe B.V. discussion Rel-16 NR_IAB-Core R2-1909896

Local routing

R2-1913459 Route priority and local routing Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-1912583 Discussion on re-routing in IAB network ZTE Corporation, Sanechips discussion
R2-1913810 Discussion on local decision make for routing Samsung discussion Rel-16 NR_IAB
R2-1913820 Consideration on local route selection in IAB node LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1911341

6.1.3.2 Bearer Mapping

R2-1913181 Uplink BH RLC Channel Mapping in IAB Nodes Ericsson, KDDI discussion Rel-16 NR_IAB-Core
R2-1913811 UL mapping configuration Samsung discussion Rel-16 NR_IAB
R2-1912366 Remaining issues for bearer mapping Huawei, HiSilicon discussion Rel-16 NR_IAB-Core
R2-1912581 Further consideration on bearer mapping ZTE Corporation, Sanechips discussion
R2-1913822 Way forward for CP bearer mapping LG Electronics Inc. discussion Rel-16 NR_IAB-Core
R2-1912935 BAP mapping support for routing CMCC discussion Rel-16
R2-1913812 Further discussions on bearer mapping configuration for CP and UP Samsung discussion Rel-16 NR_IAB

6.1.3.3 Flow Control

BAP based flow control

R2-1913819 Further details for DL flow control LG Electronics Inc., LG Uplus discussion Rel-16 NR_IAB-Core
DISCUSSION
P1/P2
- LG explains that we don't need to block all traffic,
- Futurewei wonder if the destination BAP address is the Access IAB node.
- ZTE agrees with the intention but think it is not sufficient. Ericsson think that if the feedback comes on a certain link the previous node can determine which traffic to regulate.
- Futurewei think P2 is more useful.
- Huawei agrees with P2
- QC think P2 doesn't work. LG think the flow control indication may need to include multiple Destination IDs.

- QC do not support P1/P2. Samsung do not support either.
- Intel support P1 wpould prefer to indicate UE bearer, but could accept per destination BAP address.
- Nokia agrees in principle with P2 but think Pathid should be included as well, as the buffer could be different dep on path as well. Ericsson agrees,
- Samsung think UE bearer should be indicated. QC think this involves too much overhead. Samsung think that for such case the IAb node would anyway do buffering per UE/UEbearer. Sequans agrees with Samsung.
- CATT think we should assume course granularity, and think ingress RLC channel is sufficient.

P3

- Ericsson wonders which BH RLC channel is intended. Samsung think this is about the RLC channel between the two nodes.

Chair: Proposals on the table on the information in the feedback on the “source” of the problem:

0) No information
1) Implicit information: the BH RLC channel the feedback is sent on is the BH RLC channel for which packets are buffered.
2) Routing IDs of buffered traffic
(covers congestion on next IAB link(s))
3) UE id + UE bearer ID of buffered traffic
(covers also UE access link congestion)

DISCUSSION

- Verizon think we can keep it simple, go for 1. QC think that for 1-to-1 mapped traffic, 1 is same as 3.
- Ericsson think option 2 is good enough.
- Ericsson think level 0 is not useful.

⇒ **Decision next meeting**

R2-1912980	Flow control in IAB	NEC Telecom MODUS Ltd.	Discussion		
R2-1912576	Downlink hop-by-hop flow control	Samsung Electronics GmbH	discussion		
R2-1913209	Details of hop-by-hop flow control	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_IAB-Core
R2-1912367	Flow control for IAB networks	Huawei, HiSilicon	discussion	Rel-16	NR_IAB-Core
R2-1912584	Furth er consideration on flow control in IAB	ZTE Corporation, Sanechips	discussion		
R2-1912708	Flow control in IAB - remaining issues	Intel	discussion	Rel-16	NR_IAB-Core
R2-1913183	Remaining Issues Related to Flow Control	Ericsson	discussion	Rel-16	NR_IAB-Core
R2-1913871	Discussion on the flow control	ITL	discussion		
R2-1912577	On the need for bearer ID in the BAP header	Samsung Electronics GmbH	discussion		
R2-1913920	Hop-by-Hop Flow control for IAB	Futurewei Technologies	discussion		

6.1.3.4 Other

PDU format

R2-1912368	BAP PDU format	Huawei, HiSilicon	discussion	Rel-16	NR_IAB-Core
R2-1913859	Discussion and Decision	LG Electronics	discussion	NR_IAB-Core	

Other

R2-1912711	Handling of Fairness in IAB	Intel	discussion	Rel-16	NR_IAB-Core
R2-1913180	Remaining Issues for BAP Layer	Ericsson	discussion	Rel-16	NR_IAB-Core
R2-1913821	BAP layer configurbation for data forwarding	LG Electronics Inc.	discussion	Rel-16	NR_IAB-Core
R2-1912123	Discussion on BAP Buffer CATT	discussion	Rel-16	NR_IAB-Core	

6.1.4 User plane aspects

User plane aspects not covered by BAP.

6.1.4.1 Scheduling and QoS

Including resubmission output of email discussion [106#46][IAB] Low-latency scheduling (Samsung)

Low-latency scheduling

R2-1912572 Report on email discussion [106#46][IAB]: Low-latency scheduling Samsung Electronics GmbH
report R2-1910028

DISCUSSION
- Samsung explains that the remaining proposals to treat are 4-9

P4
- Ericsson support P4

P5
- Samsung think that agreement
- Huawei think we should agree to capture this in the MAC CR

P6
- ZTE, LG, Huawei, Samsung Lenovo, FW, Sequans, Nokia think we need this. The main concern is about resource waste. CATT think we already agreed something in P1.
- Ericsson think this anyway doesn't guarantee the handling of data for the new BSR.
- Nokia also think there is a problem triggering current BSR based on SR as the node will not know the LCH. Lenovo agree this is not only about resource waste.
- Intel think this could become complex, and Intel think this is going too far.
- Samsung think this is important from timing point of view in how the network schedules the data.
- LG think that if we introduce Pre-emptive BSR we must differentiate the reporting. Then Ericsson think we also need to specify some timing in order for this to be useful.
- Huawei would like to not impact the legacy BSR behaviour.

P8
- Samsung think this is related to multi-connected nodes, and is not pre-emptive BSR specific.
- ZTE think that for a BSR, an IAB node cannot guess the routing decision, and cannot estimate which link this affects. Lenovo agrees with ZTE.
- Huawei think we can discuss this later
- LG think that also for legacy for multi-link scenarios there are similar problems.
- Intel think this now becomes too complex.
- Huawei think LCG can be associated with routing decisions. QC agrees.
- Ericsson think anyway the pre-emtive BSR is a bit speculative, and think if we need to specify details we should not do this.

P9
- Chair suggest to not specify details on triggering as this seem unactable to some companies.
- Futurewei think some behaviour should be captured. Huawei think specification could be on a high level, capture intentions acc to current agreements and using e.g. "may".
- Ericsson think that if the specification becomes too vague it is useless.
- Futurewei think it is important to capture more than intent.
- LG don't want to impact any of the current text for BSR.
- Intel wonder it the discrimination is to be able to ignore the pre-BSR.

⇒ **RAN2 will not specify any normative solution to the perceived issue of possible resource wastage due to introduction of pre-emptive BSR.**

⇒ **Confirmation that this is the expected enhanced behavior: Following the reception by the second (parent) node of a BSR from a first (child) node, resources may be requested from the third node (parent of second node) before actual data arrives from the first node**

Chair summary, possible compromise way forward:
- We will differentiate in BSR available data (as today) and expected data.
- Associating a LCH with pre-emptive BSR is left to implementation, unless issues are identified requiring normative solutions.

- FFS if SR and BSR generated by a MAC entity need or can only be reported to the parent node where the peer of that MAC entity resides.
- On Triggering of pre-emptive BSR, can capture some text similar to the current agreements, in stage-3/2.
- Exact timing etc is up to implementation.

Chair propose to either
a) Agree the way forward above, or
b) Not do the Preemptive BSR

DISCUSSION
- Ericsson object to the proposed way forward..
- Futurewei, LG, Samsung, Lenovo, ZTE, CATT think the way forward is acceptable
- After discussion, Intel would be ok to distinguish Normal and pre-BSR Data.

CB after lunch, to check the status.
- Ericsson can compromise and agree to the way forward under condition. Ericsson wonders whether an IAB implementation can use the current BSR as pre-emptive BSR, i.e. triggered by BSR rather than data. Chair wonder if Ericsson are asking for a second specified version of pre-emptive BSR.
- Futurewei think that networks can not follow the spec at its own risk. Samsung agrees, and think that the new format helps interoperability. Intel also think this is ok, but at the risk of the IAB node implementation.
- Futurewei think we are aiming to not change anything for current BSR in MAC. Ericsson think this is ok.

Chair: R2 is not planning to change behaviour for current BSR with the above way forward. Using the “current BSR” with a pre-emptive trigger will not be standards compliant. Most companies think that network nodes can diverge from standard, but it is at the risk of the network node.

Chair: Ericsson still object

R2-1913213	Buffer status reporting for IAB	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_IAB-Core
R2-1912124	Pre-emptive BSR	CATT	discussion	Rel-16	NR_IAB-Core
R2-1912369	Remaining issues for uplink scheduling enhancement	Huawei, HiSilicon	discussion	Rel-16	NR_IAB-Core
R2-1912573	Remaining issues with pre-emptive BSR	Samsung Electronics GmbH	discussion		
R2-1912586	Discussion on low latency scheduling in IAB	ZTE Corporation, Sanechips	discussion		
R2-1912587	Discussion on low latency scheduling in multi-connectivity scenario	ZTE Corporation, Sanechips, NEC	discussion		
R2-1912709	Uplink latency reduction	Intel	discussion	Rel-16	NR_IAB-Core
R2-1913065	Trigger Conditions for low-latency IAB Uplink Scheduling	ITRI	discussion	NR_IAB-Core	
R2-1913085	Consideration on UL low-latency scheduling	Lenovo, Motorola Mobility	discussion	Rel-16	R2-1910538
R2-1913086	Pre-emptive BSR in multiple connection scenario	Lenovo, Motorola Mobility	discussion	Rel-16	
R2-1913184	Further details for BSR in IAB Networks	Ericsson	discussion	Rel-16	NR_IAB-Core
R2-1913351	BSR enhancement for IAB	Sony	discussion	Rel-16	NR_IAB-Core R2-1909898
R2-1913539	Enhancements for low-latency IAB Uplink scheduling	Futurewei Technologies	discussion	R2-1911438	
R2-1913654	Consideration of preemptive BSR in IAB	Kyocera	discussion		
R2-1913764	On the consideration of routing for reporting pre-emptive BSR	ASUSTeK	discussion	Rel-16	NR_IAB-Core

R2-1913765 Discussion on traditional uplink and IAB uplink traffic for BSR triggering ASUSTeK discussion Rel-16 NR_IAB-Core

R2-1913766 SR configuration for pre-emptive BSR ASUSTeK discussion Rel-16 NR_IAB-Core

Scheduling General

R2-1913210 Signalling for radio aware scheduling Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

PDU format

R2-1913818 BSR MAC CE format for pre-BSR LG Electronics Inc., LG Uplus discussion Rel-16 NR_IAB-Core R2-1911339

6.1.4.2 LCID extension

R2-1912370 LCID and LCG space extension for IAB backhaul link Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

R2-1912575 LCID space extension Samsung Electronics GmbH discussion

R2-1913182 LCID and LCG Extension in IAB Networks Ericsson discussion Rel-16 NR_IAB-Core

DISCUSSION on the 3 docs above

- LG think that if we use LCID to indicate extension, we just extend the format and it is future proof.
- Ericsson think we should use the existing LCID bits.
- Huawei think that legacy LCID need to be used as well.
- QC wonders if we really want to carry the overhead in every PDU.
- LG don't want to use the R bit to indicate LCID extension because it is useful to keep it for other future indications. Samsung agrees R-bit is useful for future extension, but think the LCID extension can also add a byte of R bits.
- Futurewei think that the R-bit can be used differently for IAB and for UEs.
- Nokia and Ericsson would be ok with using an LCID value to indicate extension.
- LG think that if we use the R-bit we will need more discussion to determine the new format.
- Futrewei think R-bit can be used and LCID value is inefficient. Huawei think that LCID is good.
- Oppo point out the word reserved
- LG think we need two bytes, Samsung agrees. QC agrees. OPPO wonder if this means 16 bits LCID. Most companies think yes 16bits, LG point out that we can also add some reserved bits.
- Huawei would like to be future-proof and think that for IAB the overhead is ok, and 3 bytes would be better. Huawei think 2 bytes could be ok, but would like to check. ZTE also think 3 bytes would be better.
- Huawei think for 1-to-1 mapping, with 16 bits we then have 10 bits to identify the UE.
- Futurewei think we can also consider a 1-byte option
- CATT think this extension mechanism is very general and think we can extend further in the future if needed.
- ZTE think we don't need to support extension of LCG as we have same set of priority values. Samsung agrees.
- LG think that fine-grained QOS assumption for 1-to-1-mapping need to be taken into account. Ericsson think we need to extend. Intel wonders how many LCG are needed, LG think it may be tripled. Huawei think we don't need to extend. Lenovo would support to extend, and think BS-values may need extension.,
- Chair think the BSR/Scheduling etc for fine-grained QoS might need more discussion. QC think we can go for email.
- Samsung think extending LCG may have very high impact, and think we should not extend. Intel agrees.
- Oppo wonders if this is just for IAB. chair think it is for IAB, but there is a possibility that other items can accept to use this as well.

For IAB:

⇒ **Whether the extended LCID is used is indicated in the MAC header**

⇒ **A reserved LCID value (in the legacy field) is used to indicate the extended LCID extension.**

⇒ **We assume 16-bit LCID for the extension for IAB, and add 2 bytes to the MAC header (no additional reserved bits or values)**

⇒ **For Rel-16 we don't expect to extend LCG (or make any other changes for fine-grained QoS for UL scheduling)**

R2-1912588 Consideration on the Extension of LCID and LCG Space in IAB ZTE Corporation, Sanechips discussion

R2-1912800 IAB extension of LCID space Qualcomm Incorporated discussion Rel-16

R2-1912801 IAB extension of LCG space Qualcomm Incorporated discussion Rel-16

R2-1913211 Discussion on number of LCIDs and LCGs for IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-1913815 LCID space extension and MAC format LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1911334

R2-1913816 Consideration on LCG space extension LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1911335

Stage-3

R2-1913212 Discussion on MAC subheader structures for IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

6.1.4.3 Other

Other MAC RLC PDCP impacts if any, F1 based flow control etc

L1

R2-1912372 RACH related issues for IAB Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

RLC

R2-1912371 General RLC impacts Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

PDCP

R2-1912373 Support of UE PDCP duplication Huawei, HiSilicon discussion Rel-16 NR_IAB-Core

Other

R2-1913817 LCG based UL grant LG Electronics Inc. discussion Rel-16 NR_IAB-Core R2-1911338

R2-1913631 Queue Management vs Flow Control for Congestion Handling Sequans Communications discussion Rel-16 NR_IAB-Core R2-1911389

R2-1913630 F1-U Flow Control and Reordering Issues Sequans Communications discussion Rel-16 NR_IAB-Core

R2-1912979 End to end reliability in IAB NEC Telecom MODUS Ltd. Discussion

Moved here from 6.1.4

6.1.5 Control plane aspects

6.1.5.1 RLF handling

Including resubmission output of email discussion [106#43][IAB] Backhaul RLF (CATT)

R2-1912127 Summary of the email discussion [106#43][IAB] Backhaul RLF CATT discussion Rel-16 NR_IAB-Core R2-1908842

DISCUSSION

P2

- Samsung think this is about NR DC.

P5

- Ericsson think we can just turn off the cell rather than indicating. Kyocera agrees and think turing off the cell is simpler. QC think the difference may be the action taken by downstream nodes.
- Huawei think we already agreed this.
- ZTE think it is more useful to indicate that RLF happens rather than recovery failure, so downstream nodes can start prepare to recover. Intel agrees. LG think both indications are useful. Ericsson also think more notifications are needed.
- Huawei think we should focus on MT behaviour on the indication. Huawei think this mechanism need to be fast.
- Samsung think recovery failure is the most important.
- NEC think turning off the cell is not a good idea as it is possible that the cell backhaul can recover.

P10
- LG think that this is the case for MCG RLF if fast MCG recovery is not supported

P13
- Nokia are ok with this, but think we can also use SIB1. Do we really need two indications.
- Futurewei wonders which BH RLC channel would be used. Ericsson think this could be a BAP control PDU. LG agrees, but think the internal interaction need to be discussed. KDDI think RRC is more general as also the UE can be informed.
- Huawei think there was a majority for using BAP.
- Nokia think SIB1 can be used as it is encoded in the DU, and as we anyway may need some SIB1 indication.

⇒ **R2 confirm that when the IAB-node is not configured with DC, it applies for BH RLF handling the same mechanisms and procedures as UE's RLF handling currently specified in TS 38.331 (including e.g. detection and recovery). FFS on need of additional enhancements.**

⇒ **When NR DC is configured for the IAB-node, 2.1 RLF is detected separately for the MCG-link and for the SCG-link, and 2.2 existing UE procedures are used for MCG-link and SCG-link failure handling.**

⇒ **The following is agreed as working assumption: BH RLF recovery for DC case reuses UE's MCG and SCG failure recovery procedures specified in Rel-16.**

⇒ **For an IAB-node not configured with DC, it initiates RRC reestablishment when it receives downstream notification "Recovery Failure"**

⇒ **For DC case, the IAB-node considers the radio link is failed and uses RRC existing or Rel-16 Mechanism (e.g. MCG or SCG failure report, RRC reestablishment) if "Recovery Failure" notification is received from parent nodes on MCG-link or/and SCG-link.**

⇒ **R2 assumes that RLF notification "recovery failure" would be triggered when RRC reestablishment has failed. FFS whether this need to be specified**

⇒ **BAP layer is used to transmit BH RLF notification(s).**

⇒ **R2 assumes that Upstream BH RLF notification to Donor CU via current F1-AP signalling is supported.**

R2-1913087	Cell selection for IAB RLF recovery	Lenovo, Motorola Mobility	discussion	Rel-16	R2-1910547
R2-1912589	Discussion on IAB BH RLF handling	ZTE Corporation, Sanechips	discussion		
R2-1913803	Resolving open issues on BH RLF	LG Electronics France	discussion	NR_IAB-Core	
R2-1913460	BH link failure handling	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_IAB-Core
R2-1913655	Further discussion on Backhaul RLF handling	Kyocera	discussion		
R2-1912981	IAB backhaul RLF handling	NEC Telecom MODUS Ltd.	discussion		
R2-1913063	Backhaul RLF handling	ITRI	discussion	NR_IAB-Core	R2-1909960
R2-1913544	Backhaul RLF Notification and Recovery Procedure	Futurewei Technologies	discussion		R2-1911066

R2-1912126	Further Discussions on IAB BH RLF	CATT	discussion	Rel-16	NR_IAB-Core
R2-1912374	Backhaul RLF Recovery	Huawei, HiSilicon	discussion	Rel-16	NR_IAB-Core
R2-1912537	RLF reporting in dual connection of IAB	Samsung R&D Institute UK	discussion		
R2-1912710	Further discussion on Backhaul RLF handling	Intel	discussion	Rel-16	NR_IAB-Core
R2-1913088	RLF notification to downstream IAB node	Lenovo, Motorola Mobility	discussion	Rel-16	R2-1911231
R2-1913188	Backhaul link RLF Notification Types to Downstream Node(s)	Ericsson	discussion	Rel-16	NR_IAB-Core
R2-1913813	Upstream BH link RLF notification	Samsung	discussion	Rel-16	NR_IAB

6.1.5.2 Configuration

Including output of email discussion [107#52][NR IAB] Configuration (Ericsson)

Offline 31, discuss configuration offline, and treat the topic of configuration first thing on Thursday (QC)

R2-1914186 [RAN2#107bis Offline-031]: IAB - config of BAP and bearer mapping Qualcomm Inc (Rapporteur) discussion

RAN2 email discussion107#53 on BAP routing (R2-1913179) proposes:
Proposal 1: The BAP address of the next hop node to be used as the next hop identifier for the downstream

Offline-31 further proposes:
Proposal 2: The BAP address of the next hop node also to be used as the next hop identifier for the upstream

Proposal 3: Confirm that BAP address for a is configured via RRC.

Proposal 4: To configure the association between child IAB-node and NextHopID (i.e. BAP address of next hop), the CU includes the BAP address of the child IAB-node in the F1AP message (e.g. F1AP UE CONTEXT SETUP/MODIFICTION REQUEST message) for the child IAB-node MT.

Proposal 5: To configure the association between parent IAB-node and NextHopID (i.e. BAP address of next hop), the CU includes the BAP address of the parent IAB-node together with the cell group ID of the parent node in the RRCReconfiguration message.

Proposal 6: Upstream and downstream bearer mapping tables use either the BH RLC CH ID or the LCID for ingress and egress RLCchannelIDs.

Proposal 7: The BAP address of the prior-hop node is used as PriorHopID, i.e. the ingress link ID, in addition to the IngressRLCchannelID to uniquely identify the ingress RLC channel for upstream and downstream bearer mapping.

BH RLC CH ID vs. LCID for ingress/egress RLCchannelID:
7 companies are in favour of BH RLC CH ID, 2 of them are also okay with LCID
2 companies are in favour of LCID, 1 of them is also okay with BH RLC CH ID.
Some points were raised in favour of either identifier. It seems, however, that both can be accommodated.

Proposal 8: The BH RLC CH ID is used for ingress/egress RLCchannelID in the bearer mapping configuration.

RRC vs. F1AP for configuration of upstream routing & bearer mapping on intermediate node
6 companies are in favour of RRC
3 companies are in favour of F1AP.

Some companies claim that we had already agreed in RRC in: “BAP has a DU part configured by F1-AP and a MT part configured by RRC”

Proposal 9: (modified) RRC is used for configuration of upstream routing and bearer mapping of IAB nodes (intermediate nodes).

Option 1, 2, or 3 for mapping from upper layers to L2:
5 companies are in favour of option 1, i.e. 1-step, configured by RRC.
1 company is in favour of option 2. i.e. 2-step, configured by F1-AP.
2 companies are in favour of option 3, i.e. 1-step, configured by F1-AP
During this email discussion, RAN3 agree to pursue option 1 or option 3. RAN3 has agreed that the GTP FTEID (= GTP TEID + IP address) is used for the mapping of F1-U.

Proposal 10: RRC is used for configuration of mapping from upper layers to access IAB-node.

DISCUSSION
P3
- ZTE think the BAP address of the Donor may be configured by F1-AP, so this is applicable to IAB nodes.
- Chair think that BAP address handling internally in the donor can be handled by R3)

P6
- LG think that in any case LCH ID or BH Channel ID there is a one-to-one mapping.
- Huawei think LCID is currently not known by the CU it would be easier to use BH RLC channel id

P8
- LG wonders if BH RLC Channel ID is unique for BH link or per MAC entity. QC confirms yes and it is 1-to-1 mapped to LCID.
- Ericsson think that the LCH ID could have been used, and the IE in current F1 can be used.
- CATT wonders who configures what. QC think this is the next discussion.

P9
- QC explains that P9 was wrongly captured in the summary. It should be: P9: “RRC is used for configuration of upstream routing and bearer mapping of IAB nodes (intermediate nodes).”
- Chair: We consider this clarified P9
- Nokia wonders why we are choosing different protocols, Nokia would prefer that BAP is completely configured by F1-AP.
- Nokia think that it would be good if R3 is responsible for the detailed mapping between higher layers (=the transported layers, e.g. GTP/IP etc) and BAP.
- Huawei think that for an Access IAB node there is no F1 until there is a DU.
- QC think that BAP configuration is required to create the bearers for F1 CP so we need RRC configuration for this at least. Nokia think this is a very simple configuration and can be by RRC.
- Futurewei support Nokia.
- Intel also support P9. LG as well.
- Nokia objects to making this agreement now

⇒ **For BAP routing Next Hop ID, The BAP address of the next hop node to be used as the next hop identifier for the downstream**

⇒ **For BAP routing Next Hop ID, The BAP address of the next hop node also to be used as the next hop identifier for the upstream**

⇒ **Confirm that BAP address for a IAB node (e.g. to differentiate the data delivered to higher layer in BAP) is configured via RRC**

⇒ **To configure the association between child IAB-node and Next Hop ID, RAN2 assumes that the CU includes the BAP address of the child IAB-node in a F1AP configuration (e.g. F1AP UE CONTEXT SETUP/MODIFICTION REQUEST message) for the child IAB-node MT. Details up to R3.**

⇒ **To configure the association between parent IAB-node and Next Hop ID (i.e. BAP address of next hop), the CU includes the BAP address of the parent IAB-node together with the cell group ID of the parent node in the RRCReconfiguration message (details FFS).**

⇒ **Observation: Upstream and downstream bearer mapping tables can use either the BH RLC CH ID or the LCID (they are mapped 1-to-1 always) for BAP ingress and egress RLCchannelIDs.**

⇒ **The BH RLC CH ID is used for ingress / egress RLCchannelID in the BAP bearer mapping configuration.**

Chair: Nokia object to P9 and P10, so decision is postponed to next meeting. Running CRs can assume P9 and P10 are agreed.

R2-1913177 Running CR to TS 38.331 on IAB for NR NR_IAB-Core Late — Ericsson — draftCR — Rel-16 — 38.331 — 15.7.0

- Ericsson explains that the CR proposes to have a new IE for BH RLC channel config rather than reusing RLC bearer config IE, and this may be controversial.
- Ericsson think that if this is still not agreeable to companies it can be removed with an FFS note and the running CR after this meeting could also reuse the RLC bearer config IE.

⇒ **noted**

✉ **[107bis#04][IAB] Running CR 38331 (Ericsson)**
Intended outcome: Endorsed Running CR. Capture agreements of this meeting, include discussion from previous version.
Deadline: 1 week
=> Endorsed in R2-1914027

R2-1912375 BAP and RLC configurations — Huawei, HiSilicon — discussion — Rel-16 — NR_IAB-Core

R2-1913462 Routing and mapping configuration in IAB nodes — Nokia, Nokia Shanghai Bell — discussion — Rel-16 — NR_IAB-Core

R2-1914171 IAB routing and bearer mapping config — Qualcomm Incorporated (Rapporteur) — discussion

R2-1912590 Discussion on BH RLC channel configuration in IAB network — ZTE Corporation, Sanechips — discussion

R2-1912580 Discussion on BAP configuration in IAB — ZTE Corporation, Sanechips — discussion

6.1.5.3 Other

Initial access

R2-1913461 IAB initial access and IAB support indication — Nokia, Nokia Shanghai Bell — discussion — Rel-16 — NR_IAB-Core

Moved from 6.1.5.2

R2-1912376 Cell (re)Selection and Access Control and Connection Establishment — Huawei, HiSilicon — discussion — Rel-16 — NR_IAB-Core

R2-1912480 (De)Prioritizing the Access for IAB Setup — Samsung — discussion — NR_IAB-Core

R2-1912591 Discussion on IAB node connection setup — ZTE Corporation, Sanechips — discussion

R2-1913186 Access Identities and Access Categories for IAB Nodes — Ericsson — discussion — Rel-16 — NR_IAB-Core

R2-1913187 Allowing only IAB Nodes in a Standalone NR Deployment — Ericsson — discussion — Rel-16 — NR_IAB-Core

R2-1913350 IAB System information handling — Sony — discussion — Rel-16 — NR_IAB-Core — R2-1909897

R2-1913464 Admission control for IAB — Nokia, Nokia Shanghai Bell — discussion — Rel-16 — NR_IAB-Core — Late

R2-1913666 Access restrictions (barring) in IAB — Sharp — discussion — Rel-16 — R2-1910806

R2-1913801 Access control in IAB networks LG Electronics France discussion NR_IAB-Core

✉ **[107bis#40][IAB] SI Broadast, barring, Initial access, Connection setup (Ericsson)**
Intended outcome: Report to next meeting, agreeable proposals, Draft reply LS
Deadline: Next Meeting

L1 Aspects

R2-1913214 T_delta signalling for IAB timing Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IAB-Core

R2-1913178 Draft CR to 38.331 on IAB for enhancements to existing signaling for TDD pattern configuration Ericsson draftCR Rel-16 38.331 15.7.0 NR_IAB-Core

Moved here from 6.1.1

6.2 NR-based Access to Unlicensed Spectrum

(NR_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: RP-191575; Further prioritization guidance in RP-191581). Documents in this agenda item will be handled in a break out session.

Time budget: 3 TU

Tdoc Limitation: 12 tdocs

6.2.1 General

Including incoming LSs, rapporteur inputs, etc.
Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

R2-1912052 LS on RSSI definition (R4-1910573; contact: MediaTek) RAN4 LS in Rel-16 NR_unlic-Core To:RAN1 Cc:RAN2
=> Noted

R2-1912303 Running CR for NR-based Access to Unlicensed Spectrum Qualcomm Incorporated draftCR Rel-15 38.300 15.7.0 NR_unlic-Core
=> The CR is endorsed

R2-1913509 Running MAC CR for NR-U Ericsson discussion Rel-16 NR_unlic-Core
=> The CR is endorsed

R2-1913575 Running RRC CR for NR-based Access to Unlicensed Spectrum Qualcomm Incorporated draftCR Rel-15 38.331 15.7.0 B NR_unlic-Core Late
=> Moved to email discussion

R2-1913576 Running Idle/Inactive mode CR for NR-based Access to Unlicensed Spectrum Qualcomm Incorporated draftCR Rel-15 38.304 15.5.0 NR_unlic-Core Late
=> Moved to email discussion

✉ **[107bis#16][NR-U] Running CR for 38.331 (Qualcomm)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914001

✉ **[107bis#17][NR-U] Running CR for 38.321 (Ericsson)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914026

✉ **[107bis#18][NR-U] Running CR for 38.300 (Qualcomm)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914002

✉ **[107bis#19][NR-U] Running CR for 38.304 (Qualcomm)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914003

6.2.2 User plane

6.2.2.1 4-step RACH

Aspects of 4 step RACH procedure specific to unlicensed operation; including supporting extended RAR window, and LBT impact.

Extending RAR window and Contention resolution

R2-1912302	Remaining issues on 4-step RACH for NR-U => Noted	Qualcomm Incorporated	discussion	
R2-1912685	Further details of the RACH procedure for NR-U Rel-16 NR_unlic-Core R2-1910098 => Noted	Lenovo, Motorola Mobility	discussion	
R2-1913033	RAR format and contention resolution for NR-U	Huawei, HiSilicon	discussion	Rel-16
R2-1912423	Remaining Issues for Extending RAR Window Rel-16 NR_unlic-Core => Noted	Samsung Electronics Co., Ltd	discussion	
R2-1912866	Remaining issues related to random access procedure Rel-16 NR_unlic-Core => Noted	Intel Corporation	discussion	

Discussion on how to signal LSB SFN (DCI or in RAR)
- Vivo thinks that if we include in DCI we can't multiplex. ZTE explains that we only include 2bits. Intel thinks that we should first discuss whether we would multiplex several SFNs in the same PDUs. Intel understands that we don't multiplex.
- Nokia is not sure if we can use DCI for msgB. Qualcomm thinks that instead of changing the RAR format of both of them then we just use the same DCI.
- Oppo thinks that we should include in the payload per MAC RAR. Ericsson thinks that it is enough to have on SFN per PDU and we can multiplex several UEs in the same message 2. Qualcomm thinks that have more than one SFN is an optimization and for UEs this is more complex.
- LG also prefers to include in the DCI, otherwise it is complicated for the UE to know if it is targeted for the UE. Also we don't need to multiplex.
- Huawei thinks that even with DCI we can multiplex.
- ZTE explains that we have to include LBT type so the UE has to decode anyways.
- Lenovo sees some benefits to put it in DCI.
- LG explains that the UE is not required to read SFN for HO and now we are requiring the UE to read to SFN. Nokia explains that you can get the LSBs from other signals and we can get up to 4bits of LSB.

How many bits
- Huawei thinks that we should allow flexibility.

Discussion on whether RAR transmission on an SCell should be allowed
- Ericsson would like both preamble and RAR to be allowed. Oppo would like to prevent sending preamble and RAR on different cells.
- Huawei supports sending RAR on SCells but not preamble.

- Nokia doesn't supports this as we don't have common search space on SCell. LG agrees with Nokia.
- Samsung explains that for SCell we only support CFRA and this is an optimization. ZTE thinks that we should allow as otherwise we would need to change the RAR for licensed carrier. Nokia thinks that we haven't agreed whether we will change RAR or not.

=> This will not be supported for Rel-16

Discussion on when do we start ra-ContentionResolutionTimer is started
Option1: regardless of the LBT outcome of msg3 transmission
Option 2: upon successful transmission of msg3

- Qualcomm thinks we should start regardless. Ericsson, Samsung, Intel, ZTE, Vivo and LG agrees. If we got back to msg1 we have to redo msg1.
- Lenovo thinks that it is more beneficial to go back to preamble transmission rather than waiting for contention resolution time to expire. Nokia agrees and it is better for the UE to start over. Oppo thinks that waiting will cause large delays as the UE may never get msg3 retx. Mediatek agrees with Nokia and this will guarantee that there is no hanging. The network doesn't have to differentiate between missing tx or LBT failure.
- Nokia is concerned as everyone is assuming that the network will send a retx but most likely the network will not.

R2-1914053 LS to RAN1 on RACH for NR-U Qualcomm

- Nokia and Ericsson and Vivo think that we shouldn't limit to unlicensed agreed

=> Update last sentence "RAN2 respectfully asks RAN1 to provide feedback on the inclusion of 2 LSBs of SFN in DCI used for scheduling of msg2 in 4-step RACH and msgB in 2-step RACH <u>on the unlicensed carrier</u>

=> The LS is approved in R2-1914064 with the change above

Agreements:
- From RAN2 point of view it is beneficial to include LSB of SFN in the DCI. The same design is desirable to be used for 2-step RACH. Write LS to RAN1 to ask if there is any feasibility issues.
- For NR-U, 2 bits are enough for a maximum of 40ms response windows.
- Multiplexing of responses for more than one SFN is not allowed.
- ra-ContentionResolutionTimer is started regardless of the LBT outcome of msg3 transmission

RAR transmission on SCell

R2-1913505 RACH enhancements for NR-U Ericsson discussion Rel-16 NR_unlic-Core

=> Not treated

Increasing msg1/msg3 opportunities

R2-1913215 Increasing Tx opportunities for Msg1 Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core

Proposal 1: Support configuration of multiple PRACH resources in frequency domain spread across multiple 20MHz sub-bands.

- Huawei thinks that this is already supported. Ericsson thinks that we should have this and be able to configure them.
- Qualcomm explains that RAN1 has deprioritized this. LG thinks that this is RAN2 configuration and we can agree and RAN1 can determine the detail.
- Samsung asks that if we allow the configure how does the UE select. Qualcomm would like to avoid the UE performing LBT on multiple sub-bands. ZTE explains that there is no point for this feature if we don't allow multiple LBT.
- Panasonic thinks that this can be used for the case of UL LBT failure. Nokia thinks that the UE should be able to do LBT.

=> Noted

R2-1912176 Remaining Issues on RACH Procedure in NR-U vivo discussion
=> Noted

R2-1912098 Remaining issues on extending RA response window in NR-U OPPO discussion Late
- Nokia, QC, Vivo think that RAN1 is discussing this
=> Noted

Not treated

R2-1912425 Signaling Multiple UL grants for Msg3 Transmission in NR-U Samsung Electronics Co., Ltd discussion Rel-16 NR_unlic-Core
R2-1913507 Channel access for Msg3 Ericsson discussion Rel-16 NR_unlic-Core
R2-1912097 Issues on contention resolution timer in NR-U OPPO discussion
R2-1912099 [Draft] LS on supporting LBT type in RAR OPPO LS out To:RAN1
R2-1912424 Contention Resolution Timer Handling in NR-U Samsung Electronics Co., Ltd discussion Rel-16 NR_unlic-Core
R2-1912426 Draft RRC CR_Supporting RAR Window Size larger than 10ms in NR-U Samsung Electronics Co., Ltd draftCR Rel-16 38.331 15.7.0 NR_unlic-Core
R2-1912427 Random Access Resource Selection in NR-U Samsung Electronics Co., Ltd discussion Rel-16 NR_unlic-Core
R2-1912888 Random access in NR-U InterDigital discussion Rel-16 NR_unlic-Core
R2-1912936 BWP and sub-band switching for NR-U in RACH CMCC discussion Rel-16 R2-1909436
R2-1912938 Consideration on further CP enhancements for NR-U CMCC discussion Rel-16 Revised
R2-1913034 PRACH and msg3 for NR-U Huawei, HiSilicon discussion Rel-16
R2-1913062 Msg1 transmission opportunities ITRI discussion NR_unlic-Core R2-1909955
R2-1913129 Additional opportunity for Msg1 in 4-step RACH LG Electronics Inc. discussion NR_unlic-Core R2-1911198
R2-1913216 Msg2 format and contention resolution based on LBT outcome of Msg3 Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
R2-1913261 RAR design for NR-U MediaTek Inc. discussion Rel-16 NR_unlic-Core
R2-1913263 MAC behaviour for LBT failures in Msg3 transmissions MediaTek Inc. discussion Rel-16 NR_unlic-Core R2-1910078
R2-1913371 RAR MAC PDU design for NR-U ZTE Corporation, Sanechips discussion Rel-16
R2-1913372 Multiple Msg1 transmission opportunities for NR-U ZTE Corporation, Sanechips discussion Rel-16
R2-1913854 Discussion on contention resolution timer in NR-U LG Electronics Polska discussion Rel-16 NR_unlic-Core R2-1910981
R2-1912227 NR-U RACH enhancements SHARP discussion Rel-16
=> moved from 6.2.3

6.2.2.2 Handling UL LBT failures

Including detection, recovery, and reporting a consistent UL LBT failure

R2-1913287 Remaining issues on UL LBT Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
=> Noted
R2-1912889 Handling UL LBT Failures in MAC InterDigital discussion Rel-16 NR_unlic-Core
=> Noted
R2-1912304 Details of the Uplink LBT failure mechanism Qualcomm Incorporated discussion
=> Noted

1.
Discussions

Whether the UE needs to be aware of the LBT success and whether the counter/timers are reset.
- Qualcomm thinks that the reason we chose BFD is so we don't need to indicate success. Lenovo thinks that the MAC should not be made aware. Oppo thinks that we need to indicate otherwise the MAC doesn't know. Nokia thinks that one success doesn't mean that there is no LBT failure. Google thinks that it is important to know when the channel is good. ZTE agrees with Qualcomm that the whole point of using BFD is to not be told of success. Ericsson thinks that the MAC needs to know. Huawei thinks the timer is helpful.

New timer to prevent counting too close failure
- Qualcomm thinks we should count all of them. Google thinks that we should count all of them. Oppo supports having a timer. Panasonic thinks that we can resolve it with the BFD timer. Nokia explains that the timer doesn't help as it won't prevent too close triggers. Charter supports having. LG thinks that we should discuss resolving this problem. InterDigital explains that because we agreed to count all signals we can't rely on just allowing the threshold.

Discussion whether the UE declares RLF or the UE switches to another BWP upon declaration of LBT failure if there is another BWP with different sub-band(s) and configured RACH resources.
- LG doesn't think that BWP is appropriate and the UE should immediately declare RLF on PCell. Huawei support BWP switching instead of declaring RLF.
- Google thinks that for PCell switching is better. InterDigital doesn't think RLF is a good option if we have another BWP.
- Ericsson also would like to trying switching

When the UE stops trying to switch
Once all configured BWPs are exhausted, the UE shall trigger RRC re-establishment procedure if the consistent UL LBT failure was detected on the PCell
- Nokia thinks that we can have it can be network configurable. Mediate thinks that in a way it is network configured.

How to we report SCell failures
MAC CE or RRC
- Nokia thinks that the network should also know why the UE switch BWP using the MAC CE.

Agreements:
1. MAC relies on reception of a notification of UL LBT failure from the physical layer to detect a consistent UL LBT failure.
2. The UE switches to another BWP and initiates RACH upon declaration of consistent LBT failure on PCell *or PSCell* if there is another BWP with configured RACH resources.
3. The UE shall perform RLF recovery if the consistent UL LBT failure was detected on the PCell and UL LBT failure was detected on "N" possible BWP. "
4. When consistent uplink LBT failures are detected on the PSCell, the UE informs MN via the SCG failure information procedure after detecting a consistent UL LBT failure on "N" BWPs.
5. "N" is the number of configured BWPs with configured PRACH resources. If N is larger than one it is up to the UE implementation which BWP the UE selects.
6. When consistent uplink LBT failures are detected on an SCell, a new MAC CE to report this to the node where SCell belongs to is used. FFS whether the MAC CE can be used to report failure on PCell

R2-1914054 Summary of discussion on UL LBT InterDigital
- Ericsson thinks we should use RRC and minimize spec impacts

=> Noted

Not treated

R2-1912095 Remaining issues on detecting uplink LBT failure for NR-U OPPO discussion
R2-1912096 Uplink LBT failure revoery for NR-U OPPO discussion
R2-1912177 Remaining Issues on Uplink LBT Failure vivo discussion

R2-1912178 Issue on the Autonomous BWP Switching in NR-U vivo discussion
R2-1912243 LBT Failures Handling in Non-Connected State Spreadtrum Communications, Huawei, HiSilicon discussion
R2-1912244 Inconsecutive UL LBT Failures Handling Spreadtrum Communications discussion
R2-1912474 Recovery of consistent UL LBT failures Samsung discussion Rel-16 NR_unlic-Core
R2-1912569 Handling UL LBT Failures in NR-UPANASONIC R&D Center Germany discussion
R2-1912625 Detecting and Handling of UL LBT failures Intel Corporation discussion Rel-16 NR_unlic-Core
R2-1912684 Impact of systematic LBT failure on UL transmission procedure Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core R2-1910099
R2-1912937 Further consideration on consistent LBT failures CMCC discussion Rel-16
R2-1913029 UL LBT failure handling Huawei, HiSilicon discussion Rel-16
R2-1913064 Handling of consistent UL LBT failures during HO ITRI discussion NR_unlic-Core
R2-1913130 Problems in BFD-inspired detection mechanism for consistent UL LBT failures LG Electronics Inc. discussion NR_unlic-Core
R2-1913162 UE behavior upon consistenB2:AE10t UL LBT failures Fujitsu discussion Rel-16 NR_unlic-Core Withdrawn
R2-1913260 On consistent LBT failures MediaTek Inc. discussion Rel-16 NR_unlic-Core
R2-1913293 UE behavior upon consisten UL LBT failures Fujitsu discussion Rel-16 NR_unlic-Core Withdrawn
R2-1913294 UE behavior upon consistent UL LBT failures Fujitsu discussion Rel-16 NR_unlic-Core
R2-1913375 Recovery from consistent LBT failures ZTE Corporation, Sanechips discussion Rel-16
R2-1913479 Consistent LBT failure detection Google Inc. discussion Rel-16
R2-1913504 Handling LBT failures Ericsson discussion Rel-16 NR_unlic-Core
R2-1913649 Remaining Issues on Persistent LBT Failures in NRU Charter Communications, Inc discussion
R2-1913913 Further considerations on handling UL LBT failures ETRI discussion Rel-16 NR_unlic-Core
R2-1912988 Consecutive failed connection attempts in NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
=> moved from 6.2.2.5

6.2.2.3 2-step RACH

Aspects of 2 step RACH procedure specific to unlicensed operation, e.g. considering LBT impact. Generic discussion of 2 step RACH will take place under the 2 step RACH WI.

Not treated

R2-1912100 2-step RACH for NR-U OPPO discussion
R2-1913508 2-step Random Access for NR-U Ericsson discussion Rel-16 NR_unlic-Core
R2-1913574 NR-U specific aspects for 2-step RACH Qualcomm Incorporated discussion

R2-1912179 LBT Impacts on 2-step RACH vivo discussion R2-1908692
R2-1913035 Enhancement on 2-step RACH for NR-U Huawei, HiSilicon discussion Rel-16

6.2.2.4 DRX

Including impact of non-numeric K1 value on DRX, active time extension, impact on DRX cycle etc.

Impact of non-numeric

R2-1913288 Non-numeric K1 impacts Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
=> Noted

R2-1913031 Discussion on DRX for NR-U Huawei, HiSilicon discussion Rel-16
Proposal 5: Send an LS to RAN1 asking whether the non-numeric K1 can be applicable for DL SPS.
Proposal 6: drx-RetransmissionTimerUL should be stopped when a HARQ feedback is received for corresponding HARQ process with configured grant transmission.
- Ericsson agrees. Nokia, LG, and Lenovo don't think this is needed and gNB can schedule dynamic grant.

=> Noted

Discussion on when the drx-RetransmissionTimerDL is started or if we have new timers
- Oppo thinks after the PDSCH scheduled by non-numerical K1. Huawei thinks that we should introduce a new timer and we shouldn't reuse the existing timers. Mediatek thinks that we anyways need to extend the timers so nothing needs to be done.
- Qualcomm thinks that the UE should continue monitoring PDCCH until it gets the DCI after non-numeric K1. ZTE thinks that the only requirement is that the UE has to monitor the DL and gNB needs to know when the UE is monitoring. Qualcomm explains that the issue is LBT so it can't guarantee anything.
- Lenovo thinks that it is just a modelling issue and Nokia's approach works and starting a new timer would introduce new cases.
- Lenovo thinks that we can also specify like we do for SR, that the UE has to stay awake to get the triggered DCI.

R2-1913556 Impact of ACK/NACK transmission to NR-U DRX Qualcomm Incorporated discussion
=> Noted

Agreements
1. The drx-RetransmissionTimerDL is started after the PDSCH scheduled by non-numerical K1
2. UE starts the drx-HARQ-RTT-TimerDL after the HARQ A/N transmission opportunity irrespective of the LBT outcome

Not treated

R2-1912101 Remaining DRX issues for non-numerical K1 and HARQ feedback OPPO discussion

R2-1912891 Impact of non-numeric K1 value on DRX Timers InterDigital discussion Rel-16 NR_unlic-Core

R2-1913558 Impact of non-Numeric K1 Value to NR-U DRX Qualcomm Incorporated discussion

Others

R2-1912102 DRX procedure enhancements due to LBT impacts OPPO discussion

R2-1912396 DRX enhancement for NR-U Xiaomi Communications discussion Rel-16 R2-1905731

R2-1913561 DRX Active Time for NR-U Qualcomm Incorporated discussion

R2-1913503 DRX enhancement for NR-U Ericsson discussion Rel-16 NR_unlic-Core

6.2.2.5 Configured grant operation

Including HARQ aspects, configuration aspects, multiple active configured grants, and conflicts between dynamic and configured grants (NR-U specific).

R2-1912626 Further consideration on configured UL grant enhancement Intel Corporation discussion Rel-16 NR_unlic-Core

Proposal#1 : When configuredGrantTimer expires, the UE should stop the CGretransmission timer (CGRT) if it is still running and stop the CG retransmission by flushing the HARQ buffer of the corresponding HARQ process.

- LG asks why the UE has to stop the HARQ buffer. Nokia agrees that we don't need to flush the buffer.

Proposal#2: To solve the collision case in Scenario 1 (A configured grant used for new transmission of HARQ process #N is not received by the gNB due to collision over shared resources and the gNB subsequently uses the same HARQ process for new transmission via scheduled grant using C-RNTI):

- *the UE should ignore the UL grant addressed to PDCCH C-RNTI for the HARQ process regardless of the TBS size when the HARQ process for configured grant has not been ACK*

- LG thinks that the dynamic grant should be prioritized. Nokia agrees and the UE should just follow. Ericsson proposes to have a timer on the configured grant.
- Qualcomm thinks that the real question is what do we do if the grant comes at the CG time or a little later. Do we define a timer or do we leave up to the UE?
- Mediatek doesn't think we need to solve this issue and can be solve by the network. Huawei also thinks that the UE should also follow the dynamic grant.

=> Noted

R2-1912301 Remaining Aspects of Configured Grant Transmission for NR-U Qualcomm Incorporated discussion

Proposal 1: HARQ process id selection is based on UE implementation like AUL

- Ericsson thinks that this should be for new transmissions and not retx. Nokia thinks that the UE should prioritize the retransmission. Ericsson thinks that we need to further prioritize older retx.

=> Noted

Agreements

1. When configuredGrantTimer expires, the UE should stop the CGretransmission timer (CGRT) if it is still running.
2. Upon receiving CG activation command, stop the CG retransmission timer for HARQ processes configured for the CG
3. No special handling for HARQ process sharing between configured grant and dynamic grants (i.e. follow licensed specifications)
4. HARQ process id selection is based on UE implementation. Ongoing retransmissions on HARQ processes should be prioritized.

R2-1913852 Discussion on multiple active CGs for NR-U LG Electronics Polska discussion Rel-16 NR_unlic-Core

Proposal 1. Multiple active CG configurations should be introduced for NR-U.

Proposal 2. The basic framework of multiple active CG configurations in IIoT can be considered a baseline for NR-U.

- Ericsson supports both of this but it comes for free. Interdigital agrees and proposal 1 is enough.
- Nokia thinks that the HARQ process operation is quite different for licensed and unlicensed. Lenovo explains that there are some differences.
- Oppo asks what is the main motivation, is it to increase transmission opportunities in frequency domain. Qualcomm explains it is for time domain like licensed.

=> Noted

Agreements

1. Multiple active CG configurations should be allowed for NR-U. Details are FFS

R2-1913501 Discussions on configured grant in NR-U Ericsson discussion Rel-16 NR_unlic-Core

Discussion on terminology

- Ericsson is concerned that when we write the CR the terminology gets too long. Oppo thinks that we can reuse the CGretransmission time to differentiate.

=> Noted

No treated

R2-1913373 Discussion on configured grant for NR-U ZTE Corporation, Sanechips discussion Rel-16

R2-1912103 Remaining issues on NR-U configured grant OPPO discussion

R2-1912180 Remaining Issues on Configured Grant in NR-U vivo discussion

R2-1912661 Handling of pending TB for CG transmission Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core

R2-1913030 Configured grant for NR-U Huawei, HiSilicon discussion Rel-16

R2-1913163 On PDU overwritten in NR-U configured grant Fujitsu discussion Rel-16 NR_unlic-Core

R2-1913289 Multiple configured grants for NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core

R2-1913858 Discussion on MAC PDU overwritten issue LG Electronics Polska discussion Rel-16 NR_unlic-Core

6.2.2.6 CAPC

Including CAPC selection, impact on TB construction etc.

R2-1912890 CAPC selection for Configured grant transmission in NR-U InterDigital discussion Rel-16 NR_unlic-Core R2-1909605
=> Noted

R2-1913290 CAPC for configured grant and dynamic grant Nokia, Nokia Shanghai Bell, Lenovo discussion Rel-16 NR_unlic-Core
=> Noted

R2-1913562 CAPC and uplink transmission Qualcomm Incorporated discussion
=> Noted

Discussion on whether to introduce LCP restrictions for CAPC

- Google thinks that there is a requirement to do this for SRBs and in LAA we didn't mix up CAPC and LCP. InterDigital explains that for LAA we would have to SRBs on the licensed carriers and for NR-U we have standalone and no way to restrict. Nokia agrees. Ericsson thinks we can leave it up to gNB implementation. Lenovo is not sure that the gNB can be handled and supports this restrictions.
- Vivo also agrees and asks how the gNB can control what data can be put in multiple CG. Intel doesn't support the restriction and we would waste resources with padding
- Nokia thinks that at least we can do something for SRBs. Google thinks that we should do it for SRBs. Lenovo explains that we introduced restrictions in Rel-15 and this is another.
- Samsung proposes to not modify LCP but just change the rule for CAPC for SRB case.

=> Aim to introduce a mechanism for SRBs for CG. Try to find an easy way to capture this in the specs if possible.
=> For the determination of CAPC for a DRB, selection of the CAPC should be determined by gNB. Write in the spec that gNB should try to guarantee fairness in stage 2.

Not treated

R2-1912455 CAPC for RACH and PUCCH in NR-U Mediatek India Technology Pvt. discussion Rel-16 38.321 R2-1908849

R2-1912181 CAPC Restriction to Data Multiplexing for Configured Grant vivo discussion R2-1908697

R2-1912475 Remaining issues on CAPC Samsung discussion Rel-16 NR_unlic-Core

R2-1912484 CAPC Assignments for SRBs in NR-U Mediatek India Technology Pvt. draftCR Rel-15 38.331 15.7.0 FS_NR_newRAT, NR_newRAT R2-1908854

R2-1912627 Channel Access Priority selection & multiplexing for Configured Grant Intel Corporation discussion Rel-16 NR_unlic-Core

R2-1913476 Discussion on multiplexing of data Huawei, HiSilicon discussion NR_unlic-Core

R2-1913480 CAPC for configured grants in NR-U Google Inc. discussion Rel-16 NR_unlic-Core R2-1910689

R2-1913502 Further discussions on channel access priority Ericsson discussion Rel-16 NR_unlic-Core

R2-1912457 On Restrictions in Multiplexing of High and Low Priority LCH in NR-U Mediatek India Technology Pvt. discussion Rel-16 38.321 R2-1908851
=> Moved from 6.2.2.5

6.2.2.7 Other

Includes wideband operation aspects, HARQ, SR and PHR

SPS

R2-1912182 Introducing More Transmission Opportunities for DL SPS in NR-U vivo discussion R2-1909207
Proposal: The slot aggregation can be configured for the DL SPS in NR-U to increase the transmission opportunities.
- Qualcomm asks if this is RAN1. Ericsson thinks this is free.

=> confirm nothing new needs to be done

SR

R2-1912398 Consideration on SR transmission Xiaomi Communicationsdiscussion Rel-16 R2-1909215
=> Not treated

PHR

R2-1912183 On NR-U PHR Handling vivo discussion
Proposal 1: When a LBT success for a PUSCH carrying PHR MAC CE is received, MAC entity starts/restarts of phr-PeriodicTimer / phr-ProhibitTimer and cancels the triggered PHRs.
- Ericsson thinks this is unnecessary optimization. Huawei supports the proposal. Vivo thinks that if the UE starts prohibit timer PHR transmission will be delayed.
- Qualcomm explains that this was not done for LAA and PHR is not time critical anyways.

Proposal 2: The MAC entity can generate PHR MAC CEs respectively for multiple MAC PDUs before a LBT success is received for a PUSCH carrying PHR.
- Ericsson and Qualcomm think that this complicates the implementations

=> Noted

R2-1912663 Impact of LBT on power headroom reporting functionality Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core R2-1910090
- Mediatek thinks that impact of option 2 is that the UE provides reduced information and option 1 is better.
- Lenovo explains that if we do nothing it will not work according to RAN1 specs. Nokia thinks that if we do something, we should do option 2.
- LG thinks that this is a RAN1 issue. Lenovo explains that the MAC CE itself doesn't indicate whether it is type 1 or type 3.

=> Noted

=> RAN2 acknowledges that with current framework the gNB will not be aware whether the UE transmitted type 1 or type 3. FFS if and how we address it

R2-1914066 LS to RAN1 to identify the problem Lenovo
=> Update second paragraph: "RAN2 discussed several options on how to solve the identified problem, e.g. reporting a predefined existing PHR-type (e.g. PHR type 1 or type 3) for cases when the PHR MAC CE is transmitted on a configured grant on an unlicensed cell, but did not conclude on any solution.

=> Update action: RAN2 respectfully asks RAN1 to discuss this problem and determine whether a solution is needed
=> The LS is approved in R2-1914068 with the change above.

Not treated

R2-1913262 On PHR and autonomous retransmissions MediaTek Inc. discussion Rel-16 NR_unlic-Core R2-1910079

Multi-TTI

R2-1912662 LBT impact to Multi-TTI scheduling Lenovo, Motorola Mobility discussion Rel-16 NR_unlic-Core

R2-1913555 MAC Scheduling Aspects of Multi-TTI Grant Qualcomm Incorporated discussion

R2-1913032 Impacts of Cross-COT HARQ feedback to BWP and SCell Huawei, HiSilicon discussion Rel-16

R2-1912104 Discussion RAN1 LS on supporting multiple frequency domain monitoring locations for a searchspace OPPO discussion

R2-1913878 MAC impacts of multiple CCAs in wide band operation LG Electronics Polska discussion Rel-16 NR_unlic-Core R2-1909829

R2-1913506 RAN2 impact of supporting wideband operation Ericsson discussion Rel-16 NR_unlic-Core

R2-1913500 Improved transmission mechanism for PUCCH-UCI Ericsson discussion Rel-16 NR_unlic-Core

R2-1913878 MAC impacts of multiple CCAs in wide band operation LG Electronics Polska discussion Rel-16 NR_unlic-Core R2-1909829

R2-1913506 RAN2 impact of supporting wideband operation Ericsson discussion Rel-16 NR_unlic-Core

R2-1912840 Split Threshold for DC and NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core R2-1906041

R2-1913131 Dynamic DL opportunity enhancement based on channel busy level in NR-U LG Electronics Inc. discussion NR_unlic-Core R2-1909830

6.2.3 Control plane

6.2.3.1 Paging

Including configuration of additional PDCCH monitoring occasions for paging and termination of monitoring

R2-1912987 Paging in NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core
=> moved from 6.2.2.2
=> Noted

R2-1913559 Paging monitoring in NR-U Qualcomm Incorporated discussion
=> Noted

Agreements
=> Wait for RAN1 to understand whether we can use existing channels to determine when the UE should stop monitoring.
=> A UE receives paging messages only in initial BWP or in its active BWP as in NR.

Not treated

R2-1913651 Paging Monitoring in NR-U Charter Communications, Inc discussion Rel-16

R2-1912644 Extended PO and early termination for page monitoring Ericsson discussion NR_unlic-Core

R2-1912428 Draft RRC CR for supporting Additional Opportunities for paging in NR-U Samsung Electronics Co., Ltd draftCR Rel-16 38.331 15.7.0 NR_unlic-Core

R2-1912887 Paging procedure in NR-U InterDigital discussion Rel-16 NR_unlic-Core R2-1909602

R2-1912965 Consideration on further CP enhancements for NR-U CMCC discussion Rel-16 R2-1912938

R2-1913061 Paging opportunities overlapping for the NR-U ITRI discussion NR_unlic-Core R2-1909957

R2-1913474 Paging for NR-U Huawei, HiSilicon discussion NR_unlic-Core

6.2.3.2 Mobility

Including camping and cell (re)-selection. Focus should be on idle and inactive mode mobility. For connected mode mobility solutions to be covered by the NR Mobility Enh WI are not to be discussed.

R2-1912645 Cell (re)selection for NR-U Ericsson discussion NR_unlic-Core
=> Revised in R2-1913968

R2-1913968 Cell (re)selection for NR-U Ericsson discussion NR_unlic-Core
Proposal 2 N is the minimum of the detected cells on the current frequency and the value N min which is configured in SIB3 or SIB4 for that frequency, respectively, and is an INTEGER(2..9), i.e. requires 3 bits.
- Nokia thinks we should just fix the number to something simple. Qualcomm thinks that this is a deployment scenario and fixing is dangerous.

Proposal 3 For RRC re-establishment, the gNB should control whether the UE is allowed to deprioritize a carrier frequency due to LBT issues.
- LG, ZTE, and vivo support this proposal. QC thinks the UE has to do cell selection anyways and it is up to the UE implementation. Intel doesn't support this as the UE will select the cell based on other criteria.
- Nokia and Huawei don't think this is critical

=> Noted

R2-1912429 Handling MIB_SIB1 Acquisition Failure Samsung Electronics Co., Ltd discussion Rel-16 NR_unlic-Core
If the UE in RRC_IDLE or in RRC_INACTIVE or in RRC_CONENCTED while T311 is running fails to acquire MIB or SIB 1 from a cell in unlicensed band, UE shall only consider this cell as barred. UE excludes this cell as a candidate for cell selection/reselection for 300 seconds
- Nokia thinks that the other cells in the same frequency may suffer from the same problem. But the issue may be that the UE may not read SIB1.

=> Come back to this next meeting
=> Noted

R2-1913478 Further discussion on PLMN selection for NR-U Huawei, HiSilicon discussion NR_unlic-Core
=> Noted

Agreements on cell reselection
1. The UE may consider the current NR-U frequency to be the lowest priority frequency for reselection for 300 seconds after at least < the N strongest cells > on that frequency were found not suitable due to belonging to a PLMN which is not indicated as being equivalent to the registered PLMN. N is UE implementation and the UE should check at least 2 if there is more than one.
2. If a cell is barred in NR-U, due to the registered PLMN or selected PLMN does not match one of the PLMN IDs in SIB1, "IntraFreqReselection" shall be always interpreted as "allowed". The same applies if SIB1 is not decoded.

R2-1913659 Recovery due to LBT failures Kyocera discussion
=> Noted

R2-1912532 introduction of channel occupancy and RSSI for NR-U CHO Samsung R&D Institute UK discussion
=> Not treated

Discussion: RAN2 should agree to support the configuration of channel occupancy and RSSI as one of the triggering conditions for conditional handover to support NR-U SA

- Nokia indicates that we agreed to not use RSSI for normal handover so it is a little strange to use it for CHO. QC and Intel agrees with Nokia.
- Ericsson explains that we didn't agree to RSSI for idle mode and not for connected mode. Qualcomm indicates that we agreed to use the existing LAA, no new event triggers but we will include RSSI CO measurements in the existing measurement reports (like LAA)

Agreements
=> For normal HO and CHO, no new event triggers will be introduced. RRSI CO measurements can be included in the measurement reports.

Not treated

R2-1912184 Further Discussion on the Whitelist in NR-U vivo discussion

R2-1912239 Mobility Consideration in NR-U Spreadtrum Communications discussion R2-1909082

R2-1912471 Considering top N cells for PLMN Selection Samsung discussion NR_unlic-Core

R2-1912481 Including RSSI and Channel Occupancy in Connected Mode Measurements Mediatek India Technology Pvt. draftCR Rel-15 38.331 15.7.0 FS_NR_newRAT, NR_newRAT R2-1908852

R2-1912512 Including RSSI and Channel Occupancy in NR-U UE Capabilities Mediatek India Technology Pvt. draftCR Rel-16 38.306 15.7.0 FS_NR_newRAT, NR_newRAT R2-1908855

R2-1912658 Discussion on PLMN and Cell selection and reselection enhancements for NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core

R2-1912865 Remaining FFSs on enabling the UE to camp on non-best cell Intel Corporation discussion Rel-16 NR_unlic-Core

R2-1913374 Considerations on camping on non-best cell ZTE Corporation, Sanechips discussion Rel-16

R2-1913560 Remaining FFS on cell reselection for NR-U Qualcomm Incorporated discussion

R2-1913750 Cell (re)selection after consecutive UL LBT failures LG Electronics Inc discussion Rel-16 NR_unlic-Core

R2-1913751 Remaining issues on camping on non-best cell LG Electronics Inc discussion Rel-16 NR_unlic-Core

6.2.3.3 RRM

Note RP-191581: RRM Measurements beyond currently agreed ones have lower priority.

R2-1912646 RRM in NR-U Ericsson discussion NR_unlic-Core
=> Noted

Agreements:
1 No additional mechanisms are introduced to help the UE find and identify NR-U target cells. The existing/agreed whitelist/blacklist configuration and CGI reports are considered sufficien.
2 No additional mechanisms are introduced to address PCI collisions in Rel-16

R2-1912660 On UL transmissions during SMTC in NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core R2-1909318
=> Noted

Not treated

R2-1912649 RRM Measurements for Mobility in NR-U Fraunhofer HHI, Fraunhofer IIS discussion R2-1910540

R2-1913753 RSSI and channel occupancy measurements for serving frequency LG Electronics Inc discussion Rel-16 NR_unlic-Core R2-1911403

6.2.3.4 RLM/RLF

Not treated

R2-1912105 RLM enhancements OPPO discussion

R2-1912472 RLM for NR-U Samsung discussion NR_unlic-Core

R2-1912659 RLM/RLF measurement on NR-U Nokia, Nokia Shanghai Bell discussion Rel-16 NR_unlic-Core R2-1909317

R2-1912892 RLM and RLF for NR-U InterDigital discussion Rel-16 NR_unlic-Core R2-1909606

R2-1913132 Measurement enhancement for channel occupancy LG Electronics Inc. discussion NR_unlic-Core R2-1911199

R2-1913477 Discussion on DL LBT failure impact on RLF triggering Huawei, HiSilicon discussion NR_unlic-Core

R2-1913752 RLMRLF in NR-U LG Electronics Inc discussion Rel-16 NR_unlic-Core R2-1911407

6.2.3.5 Other

Other control plane stage-3 aspects including system information. Note RP-191581: Enhancements for System Information has lower priority

R2-1912677 The issue of putting all SIBs in one SI message PANASONIC R&D Center Germany, MediaTek Inc., vivo, Charter Communications, OPPO discussion R2-1909236

Proposal 1: RAN2 reopen the discussion on the possible SI enhancements for NR-U, instead of relying on the assumption that all SIBs are to be transmitted together in one SI message

- Nokia indicates that we have discussed this. Qualcomm explains that this was if we could put everything in one SI. Google has some sympathy on this proposal as we should be future proof. Mediatek thinks it is impossible to fit. Ericsson thinks that this makes it complicated. Oppo and companies have shown that it is not possible to fit everything. ZTE thinks that for NR-U we have small cells and we don't have to put everything. Huawei also doesn't think this is critical and SIB1 to 5 are quite similar can use the same periodicity.
- Panasonic explains that it is not related to the size of the cell but rather the number of frequencies.

=> RAN2 will not reopen the discussion
=> Noted

R2-1912185 Enhancements of System Information in NR-U vivo discussion R2-1908695
=> Noted

R2-1912305 Broadcasting of System Information in NR-U Qualcomm Incorporated discussion

Proposal 4: For msg1 based SI request, a more optimal way to request SI messages, considering the LBT impact for RACH and SI, should be discussed. As a minimum, it should be possible to configure both separate preamble and common preamble options together.

- ZTE thinks that we also have msg3based SI request. Samsung explains that we anyways would have 1 or two SIs.

=> Noted

R2-1913652 On NR-U Operation in DFS Channels Charter Communications, Inc discussion Rel-16
=> Revised in R2-1914063

R2-1914063 On NR-U Operation in DFS Channels Charter Communications, Inc discussion Rel-16

Proposal 1: RAN2 to consider development of a mechanism so that a gNB, deployed in standalone NR-U mode, is equipped to perform effectively the regulatory requirement such as DFS in the event of detection of incumbent technologies protected by regulators.

- Nokia thinks that the gNB implementation can handle this. ZTE has some sympathy for the problem but the real question is what are the timing requirements. The problem with idle don't exist as the MIB and SIBs won't be broadcasted.
- Huawei asks how often this problem would happen. Charter explains that this is regulatory requirement. Qualcomm agrees it is a problem but if we have 200ms then the gNB should be able to solve it. The solution where the gNB broadcasts something has security issues.
- Ericsson also thinks that it is solvable
- Samsung explains that this was discussed in LAA and it was captured in the TR

=> Noted

Not treated

R2-1912106 System information enhancements for NR-U OPPO discussion

R2-1913475 SI enhancement for NR-U Huawei, HiSilicon discussion NR_unlic-Core

R2-1913653 System Information Transmission Enhancements in NR-U Charter Communications, Inc discussion Rel-16

R2-1912456 SI scheduling enhancements for NR-U Mediatek India Technology Pvt. discussion Rel-16 R2-1908850

=> moved from 6.2.3

6.4 NR V2X

(5G_V2X_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191723). Documents in this agenda item will be handled in a break out session

Time budget: 3 TU

Tdoc Limitation: 14 tdocs

6.4.1 General

Including incoming LSs, rapporteur inputs, running CRs, etc.

R2-1912017 LS on mapping between LTE V2X PPPP and NR V2X priority (R1-1909876; contact: Qualcomm) RAN1 LS in Rel-16 5G_V2X_NRSL To:SA2 Cc:RAN2

[Chair]: We do not have per packet priority so wonders if LTE PPPP can directly compare to NR V2X priority. [Apple]: In NR V2X, we have LCH priority so LTE PPPP would be compared to LCH priority. [Huawei]: QoS flow will be informed per packet and the corresponding priority is used.

⇨ Noted.

R2-1912018 Reply LS on Sidelink HARQ Feedback for Groupcast (R1-1909879; contact: LGE) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2, SA2

[ZTE]: There should be no RAN2 work for group management (e.g. to know member UEs id, etc.) [Huawei, Nokia, Intel, Ericsson]: Agree with ZTE.

⇨ RAN2 understands there should be no RAN2 work for the solution RAN1 asked. It's up to SA2.

⇨ Noted

R2-1912050 LS on sidelink BWP reconfiguration on ITS band (R4-1910542; contact: MediaTek) RAN4 LS in Rel-16 5G_V2X_NRSL-Core To:RAN1 Cc:RAN2

⇨ Noted

R2-1913533 LS on NR V2X synchronization procedures and priority (R1-1909910; contact: CATT) RAN1 LS in Rel-16 5G_V2X_NRSL-Core To:RAN2, RAN4

⇨ 38.331 rapporteur should take it into account in 38.331 running CR.

⇨ Noted

=> Besides RRC/MAC running CRs, details of all running CRs and TP will be discussed offline. Updated CRs will capture the agreements made this meeting. For RRC/MAC running CRs, we will have email discussion and it can includes the discussion for the detailed stage3 issues.

R2-1912164 38 323 running CR CATT draftCR Rel-16 38.323 15.6.0 B 5G_V2X_NRSL-Core

- ⇨ Offline discussion#801 (R2-1914111, CATT)
- ⇨ Endorsed in R2-1914111.

R2-1912252 Running CR to 37324 for 5G_V2X_NRSL vivo (Rapporteur) draftCR Rel-15 37.324 15.1.0 5G_V2X_NRSL-Core

- ⇨ Offline discussion#802 (R2-1914112, Vivo)

[OPPO]: Do we need differentiation for SL DRB and SL SRB (instead of SLRB)? [Vivo]: Agreements made this meeting have not been captured in this version.

- ✉ **[107bis#12][V2X] Running 37.324 CR (Vivo)**
  Intended outcome: Endorsed running CR, 37.324 CR capturing this meeting's agreements
  Deadline: 1 week

=> Endorsed in R2-1914152

R2-1913331 Running CR for 38.322 for NR V2X Ericsson draftCR Rel-16 38.322 15.5.0 B 5G_V2X_NRSL-Core

- ⇨ Offline discussion#803 (Ericsson, R2-1914113)

[Huawei]: For 5.1.1, it should be aligned with PDCP specification.

- ⇨ Endorsed in R2-1914146 with the removal of change in 5.1.1

R2-1913887 Running CR to 38.300 on 5G V2X with NR sidelink LG Electronics Inc. draftCR Rel-16 38.300 15.7.0 B 5G_V2X_NRSL-Core

- ⇨ Offline discussion#804 (LG, R2-1914114)

[Nokia]: It would be better to introduce sub-sections under 16.x.4. [LG]: Agrees with the observation and will take it into account in the next version. [OPPO, Apple]: In 16.x.2.3, the agreement "For UM, only uni-directional transmission is supported." may need to be reconsidered in order to support ROHC feedback for unicast.

- ✉ **[107bis#13][V2X] Running 38.300 CR (LG)**
  Intended outcome: Endorsed running CR, 38.300 CR capturing this meeting's agreements
  Deadline: 1 week

=> Endorsed in R2-1914000.

R2-1912392 (running)36.304CR on cell selection(reselection) for NR V2X UE ZTE Corporation, Sanechips draftCR Rel-16 36.304 15.4.0 B 5G_V2X_NRSL-Core

- ⇨ Offline discussion#805 (ZTE, R2-1914115)
- ⇨ Email discussion: Discuss how to handle editor's note and endorsed the version considering companies' inputs (ZTE)

R2-1912393 (running)38.304CR on cell selection(reselection) for NR V2X UE ZTE Corporation, Sanechips draftCR Rel-16 38.304 15.5.0 B 5G_V2X_NRSL-Core

- ⇨ Offline discussion#805 (ZTE, R2-1914116)
- ⇨ Email discussion: Discuss how to handle editor's note and endorsed the version considering companies' inputs (ZTE)
- ⇨
- ✉ **[107bis#95][V2X] 38.304 and 36.304 running CRs (ZTE)**

Intended outcome: Draft CRs for next meeting, to be endorsed. Including discuss how to handle editor's note.
Deadline: Next Meeting

R2-1913699 TP on NR V2X for TR 37.985 RAN2 parts Huawei, HiSilicon pCR Rel-16 37.985 0.1.0 5G_V2X_NRSL-Core Late

⇨ Offline discussion#806 (Huawei, R2-1914117)

⇨ Endorsed in R2-1914117.

R2-1912377 Running CR to TS 38.331 for 5G V2X with NR sidelink Huawei, HiSilicon draftCR Rel-15 38.331 15.7.0 B 5G_V2X_NRSL-Core Late

✉ **[107bis#91][V2X] 38.331 running CR (Huawei)**
Intended outcome: Draft CR for next meeting, to be endorsed. 38.331 running CR (including discussion of 38.331 miscellaneous open issues considering new RAN1/4 agreements, e.g. L1 parameters, information in Sidelink UE Information, information in UE Assistance Information, need of both Sidelink UE Information and UE Assistance Information, need of Uu MR (if needed including information in the corresponding MR), SIB remaining issues, etc). See also R2-1912377.
Deadline: Next Meeting

R2-1913698 Running CR to 36 331 for NR V2X Huawei, HiSilicon draftCR Rel-16 36.331 15.7.0 B 5G_V2X_NRSL-Core Late 8

✉ **[107bis#92][V2X] 36.331 running CR (Huawei)**
Intended outcome: Draft CR for next meeting, to be endorsed. 36.331 running CR, See also R2-1913698
Deadline: Next Meeting

R2-1913825 Running CR to 38.321 on 5G V2X with NR sidelink LG Electronics Inc. draftCR Rel-16 38.321 15.7.0 B 5G_V2X_NRSL-Core Late

✉ **[107bis#93][V2X] 38.321 running CR (LG)**
Intended outcome: Draft CR for next meeting, to be endorsed. 38.321 running CR (including discussion of 38.321 miscellaneous open issues considering new RAN1/4 agreements). See also R2-1913825
Deadline: Next Meeting

R2-1913824 Running CR to 36.321 on 5G V2X with NR sidelink LG Electronics Inc. draftCR Rel-16 36.321 15.7.0 B 5G_V2X_NRSL-Core Late

✉ **[107bis#94][V2X] 36.321 running CR (LG)**
Intended outcome: Draft CR for next meeting, to be endorsed. 36.321 running CR. See also R2-1913824
Deadline: Next Meeting

6.4.2 L2/3 protocols common to mode 1 and mode 2 resource allocation

Including L2/L3 functionalities and procedures that are applied to both mode-1 and mode-2 or independent of resource allocation modes. Note that functionalities specific to QoS support are discussed in 6.4.6.

R2-1913701 Discussion on HARQ support for NR sidelink Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: Like Tx UE in LTE-V2X, only one NR sidelink HARQ entity maintained for each sidelink carrier for transmission, and shared by all cast-types.

[AsusTek]: Since one UE can have many unicast links, we may consider HARQ entity per unicast link. [LG]: Agree with AsusTek. Single HARQ entity across unicast links will bring the problem as described in the contribution. [OPPO, Lenovo, Samsung, Nokia, ZTE]: In LTE, we do not have L2 destination specific HARQ entity. If we consider cast type specific HARQ entity, some may be just wasted, so agree with the proposal. Single HARQ entity will be more efficient in buffer management. [LG]: If we follow LTE principle, it is ok, but we need to consider change of HARQ id. We should wait for RAN1 progress.

⇨ Agreed

Proposal 1a: Like Tx UE in LTE-V2X, the NR sidelink HARQ entity maintains a number of parallel sidelink processes, and shared by all unicast connections, groups and broadcast services. The maximum number of transmitting sidelink processes associated with each NR sidelink HARQ entity is pending on RAN1.

⇨ Agreed.

Proposal 2: For a SL grant, the Tx UE can select the HARQ process ID carried in the SCI, e.g. the Tx UE can select the HARQ process ID carried in the SCI from unoccupied HARQ process ID.

Proposal 3: Tx UE needs to store the corresponding relation between the HARQ process ID allocated by the network and HARQ process ID carried in SCI.

Proposal 4: For a SL grant for retransmission, Tx UE can set the HARQ process ID carried in SCI to be same as the new transmission.

Proposal 5: Like Rx UE in LTE-V2X, only one NR sidelink HARQ entity maintained for each sidelink carrier for reception, and shared by all cast-types.

⇨ Agreed.

Proposal 5a: Like Rx UE in LTE-V2X, the NR sidelink HARQ entity maintains a number of parallel sidelink processes, and shared by all unicast connections, groups and broadcast services. FFS for the maximum number of receiving sidelink processes associated with each NR sidelink HARQ entity.

⇨ Agreed.

Proposal 6: From a SCI, the Rx UE can select the HARQ process to handle the corresponding transmission from unoccupied HARQ process.

[Lenovo]: Agree with the proposal. [Samsung, LG, Nokia]: Why Rx UE selects the HARQ process id? There is nothing to do with HARQ process id selection in Rx UE. [Vivo]: Is it only for unicast or also for groupcast? [OPPO]: It should be same for all cast types.

⇨ Agreed.

Proposal 7: Rx UE needs to store the corresponding relation between HARQ process indicated in the SCI and the HARQ process selected by the Rx UE.

[Nokia]: Do we need to specify in MAC specification? It seems internal UE behavior. [Lenovo, LG]: First we should decide principle and whether to be captured in MAC or not will be discussed later. [OPPO]: Agree with Nokia.

⇨ Noted.

Proposal 8: For unicast/groupcast communication, each corresponding TB at the Tx UE should be associated with cast-type, Source ID, Destination ID and HARQ process id.

[OPPO]: Not sure whether we need a kind of fixed association or not. [AsusTek]: We need some association with ids, but need of association with cast type is not clear.

⇨ Agreed.

Proposal 9: For unicast/groupcast communication, each corresponding TB at the Rx UE should be associated with cast-type, Source ID, Destination ID and HARQ process.

[LG]: When Rx UE receives TB, it can not be aware of cast type. [OPPO]: Information in SCI should be left to RAN1. [Samsung]: Agree with the proposal in principle, but it does not mean SCI should include source id and destination id. It should be left to RAN1. [Intel]: Agree with LG.

⇨ Wait for RAN1 progress.

Proposal 10: For NR-V2X unicast/groupcast, a timer is introduced for the Rx UE to release the HARQ process.

[OPPO, Apple]: Agree with the observed problem described in the contribution, but not sure if timer-based option is the best one. [LG]: There would be other ways and we are not sure what information is included in SCI, so should wait for RAN1 progress.

⇨ Noted from proposal 10 to 15.

Proposal 11: For NR-V2X unciast/groupcast, this timer is carried in each SCI.

Proposal 12: For NR-V2X unciast/groupcast, this timer is also applied for the Tx UE to release the HARQ process.

Proposal 13: For NR-V2X unciast/groupcast, this timer is configured by network if Tx UE is scheduled by network, i.e. in mode 1.

Proposal 14: Tx UE should maintain NDI based on cast-type, Source ID, Destination ID and HARQ process ID.

Proposal 15: Rx UE should determine whether the transmission is a new transmission or a retransmission based on whether NDI of the same Source ID, Destination ID and HARQ process ID is toggled.

Proposal 16: For unicast/groupcast communication, the Tx UE's MAC is able to receive the sidelink HARQ feedback indication (e.g. ACK or NACK) from SL PHY layer.

⇨ Agreed.

Proposal 16a: For unicast/groupcast communication, the Tx UE's MAC needs to report the latest sidelink HARQ feedback status (i.e. ACK or NACK) to the gNB if requested (e.g. corresponding PUCCH resource has been configured).

Proposal 17: For at least mode2 UEs, the Tx UE's MAC shall release the unused resource(s) and stop retransmission when the Rx UE(s) has successfully received the TB based feedback.

[ZTE]: What unused resource(s) means here? [LG]: It was already agreed for mode2 opearation in RAN1, but for mode1 there is no agreement yet in RAN1. We should wait for RAN1 progress. [Intel]: Assume it is applied to all cast types. "when it deems the Rx UE(s)…" is not clear.

Proposal 18: For mode1 Tx UE, for each SL transmission the MAC shall always instruct the PHY layer to feedback SL HARQ status, whether the Tx UE really send feedback on UL is pending on RAN1.

[OPPO]: If PUCCH is not configured for HARQ A/N, it sounds strange MAC still instruct PHY to feedback. [Apple]: If HARQ is disabled, still MAC shall always instruct the PHY to feedback? [Lenovo, LG]: All are more like MAC modelling issues.

Proposal 19: For the Tx UE, when the previous transmission is NACK, the Tx UE's MAC (e.g. HARQ entity) shall instruct the sidelink process to trigger the retransmission.

[ZTE]: There are some corner cases which this proposal is not applied, e.g. high CBR case. [LG]: TX UE should decide retransmission is needed or not based on max retransmission number and remaining latency budget.

Proposal 20: For mode2 Tx UE, if the latest feedback is NACK and having no retransmission resources, it shall trigger the retransmission resource reservation.

Proposal 21: For Rx UE's MAC, it shall always instruct the PHY layer to send SL feedback for each SL reception, whether the Rx UE really send the SL feedback is pending on RAN1.

Proposal 22: For Rx UE's MAC, RAN2 to decide which option is adopted for the instruction from MAC layer to PHY layer:

- Option1: Instruct the PHY layer to generate acknowledgement(s) of the data in this TB if necessary.
- Option2: Generate a positive acknowledgement (ACK)/negative acknowledgement (NACK) of the data in this TB

Proposal 23: For unicast/groupcast, the network shall configure the HARQ enable/disable to Tx-UE:

- for RRC_CONNECTED UEs: the gNB configure via RRC message.
- for RRC_Idle/RRC_Inactive UEs: the gNB configure via SIB.
- for OOC UEs: via pre-configure.

[LG]: For RRC connected UE, gNB can also configure via DCI. [Huawei]: gNB may not know the pair of TX UE and RX UE. [OPPO]: Ok with all proposals. [Apple]: gNB configures HARQ but number of retransmissions will be based on CBR (just like LTE). [Xiaomi]: Do we need eNB to configure HARQ enabled/disabled for inter-RAT SL operation? [Huawei]: Dynamic scheduling is not supported for inter-RAT SL operation, so we do not need eNB to configure it. [ZTE]: To configure HARQ enabled/disabled is not directly related to dynamic scheduling. [LG]: Does gNB need to know UE SL capabilities?

⇨ Agreed.

Proposal 24: For unicast/groupcast, the Tx-UE shall configure the HARQ A/N enable/disable to Rx-UE.

[LG]: Agree with proposal [OPPO]: If RAN1 introduces HARQ A/N enabled/disabled in SCI, we do not need PC5-RRC based configuration. [Samsung, Interdigital, Ericsson]: Shares the view with OPPO. [Ericsson]: With the understanding, shouldn't we wait for RAN1 decision first?

⇨ Wait for RAN1 progress whether HARQ A/N enabled/disabled in SCI or not.

Proposal 25: For unicast/groupcast, RAN2 to support both SL-RRC and SCI for the configuration from Tx-UE to Rx-UE.

Proposal 26: RAN2 to support SL HARQ feedback enable/disable configures in SLRB level:

- For both mode1&mode2 UEs: SLRB level in RRC message
- For Idle/Inactive/OOC UEs: SLRB level in SIB/pre-configuration message

[Apple]: It should be included in MAC configuration instead of per SLRB level. [ZTE, Ericsson]: Agree with the proposal. [LG]: Do not see the issue related to LCP. Also maximum number of retransmission can be configured per SLRB level. [Intel]: Agree with the proposal since QoS flow will be associated with SLRB, so it sounds natural some QoS flow requires HARQ enabled.

⇨ Agreed.

Proposal 27: RAN2 to agree applying all the above proposals also for groupcast option1&2.

Agreements on SL HARQ:

1: Like Tx UE in LTE-V2X, only one NR sidelink HARQ entity maintained for each sidelink carrier for transmission, and shared by all cast-types.
2: Like Tx UE in LTE-V2X, the NR sidelink HARQ entity maintains a number of parallel sidelink processes, and shared by all unicast connections, groups and broadcast services. The

maximum number of transmitting sidelink processes associated with each NR sidelink HARQ entity is pending on RAN1.
3: Like Rx UE in LTE-V2X, only one NR sidelink HARQ entity maintained for each sidelink carrier for reception, and shared by all cast-types.
4: Like Rx UE in LTE-V2X, the NR sidelink HARQ entity maintains a number of parallel sidelink processes, and shared by all unicast connections, groups and broadcast services. FFS for the maximum number of receiving sidelink processes associated with each NR sidelink HARQ entity.
5: From a SCI, the Rx UE can select the HARQ process to handle the corresponding transmission from unoccupied HARQ process.
6: For unicast/groupcast communication, each corresponding TB at the Tx UE should be associated with cast-type, Source ID, Destination ID and HARQ process id.
7: For unicast/groupcast communication, the Tx UE's MAC is able to receive the sidelink HARQ feedback indication (e.g. ACK or NACK) from SL PHY layer.
8: For unicast/groupcast, the network shall configure the HARQ enable/disable to Tx-UE:
- For RRC_CONNECTED UEs: the gNB configure via RRC message.
- For RRC_Idle/RRC_Inactive UEs: the gNB configure via SIB.
- For OOC UEs: via pre-configure.
9: RAN2 to support SL HARQ feedback enable/disable configures in SLRB level:
- For both mode1&mode2 UEs: SLRB level in RRC message.
- For Idle/Inactive/OOC UEs: SLRB level in SIB/pre-configuration message.

R2-1913826 Layer-1 and Layer 2 Identifiers for NR Sidelink LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1910635

Proposal 1: The Source Layer-2 ID is 24 bits long and the Destination Layer-2 ID is 24 bits long in NR Sidelink, as in LTE Sidelink.

⇨ Agreed.

Proposal 2: RAN2 should inform RAN1 and SA2 that the Source/Destination Layer-2 IDs are 24 bits long in NR Sidelink.

⇨ Agreed.

Proposal 3: TX UE allocates a Layer-1 ID to RX UE for using it in SCI transmissions to RX UE via a PC5-RRC message at least for unicast. TX UE should ensure that allocation of the Layer 1-ID does not cause collision.

[Samsung, OPPO]: It is under RAN1 discussion. Collision issue also should be discussed in RAN1. [Ericsson]: Agree with the proposal. [Huawei, Intel]: Considering L2 id is also assigned by the UE, don't see the big need to introduce new L1 id. We can stick to LTE principle. [ZTE]: In LTE, blind HARQ retransmission is only supported. For NR, Rx UE needs to know whether it can be combined or not, so unique id would be helpful.

⇨ Noted.

Proposal 4: The actual size of the Layer-1 ID and whether the size is configurable or fixed are up to RAN1's decision.

Agreements on L2 id:
1: The Source Layer-2 ID is 24 bits long and the Destination Layer-2 ID is 24 bits long in NR Sidelink, as in LTE Sidelink.

R2-1913827 Proposed LS on Layer-1 and Layer 2 Identifiers for NR Sidelink LG Electronics Inc. LS out Rel-16 5G_V2X_NRSL-Core R2-1910636 To:RAN1 Cc:RAN3, SA2

⇨ Offline discussion#808 (LG, R2-1914120)

⇨ Approved in R2-1914147 with the removal of "Thus, the NR sidelink communication uses the same length of Source/Destination Layer-2 IDs as LTE V2X sidelink communication." and adding "SA2" into "To RAN1 group".

[Interdigital, Huawei]: It would be good to send this LS as soon as possible since RAN1 continues V2X discussion. [LG]: Will indicate Juha that it is urgent LS to RAN1.

R2-1913326 Remaining issues on UL-SL prioritisation Ericsson discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1 A separate LCH priority thresholds is configured for both NR-UL and NR-SL.

[Intel, Convida]: Ok with the proposal. [LG]: Prefer SL threshold per LCH. [Vivo]: We may consider applying scaling factor.

⇨ Agreed.

Proposal 2 For between SL-data and UL-data/SRB, the SL transmission is prioritized if the highest priority value of UL LCH(s) with available data is larger than the UL priority threshold and the highest priority value of SL LCH(s) with available data is lower than the SL priority threshold. Otherwise the UL transmission is prioritized

[Nokia]: Agree with the proposal. Lower value means higher priority. [OPPO]: Agree with the proposal. [Intel]: Ok with the proposal. If both priority is lower (or higher) than the threshold, what should be the exact UE behavior? [Ericsson]: In the case, UL is prioritized. [Huawei]: Agree with the proposal. [Vivo]: How to handle PSFCH? [OPPO]: Pure PHY channel related issues can be discussed in RAN1. It was already discussed offline before.

⇨ Agreed.

Proposal 3 Prioritization between UL SR and SL data transmission could be based on priority of the UL LCH that triggered the UL SR and priority value(s) of SL LCH(s), similar as prioritization between NR UL data and NR SL data transmission.

[Interdigital, Convida]: Agree with the proposal.

⇨ Agreed.

Proposal 4 RAN2 to wait progresses from the IIOT WI regarding the handling of prioritization between UL BSR and SL data (i.e., same IIOT solution on prioritization between URLLC BSR and MBB data will be adopted for NR SL).

Agreements on prioritization:
1: A separate LCH priority thresholds is configured for both NR-UL and NR-SL.
2: For between SL-data and UL-data/SRB, the SL transmission is prioritized if the highest priority value of UL LCH(s) with available data is larger than the UL priority threshold and the highest priority value of SL LCH(s) with available data is lower than the SL priority threshold. Otherwise the UL transmission is prioritized.
3: Prioritization between UL SR and SL data transmission could be based on priority of the UL LCH that triggered the UL SR and priority value(s) of SL LCH(s), similar as prioritization between NR UL data and NR SL data transmission.

R2-1912071 Left issues on UL-SL prioritization for NR-V2X OPPO, Apple discussion 5G_V2X_NRSL-Core

Proposal 2 Before confirm the flexible BSR WA, RAN2 needs to solve the issue that low-priority SL-BSR entries preventing the UL-BSR, e.g., by only allowing the high-priority SL-BSR entries being prioritized over UL-BSR. The rule used for prioritization between UL-triggered UL-TX and SL-TX is applied to define high-priority SL-BSR entries. Otherwise, the WA needs to be reverted.

Proposal 3 If RAN2 confirms the flexible BSR WA, RAN2 further discuss, besides BSR, what other UL-TX(s) (e.g., UL/SL-SR, UL/SL-configured grant confirmation, UL MAC SDU) needs to be considered for prioritization between UL-triggered UL-TX and SL-triggered UL-TX, following the same rule for prioritization between UL-triggered UL-TX and SL-TX.

[Ericsson]: Similar issue is under other WI discussion, so prefer waiting for the decision from that WI. [Interdigital]: Agree with OPPO's observation. [Apple, CATT]: Here the problem is brought from SL-BSR, so it is not expected to be discussed in IIOT WI.

⇨ RAN2 understands possible problem described by OPPO.

⇨ Offline discussion#809 (To discuss way-forward, i) revert WA and have fixed prioritization rule between UL-BSR and SL-BSR or ii) introduced enhancement to resolve the issue while keeping the WA) (OPPO, R2-1914141)

Proposal 4 For prioritization between SL-TX and SL-triggered UL-TX, it is based on direct comparison between associated LCH priority. RAN2 further discuss which UL-TX (i.e., SR, BSR) needs to considered for prioritization between SL-TX and SL-triggered UL-TX. FFS on other MAC CEs.

⇨ Include proposal4 into offline discussion#809.

R2-1914141 WF on flexible BSR OPPO

Proposal 1: If SL-BSR is prioritized, and if the UL-grant size is not enough to carry "the BS of all prioritized SL-BSR entries + UL-BSR", transmit SL-BSR. Otherwise, rely on legacy behavior.

⇨ Agreed.

Proposal 2: The rule for UL-data/SL-data prioritization is reused for defining prioritized SL-BSR/UL-BSR.

⇨ Agreed.

Agreements on flexible BSR:
1: If SL-BSR is prioritized, and if the UL-grant size is not enough to carry "the BS of all prioritized SL-BSR entries + UL-BSR", transmit SL-BSR. Otherwise, rely on legacy behavior.
2: The rule for UL-data/SL-data prioritization is reused for defining prioritized SL-BSR/UL-BSR.

R2-1912380 Discussion on UL and SL prioritisation ZTE Corporation, Sanechips discussion

Proposal 4: For LTE UL and NR SL prioritization, it is suggested to configure a threshold of NR sidelink logical channel priority value for the eNB.

Proposal 5: For NR UL and LTE SL prioritization, a new threshold of NR UL logical channel priority value can be configured by gNB. Then if the value of the highest priority of the NR UL logical channel(s) in the UL MAC PDU is lower than the threshold, the NR UL Tx is prioritized, otherwise, the UE uses LTE solution of comparing the SL PPPP with PPPP threshold.

Proposal 6: It is suggested that NR SL and LTE SL prioritization depends on UE implementation.

Proposal 7: If there is necessity of MCG-SL/SCG-UL prioritization, the MCG UL/SL prioritization mechanism can be reused for the MCG-SL/SCG-UL prioritization if SCG UL TX overlaps in time domain with SL TX.

[Intel]: We have sent LS to RAN1/4 to ask the scenarios and we have not received any response yet. Can we decide solution w/o response LS on the scenarios? [Ericsson]: Agree, should wait for response LS.

⇨ First we will wait for RAN1/4 response LS.

R2-1913711 Remaining issue on sidelink LCP procedure Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: UE in MAC may select the destination and cast type associated with the highest SL LCH priority for a new transmission. Then only the data of the SL LCHs belonging to the selected destination and cast type can be multiplexed into the MAC PDU to be transmitted.

[LG]: Is the proposal to include cast type into SCI? [Huawei]: Yes, original intention was.

⇨ Agreed.

Proposal 4: When an SL grant is indicated as “HARQ enabled”, at least SL LCHs with the LCP restriction of “HARQ enabled” match the grant and can be selected for transmission. FFS whether SL LCHs with “HARQ disabled” configured can be selected as well.Proposal 4a: When an SL grant is “HARQ disabled”, only SL LCHs with “HARQ disabled” match the grant and can be selected for transmission.

[ZTE]: What is RAN1 status? Packets with HARQ enabled and disabled can be sent over an SL grant? [LG]: Should wait for RAN1 progress. [Apple, Intel]: It does not make a sense to mux packets with HARQ enabled and disabled.

Proposal 4: LCP will take HARQ A/N enabled/disabled into account, e.g. packet with HARQ enabled will be multiplexed only with packets with HARQ enabled.

⇨ Agreed.

Proposal 6: For the LCP restriction on Groupcast HARQ option1/2, the MAC needs to select the matched DSTs, if it is agreed to be configured at DST level, but to select the matched SL LCHs, if it is agreed to be configured at LCH level.

[OPPO]: HARQ option1/2 is more group specific.

⇨ Wait for SA2 response LS first.

Proposal 12: For Sidelink unicast, data of different destinations is not multiplexed into the same MAC PDU.

⇨ Agreed.

Agreements on LCP:
1: UE in MAC may select the destination and cast type associated with the highest SL LCH priority for a new transmission. Then only the data of the SL LCHs belonging to the selected destination and cast type can be multiplexed into the MAC PDU to be transmitted.
2: LCP will take HARQ A/N enabled/disabled into account, e.g. packet with HARQ enabled will be multiplexed only with packets with HARQ enabled.
3: For Sidelink unicast, data of different destinations is not multiplexed into the same MAC PDU.

R2-1912688 SL LCP procedure considering the MCR requirements Lenovo, Motorola Mobility
discussion Rel-16 5G_V2X_NRSL-Core R2-1910088

Proposal 1: RAN2 discuss and choose between the two approaches to select an MCR associated with a MAC TB:

- Option 1: a TB contains data of only the SL LCH(s) having the same/range of MCR (10)
- Option 2: a TB generation is done irrespective of the MCR and in accordance to the normal LCP procedure & MCR is selected afterwards as (e.g.) the highest among the constituents (10)
- Option3: Leave it to RAN1 (3)

[OPPO]: Support option 2 [LG]: If we have multiple single value, how to handle? [Xiaomi]: Support option 1 [Intel]: Isn’t option2 not aligned with previous RAN2 agreement, i.e. LCP will consider MCR. [Huawei, OPPO]: We didn’t make any agreement last meeting. For option1, granuality is [m] and with that granulaity, does it really make a sense? [Interdigital]: Option2 doesn’t sound natural considering Rx UEs should take MCR into account. [Apple]: Prefer option1. [Chair]: 10 companies support option1 while 10 companies support option2 (No consensus)

⇨ Noted.

Proposal 2: RAN2 discuss if packing more than one L2 destination in a MAC TB is sensible from meeting the latency (PDB) requirement and from resource efficiency perspective.

Proposal 3: MAC CE(s) have no associated MCR and can be multiplexed in a TB regardless of the “determined MCR” of a TB.

R2-1913329 Remaining issues on RLC AM and UM support in SL Ericsson discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1 When an RRC_CONNECTED UE receives an RLC AM SLRB configuration message, it forwards to the serving gNB. It is up to gNB to accept or reject the RLC AM SLRB establishment.

Proposal 2 When an RRC_IDLE/INACTIVE/OoC UE receives an RLC AM SLRB configuration message, the UE decides to accept or reject the RLC AM SLRB establishment.

Proposal 3 RAN2 discusses if TX side and RX side of the same SL RLC AM entity can adopt different RLC SN lengths.

Proposal 4 The established SL RLC AM entity can operate as SL RLC UM if the corresponding peer UE RLC entity using the same LCID is UM.

Proposal 5 For SL groupcast/broadcast, only uni-directional RLC UM SLRB is supported.

⇨ Agreed.

Proposal 6 For SL unicast, both bi-directional and uni-directional RLC UM SLRB are supported.

[LG]: UE can have multiple RRC connections, so we can rely on uni-directional RLC UM. Seems bi-directional RLC UM not essential in Rel-16. [Huwei]: Depending on the criterion whether NW configures uni-direcational RLC UM or bi-directional RLC UM, it can be different, but do not see the real essential need for bi-directional RLC UM for SL in Rel-16.

⇨ FFS on SL unicast, i.e. whether uni-direcational RLC UM is only supported or not in Rel-16.

[Apple]: For SL unicast, we need bi-directional RLC UM for ROHC feedback. We may consider to reuse a mechanism to be introduced for RLC AM.

Proposal 7 RAN2 discusses if TX side and RX side of the same bi-directional SL RLC UM entity can adopt different RLC SN lengths.

Agreements on RLC UM: 1: For SL groupcast/broadcast, only uni-directional RLC UM SLRB is supported (i.e. no support of bi-directional RLC UM SLRB). FFS on SL unicast.

R2-1913713 Support of RLC AM for Sidelink unicast Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: For the RLC SR transmission over a bi-directional SLRB, the UE which initiates the establishment of the SLRB signals the SLRB ID/LCID and the RLC mode used for this SLRB to its peer UE which in turn establishes a corresponding SLRB with these parameters for RLC SR transmission.

[Ericsson]: If two UEs belong to different gNB and each gNB configures RLC AM, does the UE have two RLC AM entities for the given destination id? [Ericsson]: In the case, NW can coordinate the configuration or the UE should report the received configuration to NW to make a decision. [Ericsson, Nokia]; If both gNBs configure different SLRB configurations to two UEs at the same time for the given destination id and the corresponding QoS profile, how to work? [Ericsson]: In the case, for example if RLC AM is configured for one UE and RLC UM is configured for peer UE, both UEs should be just operated based on the its configured RLC mode/parameters.

- Option1: Fix RLC mode according to LCID.
- Option2: Only RLC AM is used for unicast (i.e. RLC UM is not used at all for unicast)
- Option3: LCID is assigned by UE
- Option4: NW coordination (avoids the problem)

- Option5: SRLB establishment via PC5 fails.

⇨ [Offline discussion#811]: Discuss/select option(s) (including other possible problematic configurations) (Huawei, R2-1914142)

Proposal 2: The LCID is assigned by the UE for each configured SLRB.

Proposal 3: RAN2 to discuss whether the SLRB ID can be assigned by the UE itself for each configured SLBR.

Proposal 4: For the RLC SR transmission over a bi-directional SLRB, the UE in RRC_CONNECTED reports the SLRB ID/LCID of the bi-directional SLRB as well as the corresponding QoS profiles to the gNB in order to request the mac-LogicalChannelConfig for this SLRB, and it configures the parameters of mac-LogicalChannelConfig for this SLRB by following the configurations of gNB.

Proposal 5: For the RLC SR transmission over a bi-directional SLRB, the UE in RRC_IDLE or in OOC can configure the parameters of mac-LogicalChannelConfig by UE implementation.

Proposal 6: For the RLC SR transmission over a bi-directional SLRB, the sn_FieldLength as aligned between the two UEs via PC5 RRC is used as the field length of the ACK_SN and NACK_SN in the RLC SR.

Proposal 7: For the RLC SR transmission over a bi-directional SLRB, the value of t-StatusProhit is set by UE implementation.

Proposal 8: For the bi-directional SLRB used to support the RLC AM, its logical channel should be used for both transmission and reception, and it should be unique within one unicast connection, e.g. no more differentiation on the order of UE IDs included in the {SRC L2 ID, DST L2 ID} combination.

R2-1914142 [Offline-811] Support of SL RLC AM Huawei

Proposal 2: To do further down selection among option 1, 2, 5 below:

- Option 1: Specified the RLC mode of each SL LCID value
- Option 2: LCID is assigned and negotiated by the UEs themselves
- Option 5: Handle the collision as failure case

⇨ Noted. Option will be selected based on the proposal3 and further discussion in email. However new option is not invited unless the discussed option can solve the issue.

Proposal 3a: The peer UE reports the indication to the NW when the initiating UE has already established an SLRB and the peer UE does not have corresponding SLRB configuration. FFS the specific information reported to the NW.

Proposal 3b: The peer UE reports the indication to the NW, when the initiating UE informs the peer UE of the establishment of an SLRB and the peer UE does not have corresponding SLRB configuration. FFS the specific information reported to the NW.

✉ **[107bis#96][V2X] RLC AM mismatch (Huawei)**
Intended outcome: Report for next meeting, discuss the RLC AM mismatch issues and decide solution.
Deadline: Next Meeting

R2-1912068	Discussion on RLC mode configuration collision	OPPO	discussion	5G_V2X_NRSL-Core
R2-1912065	Discussion on SL capability signaling for Uu-RRC	OPPO	discussion	5G_V2X_NRSL-Core
R2-1912066	Left issues on SIB and cell reselection for NR-V2X	OPPO	discussion	5G_V2X_NRSL-Core
R2-1912067	Discussion on SL-related Uu-RRC messages	OPPO	discussion	5G_V2X_NRSL-Core
R2-1912069	Left issues on RLC, PDCP and SDAP for NR-V2X	OPPO	discussion	5G_V2X_NRSL-Core
R2-1912070	Left issues on MAC for NR-V2X	OPPO	discussion	5G_V2X_NRSL-Core

=> Revised in R2-1913941

R2-1913941 Left issues on MAC for NR-V2X OPPO discussion 5G_V2X_NRSL-Core

R2-1912072 [DRAFT] LS on HARQ option for group-cast OPPO LS out 5G_V2X_NRSL-Core To:SA2 Cc:RAN1

R2-1912165 Remaining Issues on PDCP CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912166 Resource allocation mode configuration CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912167 Further discussion on LCP procedure CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912169 Prioritization between UL and SL for NR V2X CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912171 Configuration Procedure of the Bi-directional RLC AM SLRB CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912231 Discussion on SLRB configuration alignment Spreadtrum Communications discussion

R2-1912234 Logical channel prioritization Consideration Spreadtrum Communications discussion

R2-1912253 Left Issues on NR SL RLC and PDCP vivo discussion

R2-1912254 Uplink and Sidelink transmission prioritization in NR V2X vivo discussion R2-1910215

R2-1912255 Indication and resource configuration on HARQ enable disable vivo discussion

R2-1912381 Consideration on NR V2X CBR ZTE Corporation, Sanechips discussion

R2-1912382 Discussion on left issue in NR V2X PDCP ZTE Corporation, Sanechips discussion

R2-1912383 Left issues for MAC in NR V2X ZTE Corporation, Sanechips discussion

R2-1912384 Considerations on sidelink RLC ZTE Corporation, Sanechips discussion

R2-1912387 Discussion on SDAP issues ZTE Corporation, Sanechips discussion

R2-1912388 Consideration on sidelink RLM management ZTE Corporation, Sanechips discussion

R2-1912389 Consideration on exceptional resource pool and system information acquisition ZTE Corporation, Sanechips discussion

R2-1912391 SLRB maintenance during RRC state transition ZTE Corporation, Sanechips discussion

R2-1912435 RRC Connection Initiation Trigger for V2X Sidelink Communication Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-1912443 Discussion on Sidelink UE Information Initiation Trigger for NR V2X Sidelink Communication Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1907966

R2-1912444 Interaction between RRC Connection Resume Condition and RNAU for NR V2X SL Communication Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1911328

R2-1912620 Remaining issues for mode1 and 2 operation Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core

R2-1912621 NR UL SL prioritization aspects Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core

R2-1912628 Sidelink and Uplink Prioritization Samsung discussion Rel-16 5G_V2X_NRSL-Core R2-1911105

R2-1912629 Congestion control in NR-V2X Samsung discussion Rel-16 5G_V2X_NRSL-Core R2-1911120

R2-1912686 SL HARQ protocol operation Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core

R2-1912790 Remaining aspects on SL PDCP Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core

R2-1912792 Need for SL RLC re-establishment Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core

R2-1912804 Discussion on resource allocation Beijing Xiaomi Software Tech discussion

R2-1912805 Discussion on sidelink admission control Beijing Xiaomi Software Tech discussion

R2-1912820 Validity areas based on cell lists MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core

R2-1912869 RAN2 Aspects of HARQ for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core

R2-1912870 LCP for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core
R2-1912871 Remaining Aspects of UL/SL Prioritization InterDigital discussion Rel-16 5G_V2X_NRSL-Core
R2-1912913 Remaining issue for prioritization for NR V2X Lenovo, Motorola Mobility discussion Rel-16
R2-1913146 Even further views on NR V2X System Information Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1909279
R2-1913147 Unresolved issues on SL and UL prioritization Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core
R2-1913148 On NR V2X Sidelink transmissions during Handover or Uu PHY layer problems Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core
R2-1913235 Prioritization between NR-UL and NR-SL MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1913236 Remaining issues of SL LCP MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1911127
R2-1913274 Resource Pool Configuration LG Electronics Inc. discussion Rel-16
R2-1913324 Discussion on SL information reporting over Uu Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-1913327 Support on HARQ procedure over sidelink Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-1913332 Discussion on SL AS configuration request over NR Uu Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1910132
R2-1913334 Handling of SL in Uu RRC state transitions Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1910135
R2-1913494 Discussion on SDAP protocol for NR V2X Apple discussion Rel-16 5G_V2X_NRSL-Core R2-1910201
R2-1913496 Discussion on remaining issues on HARQ feedback Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-1913497 Draft LS on Support HARQ feedback design for SL groupcast Apple LS out Rel-16 5G_V2X_NRSL-Core To:SA2 Cc:RAN1
R2-1913512 Inter-RAT resource allocation in NR V2X Qualcomm Incorporated discussion Rel-16 5G_V2X_NRSL-Core R2-1910888
R2-1913595 PC5 groupcast handling Qualcomm Incorporated discussion Rel-16
R2-1913705 Identifier assignment to enable Option2 groupcast HARQ Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core R2-1911068
R2-1913706 Discussion on related aspects of system information Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core R2-1911093
R2-1913709 Further discussion on NR SL and NR UL prioritization Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core
R2-1913767 Discussion on SCCH configuration ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core R2-1911221
R2-1913768 Discussion on handling multiple SL communication ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core
R2-1913778 Discussion on groupcast HARQ in NR SL LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL
R2-1913779 Discussion on HARQ enable and disable LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL
R2-1913780 Discussion on measurement and report in NR SL LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL
R2-1913808 Remaining issues in SDAP layer MediaTek Inc. discussion Rel-16
R2-1913886 Discussion on assistance information for resource allocation in NR SL LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core

6.4.3 L2/3 protocols for mode 1 resource allocation

Including control and user plane aspects in order to support mode 1 (e.g. RRC procedures, information to be sent to NW/UE, UE behaviours in CP and/or UP, etc.). Note cross-RAT mode 1 resource scheduling is discussed in 6.4.7.

R2-1912168 Leftover issues for sidelink configured grant CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912173 Left Issues of BSR/SR CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912175 Type 1 Sidelink Configured Grant Validity Time CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912256 Discussion on SR and BSR vivo discussion

R2-1912257 Discussion on Truncated Sidelink BSR vivo discussion R2-1910227

R2-1912258 Remaining issues on sidelink configured grant vivo discussion R2-1910211

R2-1912379 Consideration on mode1 resource allocation ZTE Corporation, Sanechips discussion

R2-1912434 Impact of Mode 1 Resource Allocation on Uu BWP Operation Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core

R2-1912650 Resource Pool Sharing between Mode 1 and Mode 2 UEs Fraunhofer HHI, Fraunhofer IIS discussion R2-1910534

R2-1912687 SR trigger for NR SL Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core

R2-1912806 Discussion on BSR prioritization Beijing Xiaomi Software Tech discussion

R2-1912872 Multiple SL Configured Grants and UE Assistance InterDigital discussion Rel-16 5G_V2X_NRSL-Core

R2-1913164 Discussion on sidelink SR trigger Fujitsu discussion Rel-16 5G_V2X_NRSL-Core

R2-1913237 On SL configured grant MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1911128

R2-1913325 Discussion on SL mode 1 left issues Ericsson discussion Rel-16 5G_V2X_NRSL-Core

R2-1913495 Discussion on prioritization between SL BSR and UL BSR Apple, OPPO discussion Rel-16 5G_V2X_NRSL-Core

R2-1913511 Discussion on mode 1 resource allocation Qualcomm Incorporated discussion Rel-16 5G_V2X_NRSL-Core R2-1910890

R2-1913702 Discussion on Sidelink Configured Grant support Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core R2-1911072

R2-1913707 Discussion on remaining issues of SR and BSR for SL Mode 1 Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

R2-1913769 Discussion on resource allocation for sidelink HARQ ACK/NACK report ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core R2-1911223

R2-1913781 Discussion on remaining issues of mode 1 operation LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL

R2-1913868 Sidelink HARQ retransmission in mode 1 ITL discussion R2-1911411

6.4.4 L2/3 protocols for mode 2 resource allocation

Including control and user plane aspects in order to support mode 2 (e.g. RRC procedures, information to be sent to NW/UE, UE behaviours in CP and/or UP, etc.). Note cross-RAT mode 2 resource configuration is discussed in 6.4.7.

R2-1912163 Resource (Re-) selection function in NR V2X Sidelink CATT discussion Rel-16 5G_V2X_NRSL-Core

R2-1912622 On admission/congestion control Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core

R2-1912630 Discussion on V2X specific validity area Samsung discussion Rel-16 5G_V2X_NRSL-Core R2-1911102

R2-1912651 Resource Allocation for Mode 2 NR V2X Fraunhofer HHI, Fraunhofer IIS discussion R2-1910536

R2-1912868 Considerations for Geographical Zone Design for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core R2-1909585

R2-1912914 Considerations on QoS based resource pool for NR V2X Lenovo, Motorola Mobility discussion Rel-16

R2-1913275 NR V2X System Information Aspects LG Electronics Inc. discussion Rel-16 R2-1909838

R2-1913323 Discussion on SL Mode 2 left issues Ericsson discussion Rel-16 5G_V2X_NRSL-Core

6.4.5 PC5 RRC procedures and information

Including output of email discussion [107#75][NR/V2X] RLF (Ericsson), identification of the required PC5 RRC procedures, information to be sent to peer UE, UE behaviours, relation with the PC5-S procedures, PC5 RRC security aspects, etc.

R2-1913328 Summary of email discussion [107#75][NR/V2X] RLF Ericsson discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1 In case of SL RLC AM, RLF declaration is triggered by indication from RLC that the maximum number of retransmissions has been reached

⇨ Agreed.

Proposal 2 RLF triggering condition based on indication by physical layer is supported (pending RAN1/RAN4 progresses on the topic).

⇨ Agreed.

Proposal 3 The RLM/RLF procedure only apply to NR SL unicast.

⇨ Agreed.

Proposal 4 RAN2 to agree on one of the following options regarding the UE behavior in case SL RLF is detected for RRC_INACTIVE/RRC_IDLE/Out-of-coverage UEs:

a. In case of RRC_CONNECTED/INACTIVE/RRC_IDLE/Out-of-coverage UEs, upon SL RLF declaration (e.g., expiring of timer T310) the UE releases the PC5-RRC connection immediately and sends an indication to upper layers.

b. In case of RRC_INACTIVE/RRC_IDLE/Out-of-coverage UEs, upon SL RLF declaration (e.g., expiring of timer T310) the UE continue to monitor the SL channel based on a new timer and if no recovery happens then the upper layers are informed with an indication.

c. In case of RRC_INACTIVE/RRC_IDLE/Out-of-coverage UEs, upon SL RLF declaration (e.g., expiring of timer T310) the UE try to perform resource reselection and if this fails, the upper layers are informed with an indication.

[OPPO, Ericsson, ZTE, MediaTek, Intel, Samsung, Qualcomm, Interdigital]: Option1 is preferred. New timer can cover option b) in principle (e.g. by setting the new timer to long value). [Xiaomi]: Option b) actually means there is no AS-level action until upper layer informs unicast link release. [ZTE]: With option b), the UE just continue sending/receiving the packets even though they can not be actually done in RLF. [LG]: Option b) is preferred. [Huawei]: Option c) is preferred.

⇨ Option a) is agreed.

Proposal 5 For RRC_CONNECTED UEs, upon SL RLF declaration (e.g., expiring of T310), the UE informs NW via Sidelink UE Information. FFS if we need explicit failure indication in Sidelink UE information or if it's enough for the UE to inform it by excluding the corresponding destination L2 id.

[Ericsson]: NW should be informed if SRLB is not used. [Qualcomm, Apple, Intel, Samsung, Nokia, ZTE]: Why not use SL UE information message? [LG]: Dependent on the contents, we can reuse SL UE information or new message. [Ericsson]: If we use Sidelink UE information, the overhead would be big (if full information is always sent). [OPPO]: The information in Sidelink UE

information is associated to BSR, so using Sidelink UE information sounds natural. [Ericsson]: It is ok to use Sidelink UE information, but to include all information in Sidelink UE information sounds not desirable. [Huawei]: It should be FFS whther to include full information or delta information only. [Samsung]: Without explicit failure indication, it still works.

⇨ Agreed.

Proposal 6 FFS whether available measurements and destination L2 ID are also included.

⇨ Measured results is not included in Sidelink UE Information at RLF.

Proposal 7 A new timer (e.g., similar to T310) is specified for SL RLF handling (pending RAN1/RAN4 progresses on the topic).

⇨ Agreed.

Proposal 8 RAN2 working assumption: Upon the PC5-RRC connection release, the UE performs the following actions:

a. Reset MAC;

b. Stop relevant timers specific for sidelink (e.g., new timer for SL RLF handling if agreed);

c. Discard any SL UE context, if any;

d. Discard any security key configured specific for SL, if any;

e. Release all SL radio resources, including release of the RLC entity, the MAC configuration and the associated PDCP entity and SDAP for all established SLRBs;

f. Indicate the release of the PC5-RRC connection to upper layers (e.g. PC5-S entity) together with the release cause.

[ZTE, Vivo]: “Reset MAC” is not clear. Do we reset whole MAC entity when RLF is declared for the given destination L2 id?

Proposal 9 Upon receiving a SL failure indication by the UE, the network does not release the PC5-RRC connection via dedicated signaling. FFS whether the network is allowed to release the PC5-RRC connection for other purpose that are not RLF.

[Ericsson, Interdigital]: Sounds not reasonable in that UE informs NW, but NW is not allowed to release the connection. [Huawei, LG]: Why we need different behavior for idle/inactive and connected? It would be desirable to have common solution.

Proposal 10 In the case of RRC_CONNECTED UEs, the PC5-RRC is not released autonomously by the UE.

Proposal 11 In the case of RRC_CONNECTED UEs, after indicating by upper layers to release the PC5-RRC connection, the UE informs the network via the SidelinkUEinformation message about the release (e.g., for resource handling purpose).

Proposal 12 No need to specify a release procedure over the PC5-RRC at least at RLF.

⇨ Agreed.

Agreements on SL RLM/RLF:

1: In case of SL RLC AM, RLF declaration is triggered by indication from RLC that the maximum number of retransmissions has been reached.
2: RLF triggering condition based on indication by physical layer is supported (pending RAN1/RAN4 progresses on the topic).
3: The RLM/RLF procedure only apply to NR SL unicast.
4: In case of RRC_CONNECTED/INACTIVE/RRC_IDLE/Out-of-coverage UEs, upon SL RLF declaration (e.g., expiring of timer T310) the UE releases the PC5-RRC connection immediately and sends an indication to upper layers.

5: For RRC_CONNECTED UEs, upon SL RLF declaration (e.g., expiring of T310), the UE informs NW via Sidelink UE Information. FFS if we need explicit failure indication in Sidelink UE information or if it's enough for the UE to inform it by excluding the corresponding destination L2 id.
6: Measured results is not included in Sidelink UE Information at RLF.
7: A new timer (e.g., similar to T310) is specified for SL RLF handling (pending RAN1/RAN4 progresses on the topic).
8: No need to specify a release procedure over the PC5-RRC at least at RLF.

⇨ [Offline discussion#810]: Will send LS to SA2 to inform RAN2 agreement to take into account in their work (Ericsson, R2-1914118)

R2-1914118 [DRAFT] LS on SL RLF handling Ericsson To: SA2

⇨ Approved in R2-1914149.

R2-1912815 Single vs. multiple PC5-RRC connection MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: The PC5-RRC connection is a logical connection between a pair of source and destination L2IDs.

⇨ Agreed.

⇨ [Offline discussion#813]: Send LS to inform RAN2 agreement to RAN1/SA2 (Interdigital, R2-1914143)

Agreements on SL unicast PC5-RRC connection:
1: The PC5-RRC connection is a logical connection between a pair of source and destination L2IDs.

R2-1914143 [DRAFT] LS on Handling Multiple Unicast Links with Peer UE Interdigital To: RAN1, Cc:SA2

[Vivo]: Do we need to update "multiple unicast links" to "multiple PC5-RRC connections"? [MediaTek]: "unicast link" is used in SA2. [Interdigital]: Will ask Juha to send this LS to RAN1 as soon as possible.

⇨ Approved in R2-1914150 with the change on the last sentence into "As a consequence, there can be multiple PC5-RRC connections between a pair of UEs, and each PC5-RRC connection can have a different pair of source/destination L2 IDs."

R2-1912873 Handling Multiple Unicast Links in NR V2X InterDigital discussion. Rel-16 5G_V2X_NRSL-Core

Proposal 1: A UE sends the L2 source IDs associated with all ongoing unicast links in PC5-RRC after initiation of a new unicast link by upper layers. FFS which RRC message to use.

[Vivo, Qualcomm, ZTE]: Is there any security issue if the UE informs all ongoing unicast links? [Ericsson]: Ask if gNB can be aware of that inforamtion. [Intel]: If Rx UE receives ids for all ongoing unicast links (including actually for other UEs), how Rx UE can distinguish which one is mine and which one is not mine? [Interdigital]: Rx UE can be aware of it based on the previously recevied id information from peer UE. [Huawei]: Concerns the signaling overhead and do not see the essential need. [OPPO, Samsung, Apple]: Shares the view with Huawei. Also there should be other many impacts in RAN2 specifications if we go towards this direction. [Nokia, Intel, LG]: Considering it works with the pair of L2 ids, further enhancement can be considered in future.

⇨ Noted.

Proposal 2: When a UE has multiple unicast links with the same peer UE, the UE maintains the set of L2 source IDs and L2 destination IDs that are associated with the same peer UE as part of the SL UE context.

R2-1913710 Relationship between PC5-RRC connection and PC5-S connectionHuawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

Proposal 2: The explicit PC5-RRC connection establishment procedure is not needed.

⇨ Agreed.

Proposal 3: For a pair of UEs performing unicast communication, the PC5-S connections and the PC5-RRC connections are 1-to-1 mapping, i.e. each PC5-S connection is associated with a PC5-RRC connection (regardless of whether they are for the same UE or not).

⇨ Agreed.

Proposal 4a: PC5-RRC signaling exchange is started after PC5-S initial connection setup.

[OPPO]: Should it be related to security aspect? [Apple]: Agree with the proposal.

⇨ Agreed (can comeback if any security issue is clarified by SA3).

Proposal 4b: When PC5-S connection is released it informs RRC, the RRC releases the associated PC5-RRC connection and the corresponding SL SRB and SL DRB.

⇨ Agreed.

Proposal 5: Do not define PC5-RRC state for unicast operation.

[Apple]: Agree with the proposal. [Intel, Ericsson]: Is it natural to assume PC5-RRC is connected after PC5-S initial direct setup?

Proposal 6: One SL SRB is configured for each PC5 RRC connection, and a specified configuration is defined for the SL SRB. FFS on PC5-S.

[Apple]: Agree with the proposal. [LG]: First we may consider separate SRB for PC5-S.

Proposal 7: PC5-S messages are transmitted over the STCH.

Agreements on SL unicast PC5-RRC connection:
1: The explicit PC5-RRC connection establishment procedure is not needed.
2: For a pair of UEs performing unicast communication, the PC5-S connections and the PC5-RRC connections are 1-to-1 mapping, i.e. each PC5-S connection is associated with a PC5-RRC connection (regardless of whether they are for the same UE or not).
3: PC5-RRC signaling exchange is started after PC5-S initial connection setup. (Can comback with this direction if any security issue is clarified by SA3)
4: When PC5-S connection is released it informs RRC, the RRC releases the associated PC5-RRC connection and the corresponding SL SRB and SL DRB.

⇨ The above agreements are also included into LS to SA2/3 (R2-1914144)

R2-1913828 Delivery of PC5-S Signaling and PC5-RRC messages LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core R2-1910640

Proposal 1: The Sidelink Control Channel (SCCH) is used to carry PC5-S signaling.

[Samsung]: In LTE, PC5-S is carried over STCH, why we need different option for NR V2X? [LG]: The difference is we need SDAP for NR V2X. [Huawei]: If STCH configuration is specified, there would be no actual difference compared to LTE V2X since we do not need any mapping between PC5-S QoS and SLRB. [Huawei]: Prefer to use STCH for PC5-S. [ZTE]: Agree with the proposal. [Apple]: Is it related to SA3 security issues? [Samsung]: To reserve LCID would be required regardless of which channel (SCCH/STCH) to be used. [MediaTek]: Both can work and it seems modeling issue. Slightly prefer SCCH.

⇨ Agreed.

Proposal 2: The SL-SRB carrying PC5-S signaling is separated from the SL-SRB carrying PC5-RRC messages.

[OPPO]: SL-SRB0 is same or something different compared to Uu SRB1? [LG]: Besides priority and LCID, it would be same or similar. [Huawei]: Do we need more differentiation for the first PC5-S which is signaled via broadcast and other PC5-S signaled via unicast? [Ericsson]: Prefer single SRB regardless of PC5-S and PC5-RRC. [LG]: We do not need differentiation in logical channel point of view, i.e. PC5-S initial direct setup message can be signaled via SCCH. [ZTE]: Only the first PC5-S is signaled via broadcast.

⇨ Agreed.

Proposal 3: PC5-S message is not encapsulated into PC5-RRC message in NR Sidelink.

⇨ Agreed.

Proposal 4: Different SCCHs carrying PC5-S message and PC5-RRC message respectively can be multiplexed into one MAC PDU in NR Sidelink for the same destination, if needed, in the same way with multiplexing of different STCHs, i.e. based on LCID.

⇨ Agreed.

Proposal 5: SCCH and STCH can be multiplexed into one MAC PDU in NR Sidelink for the same destination, if needed, in the same way with multiplexing of STCHs, i.e. based on LCID.

⇨ Agreed.

Proposal 6: PC5-S is located on top of PDCP/RLC/MAC/PHY.

⇨ Agreed.

Proposal 7: Sends a LS to SA2, Cc: SA3 on RAN2 agreements.

⇨ Agreed.

Proposal 8: The logical channel priority of SCCH carrying a PC5-RRC message is specified as a fixed value in 38.331.

⇨ Agreed.

Proposal 9: The logical channel priority of SCCH carrying a PC5-S signaling is specified as a fixed value in 38.331.

[OPPO]: In Uu, there is difference in priority between SRB carrying NAS and SRB carrying RRC. [ZTE]: gNB may configure the priority for each case. [OPPO]: Configurable value is still allowed?

⇨ Agreed.

Proposal 10: UE determines whether or not to prioritize a PC5-RRC message over SL/UL transmissions based on the logical channel priority of SCCH carrying a PC5-RRC message.

Proposal 11: UE determines whether or not to prioritize a PC5-S signaling over SL/UL transmissions based on the logical channel priority of SCCH carrying a PC5-S signaling.

Proposal 12: A specified configuration is used for SCCH and specified in 38.331.

[OPPO]: For parameters required for both TX and RX, it is agreeable, but do we need it for TX or RX only parameters? [Samsung]: Do we need multiple specified configurations for each cast type? [OPPO]: How to handle the first PC5-S is FFS. [Huawei]: Why not just specify all parameters including TX only and RX only parameters? [ZTE]: Want to allow configurable parameters and can replace the default specified configuration.

⇨ Agreed.

Agreements on PC5-S and PC5-RRC:
1: The Sidelink Control Channel (SCCH) is used to carry PC5-S signaling.

2: The SL-SRB carrying PC5-S signaling is separated from the SL-SRB carrying PC5-RRC messages.
3: PC5-S message is not encapsulated into PC5-RRC message in NR Sidelink.
4: Different SCCHs carrying PC5-S message and PC5-RRC message respectively can be multiplexed into one MAC PDU in NR Sidelink for the same destination, if needed, in the same way with multiplexing of different STCHs, i.e. based on LCID.
5: SCCH and STCH can be multiplexed into one MAC PDU in NR Sidelink for the same destination, if needed, in the same way with multiplexing of STCHs, i.e. based on LCID.
6: PC5-S is located on top of PDCP/RLC/MAC/PHY.
7: The logical channel priority of SCCH carrying a PC5-RRC message is specified as a fixed value in 38.331.
8: The logical channel priority of SCCH carrying a PC5-S signaling is specified as a fixed value in 38.331.
9: A specified configuration is used for SCCH and specified in 38.331.

⇨ [Offline discussion#814]: LS to inform RAN2 agreements to SA2 (Cc:SA3) (LG, R2-1914144)

R2-1914144 [DRAFT] LS on PC5-S Signaling and PC5-RRC connection for NR sidelink communication LG
To: SA2, Cc: SA3

⇨ Approved in R2-1914151.

R2-1912439 Bi-directional UE capability transfer procedure for NR V2X unicast Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1911321

Proposal 1: RAN2 is asked to down-select either one-way procedure or two-way procedure for capability transfer in SL unicast regardless of uni-directional and/or bi-directional SL traffic.

Proposal 2: Two-way procedure is only used for capability transfer in SL unicast.

[MediaTek, Intel, Nokia, Ericsson, Vivo]: Agree with the proposal.

⇨ Agreed.

Proposal 3: A UE can send Capability Enquiry message to request peer UE's capability along with its own capability information for SL unicast. When to include its own capabilities is up to UE implementation.

[Ericsson, Convida]: Agree with the proposal. [Nokia]: Including its own capabilities is optional or mandatory behavior? [Samsung]: Optional [Huawei]: In the case, should we specify the condition? [Ericsson]: It should be upto UE implementation. [Apple]: We may not need to include its own capabilities in enquiry.

⇨ Agreed.

Proposal 4: Any UE can intiate two-way procedure for capability transfer in SL unicast, if needed.

Agreements on UE capability transfer:
1: Two-way procedure is only used for capability transfer in SL unicast.
2: A UE can send Capability Enquiry message to request peer UE's capability along with its own capability information for SL unicast. When to include its own capabilities is up to UE implementation.

R2-1912075 Left issues on PC5-RRC based capability transfer procedure OPPO discussion 5G_V2X_NRSL-Core

Proposal 4 RAN2 discuss whether the per-CC/band/band-combination sidelink capability is to be contained in PC5 RRC capability message.

[Ericsson, Nokia, ZTE]: We may have clearer picture once we get detailed capability information from RAN1.

Proposal 5 If RAN2 agrees to introduce per-CC/band/band-combination sidelink capability in PC5-RRC capability message, RAN2 further discuss how to handle the change of per-CC/band/band-combination sidelink capability due to the change of uplink/downlink capability.

R2-1912073 Left issues on PC5-RRC based AS layer configuration procedure OPPO discussion 5G_V2X_NRSL-Core
R2-1912074 Left issues on PC5-S impact on AS-layer OPPO discussion 5G_V2X_NRSL-Core
R2-1912078 Miscellaneous issues on PC5-RRC OPPO discussion 5G_V2X_NRSL-Core
R2-1912161 Discussion on unicast connection setup procedure CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-1912162 RLM / RLF procedure in NR V2X Sidelink CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-1912230 Discussion on capability transfer procedure for NR V2X Spreadtrum Communications discussion
R2-1912259 Left issues for PC5-S messages vivo discussion
R2-1912260 Discussion on sideink radio link management on TX and RX UE vivo discussion R2-1910212
R2-1912261 Remaining issues on PC5-RRC message exchange vivo discussion R2-1910213
R2-1912262 UE ID across multiple PC5-S links vivo discussion R2-1910214
R2-1912385 Discussion on PC5 RRC procedure for unicast ZTE Corporation, Sanechips discussion
R2-1912420 Operation Principles of PC5 RRC Connection Futurewei discussion Rel-16 5G_V2X_NRSL-Core
R2-1912441 AS-layer configuration failure case in SL unicast Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1911324
R2-1912442 Discussion on handling of PC5-S messages for NR V2X unicast Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1911325
R2-1912445 Remaining Issues on SL RLM/RLF Declaration for NR V2X Unicast Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core R2-1911329
R2-1912566 PC5-S and Identification on PC5 RRC and RRC Procedures Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1912567 RLM Procedure and RLF Recovery handling Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1912623 Remaining aspects on groupcast operation Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1912652 Resource Allocation Procedures for NR V2X Fraunhofer HHI, Fraunhofer IIS discussion R2-1910537
R2-1912793 PC5 RRC procedure details for NR V2X Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1912813 Support (or not) of PC5-RRC for groupcast MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1912814 Contents and handling of PC5-RRC configuration MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1912817 RLM with aperiodic reference signals MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1912819 RLM and state modelling based on PC5-S connection MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1912874 RLM/RLF for NR V2X InterDigital discussion Rel-16 5G_V2X_NRSL-Core
R2-1912876 Draft LS on Handling of Multiple Unicast Links InterDigital LS out Rel-16 5G_V2X_NRSL-Core To:RAN1 Cc:SA2
R2-1913149 On PC5 capability transfer and link management Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1909283
R2-1913165 RLM/RLF for unicast in NR V2X Fujitsu discussion Rel-16 5G_V2X_NRSL-Core

R2-1913321 Discussion on SL link management Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-1913333 Handling of capability transfer in sidelink Ericsson discussion Rel-16 5G_V2X_NRSL-Core R2-1910134
R2-1913378 PC5 RRC procedure Apple discussion Rel-16 FS_NR_V2X
R2-1913510 PC5-RRC and PC5-S interactions and their security in NR V2X Qualcomm Incorporated discussion Rel-16 5G_V2X_NRSL-Core R2-1910831
R2-1913660 PC5-RRC state considerations Kyocera discussion
R2-1913661 PC5 L2/L3 protocols for unicast and groupcast Kyocera discussion
R2-1913665 SL RLF handling Qualcomm Incorporated discussion Rel-16
R2-1913703 Further details of UE assistance information procedure for NR SL Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core R2-1911166
R2-1913708 Further details of Uu RRC procedures for sidelink Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core
R2-1913770 Discussion on sidelink RLM indication ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core
R2-1913829 Proposed LS on PC5-S Signaling for NR Sidelink LG Electronics Inc. LS out Rel-16 5G_V2X_NRSL-Core R2-1910641 To:SA2
R2-1913830 PC5-RRC connection and procedures with PC5-S and Uu RRC LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1913884 Remaining issue on PC5 RLM/RLF LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1913885 Discussion on PC5 RRC Connection LG Electronics Inc. discussion Rel-16 5G_V2X_NRSL-Core

6.4.6 L2/3 protocols for QoS support

Including output of email discussion [107#73][NR/V2X] SDAP (Vivo), [107#74][NR/V2X] QoS flows in SLRB (Apple), identification of the required L2/3 procedures, information to be sent NW/UE or peer UE, UE behaviours, etc.

R2-1913948 Report of 107#73 NR V2X SDAP(vivo) vivo discussion

Proposal 1: SDAP layer is supported for NR SL groupcast and broadcast

⇨ Agreed

Proposal 2: For NR SL unicast, groupcast and broadcast, PDU session concept/PDU session ID is not supported by SDAP sublayer

⇨ Agreed

Proposal 3: SDAP entity is configured per destination L2 id and cast type in the UE

[Apple, LG, Convida]: For the given destination L2 id, it is not feasible to have different source L2 id. [CATT, Huawei, Vivo]: Has different understanding to Apple and LG. It is feasible. Also we need to consider different cast type since for the different cast types, same destination L2 id can be used.

⇨ Agreed

Proposal 4: For NR SL unicast Tx and Rx SDAP entity, both establishment and release are requested by upper layers (i.e., follow NR Uu as baseline).

⇨ Agreed

Proposal 5: For NR SL groupcast and broadcast Tx SDAP entity, both establishment and release are requested by upper layers (i.e., follow NR Uu as baseline).

⇨ Agreed

Proposal 6a: Leave to the UE implemtation for NR SL groupcast and broadcast, when Rx SDAP entity is established.

[Chair]: Why not just to apply the same principle of Rx PDCP establishment? [Futurewei]: PDCP entity and SDAP entity are different in that PDCP entity is per SLRB but SDAP entity is cross PDCP entities.

Proposal 6b: RAN2 to discuss whether for NR SL groupcast and broadcast Rx SDAP entity is released up to UE implementation.

Proposal 7: RAN2 to discuss whether the following SDAP parameters should be contained in SLRB configuration

- Source Destination info (for the dedicated SLRB configurations):
- SDAP header
- MappedQoS-flowsToAdd
- MappedQoS-flowsTorelease

Proposal 8: For all casts, marking QoS flow ID in SDAP packets is supported

[OPPO]: In-order delivery can be supported like Uu DL, i.e. implementation option. Also it is not clear how to define RX UE side if we have marking QoS flow id. [Huawei]: For groupcast and broadcast, it does not work.

Proposal 9: For SL unicast, SDAP in-order delivery is supported when remapping between a QoS flow and a DRB occurs. FFS for SL groupcast and broadcast.

Proposal 10: SDAP-PDU with header is supported for all casts

Proposal 11: For all casts, RDI field is not supported in NR SL SDAP PDU header

⇨ Agreed.

Proposal 12: For all casts, QFI/PFI (PC5 Flow ID) field is supported in NR SL SDAP PDU header

Proposal 13: For all casts, D/C field is supported in NR SL SDAP PDU header

⇨ Offline discussion#807: discuss proposal8/9/11/12/13 (e.g. whether in-order delivery can be supported without marking QoS flow id in SDAP packets, whether QoS remapping needs to be considered and if so, marking QoS flow id is really required, how to define Rx UE side, etc.) (Vivo, R2-1914119)

Agreements on SL SDAP:
1: SDAP layer is supported for NR SL groupcast and broadcast.
2: For NR SL unicast, groupcast and broadcast, PDU session concept/PDU session ID is not supported by SDAP sublayer.
3: SDAP entity is configured per destination L2 id and cast type in the UE.
4: For NR SL unicast Tx and Rx SDAP entity, both establishment and release are requested by upper layers (i.e., follow NR Uu as baseline).
5: For NR SL groupcast and broadcast Tx SDAP entity, both establishment and release are requested by upper layers (i.e., follow NR Uu as baseline).
6: For all casts, RDI field is not supported in NR SL SDAP PDU header.

R2-1914119 Summary of RAN2#107bis Offline-807 Vivo

Proposal 1: For NR SL unicast:

i. In order delivery in case of remapping is achieved by using SDAP PDU with header (Using end marker).

⇨ Agreed.

ii. No enhancement for Rx behavior to be specified compared to Uu solution. FFS whether the Rx behavior is left to UE implementation.

⇨ Agreed.

Proposal 2: For NR SL groupcast and broadcast, in order delivery in case of remapping is achieved by Tx side implementation and only the SDAP PDU format without header will be used.

⇨ Agreed.

Proposal 3: For NR SL Unicast, QFI/PFI (PC5 Flow ID) field is supported in NR SL SDAP PDU header. Note: In Rel-16 in case this field is present, it is only used for QoS flow to SLRB remapping.

⇨ Agreed.

Proposal 4: For NR SL unicast D/C field is supported in NR SL SDAP PDU header

⇨ Agreed.

Agreements on SL SDAP:
1a: For NR SL unicast, in order delivery in case of remapping is achieved by using SDAP PDU with header (Using end marker).
1b: For NR SL unicast, no enhancement for Rx behavior to be specified compared to Uu solution. FFS whether the Rx behavior is left to UE implementation.
2: For NR SL groupcast and broadcast, in order delivery in case of remapping is achieved by Tx side implementation and only the SDAP PDU format without header will be used.
3: For NR SL Unicast, QFI/PFI (PC5 Flow ID) field is supported in NR SL SDAP PDU header. Note: In Rel-16 in case this field is present, it is only used for QoS flow to SLRB remapping.
4: For NR SL unicast D/C field is supported in NR SL SDAP PDU header.

R2-1913376 Report on [107#74] QoS flow in SLRB Apple discussion Rel-16 FS_NR_V2X Late

Proposal 1: Confirm the observation that based on SA2 progress, the NG-RAN has no knowledge about the PC5 QoS parameters of each PC5 QoS flow if UE does not report.

⇨ Agreed

Proposal 2: In order to let NG-RAN know about the QoS parameters of each QoS flow, for all cast types, UE is required to report the PC5 QoS parameters per QoS flow per destination per cast type.

⇨ Agreed

Proposal 3: For standardized PQI in UE report message, the following parameters should be included inside the PC5 QoS parameters.

- PQI: for unicast, broadcast and groupcast (Section 5.4.1.1.1. TS23.287)
- PC5 flow bit rates (GFBR/MFBR) for GBR QoS flows: for GBR QoS flows in unicast (Note 1 in Table 5.4.4-1 in TS23.287)
- Range: for groupcast (Section 5.4.1.1.1. TS23.287)

⇨ Agreed

Proposal 4: In RRCReconfiguration message, to avoid repeating the QoS parameters reported by UE, an ID can be used to represent the QoS profile or QoS flow mapped to the SLRB. The ID

used in RRCReconfiguration message should be the ID reported by the UE associating with the QoS profile.

⇨ Agreed

Proposal 5: To support non-standardized PC5 QoS characteristics, UE should report all the parameters listed as below.

1) Resource Type (GBR, Delay critical GBR or Non-GBR);
2) Priority Level;
3) Packet Delay Budget;
4) Packet Error Rate;
5) Averaging window (for GBR and Delay-critical GBR resource type only);
6) Maximum Data Burst Volume (for Delay-critical GBR resource type only).

⇨ Agreed

Proposal 6: For standardized PQI, the following parameters should be carried in SIB to describe the QoS flow carried inside the SLRB.

- PQI: for all cast types
- range: for groupcast

[Intel]: If PQI is non-standardized one, what should be UE behavior? [Apple]: Either to go to connected or to apply a kind of default configuration. [Interdigital]: Is it acceptable to apply default configuration for all non-standardized PQI? [ZTE]: How to signal range information? [Interdigital, Ericsson]: Better to ask SA2. [OPPO]: First wants to discuss possible value range in RAN2 and 38.331 rapporteur can provide candidate considering SA1 requirements.

⇨ Agreed.

Proposal 7: For standardized PQI, the following parameters should be carried in pre-configuration message to describe the QoS flow carried inside the SLRB.

- PQI (for all cast types)
- range (for groupcast)

⇨ Agreed.

Agreements on QoS information:

1: Confirm the observation that based on SA2 progress, the NG-RAN has no knowledge about the PC5 QoS parameters of each PC5 QoS flow if UE does not report.
2: In order to let NG-RAN know about the QoS parameters of each QoS flow, for all cast types, UE is required to report the PC5 QoS parameters per QoS flow per destination per cast type.
3: For standardized PQI in UE report message, the following parameters should be included inside the PC5 QoS parameters.
   - PQI: for unicast, broadcast and groupcast (Section 5.4.1.1.1. TS23.287)
   - PC5 flow bit rates (GFBR/MFBR) for GBR QoS flows: for GBR QoS flows in unicast (Note 1 in Table 5.4.4-1 in TS23.287)
   - Range: for groupcast (Section 5.4.1.1.1. TS23.287)
4: In RRCReconfiguration message, to avoid repeating the QoS parameters reported by UE, an ID can be used to represent the QoS profile or QoS flow mapped to the SLRB. The ID used in RRCReconfiguration message should be the ID reported by the UE associating with the QoS profile.
5: To support non-standardized PC5 QoS characteristics, UE should report all the parameters listed as below.
   - Resource Type (GBR, Delay critical GBR or Non-GBR)
   - Priority Level
   - Packet Delay Budget
   - Packet Error Rate
   - Averaging window (for GBR and Delay-critical GBR resource type only)
   - Maximum Data Burst Volume (for Delay-critical GBR resource type only)

6: For standardized PQI, the following parameters should be carried in SIB/preconfiguration to describe the QoS flow carried inside the SLRB.
- PQI (for all cast types)
- Range (for groupcast)

R2-1912170 SLRB configurations handling during UE states transition CATT discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: When UE performs state transition, the mapping between PC5 QoS profile and SLRB should follow the SLRB configurations of the new UE state. FFS for the UE behavior before the acquisition of new configuration.

[ZTE]: Until SLRB reconfiguration is completed, the old SLRB configuration may be continued for the service continuity. [Ericsson, ZTE]: We need to discuss case by case and from connected to idle, the UE may continue old SLRB configuration. [Intel, OPPO]: Do not see the need of different behavior case by case. [Intel]: Agree with the proposal.

⇨ Agreed.

Proposal 2: For SL Tx UE for all cast type, once UE performs the state transition, it should apply the SLRB remapping based on the SLRB configurations of the new UE state.

Proposal 3: For SL unicast, once Tx UE changes the SLRB configurations, it should inform the Rx UE and Rx UE can update the corresponding SLRB configurations once the end marker is received.

Proposal 4: For SL broadcast and groupcast, once Tx UE changes the SLRB configurations, it should send end marker to the Rx UE, once Rx UE receives the end marker. The Rx UE can release the old SLRBs and establish new SLRBs based on the newly received SL packet.

Agreements on SLRB configuration and UE state transition:
1: When UE performs state transition, the mapping between PC5 QoS profile and SLRB should follow the SLRB configurations of the new UE state. FFS for the UE behavior before the acquisition of new configuration.

R2-1912077 Discussion on congestion control and admission control OPPO discussion 5G_V2X_NRSL-Core

Proposal 1 Reuse LTE congestion control scheme as baseline, based on input of SL LCH priority and CBR. FFS on other input factor like range (based on further inputs).

Proposal 2 RAN2 does not purse admission control.

R2-1912877 Admission Control for NR SL InterDigital, Ericsson, MediaTek, CATT, ITL, Xiaomi, Fraunhofer, LG discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1 SL QoS flow/SLRB level QoS management, i.e. admission control, is used for NR SL.

[OPPO]: What input should be considered in admission control? [Interdigital]: It is up to NW for the connected, for idle it would be based on CBR. [LG]: Latency requirement can be also considered as one of inputs. [Huawei, Nokia, Intel, Samsung, OPPO, ZTE]: Considering the limited time, it would be hard to introduce complicated admission control in Rel-16. [Apple, Nokia, Intel, Samsung, OPPO, ZTE]: Also just with the admission control based on CBR, not sure how much helpful/beneficial on top of congestion control based on CBR. [Samsung]: SLRB is configured by NW, which means some kind of admission control is still feasible.

- Need of admission control on top of congestion control
  - Yes (9)
  - No (12)

[Indigital]: Perhaps, we may continue the discussion since some companies consider it would be feasible by some manner. [Futurewei]: If QoS flow is not mapped to any SLRB, it goes to the default SLRB. [Ericsson]: NW is not forced to set SLRB configuration for all QoS flows.

⇨ No consenus on the need of admission control in Rel-16.

R2-1912076 Left issues on SLRB configuration for NR-V2X OPPO discussion 5G_V2X_NRSL-Core
R2-1912174 Admission Control for NR SL CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-1912233 Discussion on communication range in V2X Spreadtrum Communications discussion
R2-1912263 Report of 107#73 NR V2X SDAP(vivo) vivo discussion
=> Revised in R2-1913948
R2-1912264 Left issues on SLRB configuration vivo discussion
R2-1912265 Admission and Congestion control in NR V2X vivo discussion R2-1910220
R2-1912266 Mode switch for QoS guarantee in NR V2X vivo discussion R2-1910221
R2-1912267 Remaining issues about NR SL QoS handling vivo discussion R2-1910226
R2-1912386 Discussion on remaining issues on SLRB parameters ZTE Corporation, Sanechips discussion
R2-1912440 Remaining Issues on Handling of SLRB configuration Samsung Electronics Co., Ltd discussion Rel-16 5G_V2X_NRSL-Core
R2-1912489 SLRB Reconfiguration Handling Samsung discussion Rel-16 5G_V2X_NRSL-Core
R2-1912562 Apparent contradiction in Zone Configuration Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core
R2-1912565 HARQ feedback impact on RAN2 Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1912631 Discussion on Default SLRB and HARQ configuration Samsung discussion Rel-16 5G_V2X_NRSL-Core R2-1911122
R2-1912647 SLRB configuration for NR V2X UE Lenovo, Motorola Mobility discussion Rel-16 R2-1910292
R2-1912648 Discussion on QoS management for NR V2X Lenovo, Motorola Mobility discussion Rel-16 R2-1910289
R2-1912702 Congestion Control in NR V2X Fraunhofer IIS, Fraunhofer HHI discussion
R2-1912878 QoS-Based SLRB Establishment Decision InterDigital discussion Rel-16 5G_V2X_NRSL-Core
R2-1913150 Network Based Monitoring and Reporting of QoS parameters for NR V2X Sidelink Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1909284
R2-1913160 Mobility challenges for NR V2X platooning/groupcast Nokia, Nokia Shanghai Bell discussion Rel-16 5G_V2X_NRSL-Core R2-1909300
R2-1913208 Discussion on Groupcast and Broadcast QoS Report ITRI discussion
R2-1913276 SLRB Management in NR V2X LG Electronics Inc. discussion Rel-16
R2-1913320 Discussion on NR SL QoS management Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-1913330 Discussion on NR SL lower layer procedures Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-1913377 Discussion on QoS flow in SLRB Apple discussion Rel-16 FS_NR_V2X
R2-1913564 On SL HARQ configuration for NR V2X Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1913712 Remaining issues on SLRB configuration Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core
R2-1913771 Discussion on requesting and releasing SLRB configuration ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core R2-1911225
R2-1913807 Use of range parameter MediaTek Inc. discussion Rel-16
R2-1913867 Consideration on Default SLRB ITL discussion R2-1911423
R2-1913873 Remaining issue on NR SL QoS and SLRB configurations ITL discussion R2-1911420

6.4.7 L2/3 protocols for cross-RAT resource allocation

Including L2/3 aspects for i) NR sidelink mode 1 scheduling by LTE Uu, ii) NR sidelink mode 2 resource allocation by LTE Uu, iii) LTE sidelink mode 4 resource allocation by NR Uu, and iv) LTE sidelink mode 3 resource allocation by NR Uu

R2-1913704 Further discussion on inter-RAT resource allocation Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core

Proposal 1: The UE judges the cell capabilities of V2X sidelink communication using the presence of LTE/NR V2X associated SIBs.

⇨ Agreed.

Proposal 2: In NR cell, NR SI including LTE V2X SI can be provided on-demand (like any other SI).

[Samsung]: It is clear on-demand is applied to any SI.

⇨ Agreed.

Proposal 3: RAN2 to discuss how to handle the case where the V2X SI is provided on-demand and the UE is not able to judge whether there is only anchor carrier configuration.

Proposal 4: The UE can use a preamble configuration to simultaneously request both LTE V2X SIBs (i.e. Systeminformationblocktype21 and Systeminformationblocktype26), regardless of whether they can be mapped to a SI message.

[Ericsson]: Both proposal3 and proposal4 should be discussed in the main session.

⇨ Noted for proposal3 and proposal4.

Proposal 5: LTE Sidelink UE information and LTE UE Assistance Information are defined as containers (OCTET STRING) in NR RRC.

⇨ Agreed.

Proposal 6: RAN2 to introduce two separate uplink messages for LTE and NR Sidelink UE Information.

[OPPO]: UplinkInformationTransferMRDC can be reused.

⇨ Can be discussed in 38.331 running CR.

Proposal 7: RAN2 to introduce new IE(s) for inter-RAT UE Assistance Information in LTE and NR UE Assistance Information messages separately.

⇨ Can be discussed in 38.331 running CR.

Proposal 8: The signaling used for eNB configuring NR mode 2 resource pool or SL type 1 configured grant will be defined as a container (OCTET STRING), and actual information is defined in NR RRC.

[Ericsson]: Does eNB generate NR message? [Huawei]: Yes

⇨ eNB/gNB can generate NR/LTE message.

⇨ Agreed.

Proposal 9: When there are carriers supporting LTE V2X SL only and those supporting NR V2X SL only (but no one supporting both), and if the UE is configured to perform V2X communication on both SL RATs, the UE may prioritize the carrier which supports the SL RAT required by the V2X services with a higher priority between LTE SL and NR SL.

Proposal 10: When there are more than one candidate cells that satisfy the cell reselection conditions, and at least one of them is within the validity area of the current resource pool provided by the SIB, the UE should reselect to a cell among the candidate cells having the same validity area.

Agreements on inter-RAT SL resource allocation:
1: The UE judges the cell capabilities of V2X sidelink communication using the presence of LTE/NR V2X associated SIBs.
2: In NR cell, NR SI including LTE V2X SI can be provided on-demand (like any other SI).
3: LTE Sidelink UE information and LTE UE Assistance Information are defined as containers (OCTET STRING) in NR RRC.
4: The signaling used for eNB configuring NR mode 2 resource pool or SL type 1 configured grant will be defined as a container (OCTET STRING), and actual information is defined in NR RRC.
5: eNB/gNB can generate NR/LTE message.

R2-1913322 Discussion on SL cross-RAT scheduling and configurations Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-1912172 NR Uu controlling LTE sidelink SPS CATT discussion Rel-16 5G_V2X_NRSL-Core
R2-1912390 Consideration on NR V2X cross RAT support ZTE Corporation, Sanechips discussion
R2-1912563 BSR and SR reporting in Cross RAT V2X operation Lenovo, Motorola Mobility discussion Rel-16 5G_V2X_NRSL-Core
R2-1912564 Cross RAT SL Configuration Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1912624 Cross-RAT scheduling for NR V2X SL Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1913809 Inter-RAT BSR MediaTek Inc. discussion Rel-16

6.4.8 Others

Support of simultaneous configuration of mode1 and mode2 (we may need to wait for the complete design of mode1 and mode2), other working group procedures which require RAN2 discussion, etc.

R2-1912378 Discussion on multi-mode co-existence ZTE Corporation, Sanechips discussion
R2-1912568 Subtopics to be addressed in Sim M1M2 Lenovo, Motorola Mobility discussion 5G_V2X_NRSL-Core
R2-1912791 On the support of simultaneous configuration of mode1 and mode2 Intel Corporation discussion Rel-16 5G_V2X_NRSL-Core
R2-1912875 RAN2 Aspects of Simultaneous Configuration of Mode 1 and Mode 2 InterDigital discussion Rel-16 5G_V2X_NRSL-Core R2-1909591
R2-1913127 Discussion on SL radio link management Nokia, Nokia Shanghai Bell discussion 5G_V2X_NRSL-Core R2-1910031
R2-1913238 Support of simultaneous mode 1 and mode 2 MediaTek Inc. discussion Rel-16 5G_V2X_NRSL-Core
R2-1913277 Simultaneous Mode 1 and Mode 2 Configuration LG Electronics Inc. discussion Rel-16
R2-1913319 Inter-node resource coordination in NR SL Ericsson discussion Rel-16 5G_V2X_NRSL-Core
R2-1913498 UE Mobility for Simultaneous Mode 1 & Mode 2 configuration Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-1913499 Resource allocations for UEs with simultaneous mode 1 & mode 2 configurations Apple discussion Rel-16 5G_V2X_NRSL-Core
R2-1913700 Discussion about mode coexistence for NR sidelink Huawei, HiSilicon discussion Rel-16 5G_V2X_NRSL-Core
R2-1913772 Discussion on association between sidelink data and resource allocation modes ASUSTeK discussion Rel-16 5G_V2X_NRSL-Core R2-1911226
R2-1913856 Considerations on simultaneous configuration of mode 1 and 2 ITL discussion Rel-16 R2-1911404
R2-1913943 Simultaneous use of mode 1 and mode 2 KT Corp. discussion R2-1910965

6.5 Optimisations on UE radio capability signalling

(RACS-RAN-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: RP-191088). Documents in this agenda item will be handled in a break out session

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

6.5.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs, etc

R2-1912811 Work plan for RACS-RAN work item MediaTek Inc., CATT discussion Rel-16 RACS-RAN-Core
⇨ Noted

R2-1912005 LS on encoding of UE radio capabilities (C3-193147; contact: Qualcomm) CT3 LS in Rel-16 RACS-RAN-Core To:RAN2 Cc:CT4, SA2
⇨ Noted

R2-1912807 Introduction of RACS [36.300] MediaTek Inc. draftCR Rel-16 36.300 15.7.0 B RACS-RAN-Core
⇨ Endorsed in principle

R2-1912808 Introduction of RACS [38.300] MediaTek Inc. draftCR Rel-16 38.300 15.7.0 B RACS-RAN-Core
⇨ Endorsed in principle

6.5.2 UE radio capability signalling using UE capability identity

Other aspects, if any, can also be covered here

Support of delta signalling

R2-1912809 Decision on support of delta signalling MediaTek Inc. discussion Rel-16 RACS-RAN-Core
- Mediatek thinks we need to take a decision
- Ericsson/Spreadtrum/Nokia/QC don't see the need for delta signalling. Mediatek still thinks there are use cases where delta signalling is needed. CATT thinks it's acceptable not to have this in rel-16, although they agree there would be some use cases. Samsung is also fine not to have this in Rel-16

⇨ Offline discussion 205 - LS to SA2 on No support of delta signalling (MediaTek)

Agreements:
1. Delta signalling is not supported in Rel-16
2. Send a LS to SA2 to inform them of our decision

R2-1914016 Draft LS to SA2 on No support of delta signalling MediaTek Inc
⇨ LS approved in R2-1914022

R2-1914022 LS to SA2 on No support of delta signalling MediaTek Inc
⇨ Approved unseen

RRC Stage 3 impacts?

R2-1912832 Remaining aspects on Capability ID Ericsson discussion Rel-16 RACS-RAN
- Regarding proposal 3, Mediatek wonders why CT3 needs this information, will this change what they do? Nokia agrees the use of the filter can be questionable.

⇨ No consensus to send this information to CT3
- Proposal 2 discussed together the next paper

R2-1912672 Consideration on UE radio capability ID signaling in inter-node RRC messages ZTE Corporation, Sanechips discussion Rel-16 RACS-RAN-Core
- Ericsson is fine with proposal 1, other aspects are up to RAN3.
- CATT agrees with observations 1 and 2.
- QC wonders how the capability ID is delivered to the RAN and how this is encoded.
- Ericsson agrees the capability ID needs to be exchanged over X2/Xn interface, but not within an RRC message
- Intel thinks we need to take care of backwards compatibility and RAN3 should first discuss this.
- CATT thinks there might be an issue due to the fact that the current fields for UE capability are mandatory

⇨ RAN2 understands the capability ID needs to be exchanged over X2/Xn interface.
⇨ Offline discussion 206 - Draft LS to RAN3 on exchange of Capability ID (Nokia)

Agreement:
1. Send an LS to RAN3 to ask them whether an X2/Xn solution would be sufficient or if we need to impact RRC

R2-1914017 Draft LS to RAN3 on exchange of Capability ID Nokia
⇨ LS approved in R2-1914023

R2-1914023 LS to RAN3 on exchange of Capability ID Nokia
⇨ Approved unseen

R2-1912673 Introduction of UE radio capability ID in inter-node RRC messages ZTE Corporation, Sanechips draftCR Rel-16 38.331 15.7.0 B RACS-RAN-Core

Association of PLMN assigned ID

R2-1912406 Remaining issues on UE capability ID Huawei, HiSilicon discussion Rel-16 RACS-RAN-Core

PLMN-wide filter

R2-1912206 Re-consideration on PLMN-wide Filter CATT discussion Rel-16 RACS-RAN-Core

R2-1912207 Draft LS on PLMN-wide Filter CATT LS out Rel-16 RACS-RAN-Core To:SA2 Cc:RAN3

Other aspects

R2-1912249 Some remaining issues on UE capability ID Spreadtrum Communications discussion R2-1909091

R2-1912250 Filter ID for the selection of UE capability ID Spreadtrum Communications discussion R2-1909090

6.5.3 Segmentation of UE radio capabilities

Stage 3 CR

R2-1912810 Introduction of UECapabilityInformation segmentation in 36.331 MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO, Qualcomm Incorporated draftCR Rel-16 36.331 15.7.0 B RACS-RAN-Core
- ZTE has a comment on the 38.331 CR endorsed last time: the segmentEndIndication should be optional.
- Mediatek confirms this is optional in this 36.331 CR
- remove the addition to the field description for UECapabilityInformation

⇨ endorsed in principle in R2-1914018 with the change above
⇨ update 38.331 CR correspondingly in R2-1914019

R2-1914018 Introduction of UECapabilityInformation segmentation in 36.331 MediaTek Inc., CATT, Ericsson, Spreadtrum Communications, ZTE Corporation, Sanechips, OPPO, Qualcomm Incorporated_
⇨ endorsed in principle

R2-1914019 Introduction of UECapabilityInformation segmentation in 38.331 ZTE Corporation
⇨ endorsed in principle (unseen)

RRC processing delay and other aspects

R2-1912407 Remaining issues on UE capability segmentation Huawei, HiSilicon discussion Rel-16 RACS-RAN-Core
- Discussed together with next paper

R2-1912831 Remaining issues for RRC Segmentation Ericsson discussion Rel-16 RACS-RAN
- Samsung has some sympathy for this but not ready to take a decision now
⇨ No agreement yet. Companies need more time to check. Come back in the future

R2-1912513 Further considerations for the segmented UECapabilityInformation Samsung discussion Rel-16 RACS-RAN-Core

6.6 Study on NR non-terrestrial network

(FS_NR_NTN_solutions; leading WG: RAN3; REL-16; started: Jun 18; target; Dec 19; SID: RP-190710). Documents in this agenda item will be handled in a break out session
Time budget: 0.5 TU
Tdoc Limitation: 6 tdocs

6.6.1 General

Rapporteur input
Including output of email discussion [107#61][NR/NTN] Rapporteur Running TP (Thales)
Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

R2-1913406 [107#61][NR/NTN] Rapporteur Running TP THALES pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions Late
=> TP is revised R2-1913969

R2-1913969 [107#61][NR/NTN] Rapporteur Running TP THALES pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions Late
=> The TP is agreed

R2-1914165 Outcomes of NTN offline1 discussion Thales
=> Noted

R2-1914166 Outcomes of NTN offline2 discussion Thales
=> Noted

✉ **[107bis#66][NTN] Running TP (Thales)**
Running TP capturing new agreements in this meeting and removing editor's notes
Incorporate new pedestrian requirement changes
Intended outcome: Running TP
Deadline: Next Meeting

6.6.2 Requirements and Scenarios

Contributions on overall requirements and scenario prioritization. Key issues and requirement related to one of the areas identified below should be submitted in those AIs.

Not treated

R2-1912405 Revision to Non-Terrestrial Networks scenarios HUGHES Network Systems Ltd pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions

R2-1912666 Consideration on the limited C-RNTI size in NTN ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions R2-1909258

R2-1912667 [DRAFT] LS on handling the limited size of C-RNTI in NTN (FS_NR_NTN_solutions) ZTE Corporation, Sanechips LS out Rel-16 FS_NR_NTN_solutions R2-1909259 To:RAN1; Cc:RAN3

R2-1913465 Revisions of usage scenarios for NTN THALES pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions Late

6.6.3 User Plane

6.6.3.1 MAC Enhancements

Contributions related to MAC enhancements (e.g. DRX, HARQ, RA enhancements) and any other identified issues
Additional timers can be treated in later phases of the work
Impact of HARQ on other procedures and impact of propagation delay to user plane procedures (e.g. RA)
Contributions on aspects that are already covered in the email discussions are highly discouraged
Including output of email discussion [107#60][NR/NTN] RACH capacity evaluation and procedures (ZTE)

R2-1912695 DRX HARQ RTT enhancements for NTN Nomor Research GmbH discussion Rel-16 38.821
=> The TP is revised in R2-1914056

R2-1914056 DRX HARQ RTT enhancements for NTN Nomor Research GmbH discussion Rel-16 38.821
- LG doesn't think the offset for HARQ RTT is not needed
=> The TP is agreed

R2-1913173 Further consideration on HARQ configuration in NTN CMCC,Huawei,HiSilicon,Sony,KT Corp. discussion Rel-16 FS_NR_NTN_solutions R2-1912926
=> Revised in R2-1914197

R2-1914197 Further consideration on HARQ configuration in NTN CMCC,Huawei,HiSilicon,Sony,KT Corp., NEC, Nomor discussion Rel-16 FS_NR_NTN_solutions R2-1912926
=> Noted

R2-1914198 TP on HARQ configuration in NTN CMCC, Nomor Research GmbH, Huawei, HiSilicon, Sony, KT Corp., NEC, Oppo, Nokia, ZTE, Ericsson, ETRI
- Mediatek is concerned if we do this on a per logical channel basis.
=> Change FFS to "can be discussed in WI phase"
=> The TP is agreed with the change above (rapporteur will make the change)

R2-1912664 Report of [107#60] [NR/NTN] RACH capacity evaluation and procedures (ZTE) ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions
=> Noted

R2-1912665 TP on RACH capacity evaluation and procedures ZTE Corporation, Sanechips,China Southern Power Grid Co., Ltd discussion Rel-16 FS_NR_NTN_solutions
=> The TP is revised in R2-1914069

R2-1914069 TP on RACH capacity evaluation and procedures ZTE Corporation, Sanechips,China Southern Power Grid Co., Ltd discussion Rel-16 FS_NR_NTN_solutions

=> CATT will bring a paper to discuss other open
=> The TP is agreed

Not treated

R2-1912159 Discussion on Random Access Procedure for NTN CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1912160 Consideration on the SPS/CG for NTN CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1912232 Asymmetric UL and DL frame timing at gNB side Spreadtrum Communications discussion

R2-1912570 Impact of disabling HARQ on DRX PANASONIC R&D Center Germany discussion R2-1909277

R2-1912654 On Analysis of RACH Capacity in NTN Mediatek India Technology Pvt. discussion R2-1908856

R2-1912698 HARQ process selection and logical channel prioritization Nomor Research GmbH discussion Rel-16 38.821

R2-1912926 Further consideration on HARQ configuration in NTN CMCC,Huawei,Sony, KT Corp. discussion Rel-16 FS_NR_NTN_solutions Revised

R2-1913083 Further consideration on MAC enhancements ZTE Corporation, Sanechips discussion FS_NR_NTN_solutions

R2-1913335 Left issues on random access procedure in NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1913336 Discussion on DRX operation in NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1913337 Discussion on UL scheduling enhancement in NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1913338 Impacts of disabling HARQ on LCP OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1913388 Discussion on LCP procedure for NTN Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions R2-1911286

R2-1913581 On uplink enhancements for NTN Ericsson discussion Rel-16 FS_NR_NTN_solutions

R2-1913582 DRX adaptions for NTN Ericsson discussion Rel-16 FS_NR_NTN_solutions

R2-1913583 Remaining aspects on Random access for NTN Ericsson discussion Rel-16 FS_NR_NTN_solutions

R2-1913784 Random access without UE location information Huawei, HiSilicon discussion Rel-16 FS_NR_NTN_solutions

R2-1913785 Random access with UE location information Huawei, HiSilicon discussion Rel-16 FS_NR_NTN_solutions

R2-1913786 RACH resource configuration and utilization in NTN Huawei, HiSilicon discussion Rel-16 FS_NR_NTN_solutions

R2-1913844 Scheduling enhancement in NTN LG Electronics Inc. discussion Rel-16 FS_NR_NTN_solutions R2-1904730

R2-1913869 Discussion on DRX operation associated with disabling HARQ feedback LG Electronics Polska discussion Rel-16 FS_NR_NTN_solutions

R2-1913876 Common delay for initial access ETRI other Rel-16

6.6.3.2 RLC and PDCP Enhancements

Contributions on this topic related to RLC reordering (e.g. timers and SN space) and any other identified issues.
Contributions on this topics will not be treated in RAN2#106 until RAN1 has done some progress

R2-1914062 TP editorial corrections Nomor

=> editor notes will be removed from the final version of the TR and the rapporteur will provide the update next meeting
=> Noted

R2-1913584 Remaining aspects on RLC and PDCP Ericsson discussion Rel-16 FS_NR_NTN_solutions
=> Not treated

6.6.4 Control Plane

R2-1913585 Satellite identifier in 3GPP NTN Control Plane THALES discussion Rel-16 38.821 R2-1908843

Proposal 1: UE to search satellite beam/cell/satellite ephemeris by detecting PCI linked NR PSS/SSB.
- ZTE thinks that maybe we can treat this in Ericsson email discussion
- Nokia agrees with what the paper says. Huawei thinks that this is legacy behavior.

=> Noted

R2-1913930 Considerations on the use of satellite Id in NTN Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions R2-1910695
- Ericsson explains that we already have agreed to not have a satellite ID. Nokia explains that this is just to capture it as some companies are still proposing whether it is needed or not.

=> Noted

R2-1913563 Clarification on satellite beam and PCI mapping THALES, ERICSSON pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions R2-1908843
=> TP revised in R2-1914055

R2-1914055 Clarification on satellite beam and PCI mapping THALES, ERICSSON, Nokia pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions R2-1908843
=> The TP is agreed

Not treated

R2-1912977 Location based mobility enhancement NEC Telecom MODUS Ltd. discussion

R2-1913534 Clarification on satellite beam and PCI mapping THALES discussion Rel-16 38.821 Withdrawn

R2-1913926 UE positioning requirements in NTN Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions R2-1910693

6.6.4.1 Mobility

Solutions addressing additional mobility issues and solutions for GEO and LEO based systems, including CHO specific aspects related to NTN, and positioning.
Contributions on aspects that are already covered in the email discussions are highly discouraged
Including output of email discussion [107#62][NR/NTN] TP Mobility (InterDigital)
Including output of email discussion [107#63][NR/NTN] Feeder link switch TP (Ericsson)

R2-1913604 Summary of Email Discussion [107_62] TP Mobility (InterDigital) InterDigital discussion Rel-16 FS_NR_NTN_solutions Late
=> Noted

R2-1913605 TP on NTN Mobility Issues and Solutions InterDigital discussion Rel-16 FS_NR_NTN_solutions R2-1910962 Late
=> Revised in R2-1914194

R2-1914194 TP on NTN Mobility Issues and Solutions InterDigital discussion Rel-16 FS_NR_NTN_solutions R2-1910962 Late
=> The TP is agreed

R2-1912701 Report of email discussion [107#63][NR/NTN] Ericsson discussion Late
=> Revised in R2-1914196

R2-1914196 Report of email discussion [107#63][NR/NTN] Ericsson discussion Late
=> Check if the references to 8.8 is the right reference and if not delete it.
=> The TP is agreed with the change above (rapporteur will check the reference again)

Location reporting

R2-1913493 UE positioning in legacy satellite communication systems for 5G NTN THALES discussion Rel-16 FS_NR_NTN_solutions R2-1908844
=> Thales will create a TP capturing issues and solutions from the contributions in this meeting
=> Noted

R2-1912595 Make before break for NTN Ericsson discussion Rel-16 R2-1911274
- Huawei is concerned as there is no NR make before break feature. Only LTE.
=> Ericsson will write a TP for next meeting in the mobility section of the TR using a similar structure and the details can be discussed in the WI phase.
=> Noted

R2-1913923 Discussion on fixed vs. steerable beams in NTN LEO Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions
- Thales thinks this is an interesting subject but there is still work to do here as there are a lot assumptions.
- Ericsson thought that the steerable beams were down-prioritized in SI and doesn't understand why we are adding more work at this point in time.
- Nokia explains that there is a desire to add this to the WI so we should discuss it.
- Vodafone also thinks we need more time and is not quite sure what we are adding to the TR as this are well known observations.
- Thales doesn't think that downprioritization mean to not treat it.
=> Noted

Not treated

R2-1912155 Mobility Issue for LEO in NTN System CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1912157 Measurement Issues for NTN System CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1912668 Location report in NTN ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions R2-1909266

R2-1912669 Consideration on measurements in NTN-TN service continuity ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions R2-1909260

R2-1912712 Conditional Handover for Non-Terrestrial Networks Intel discussion Rel-16 FS_NR_NTN_solutions

R2-1912923 Grouping and Automatic Reconfiguration for Handover Enhancement in LEO NTN Mediatek India Technology Pvt. discussion R2-1905702

R2-1912939 Differentiating steerable and moving cells of LEO CMCC discussion Rel-16

R2-1912940 Using beam footprint information for GEO mobility CMCC discussion Rel-16 R2-1909439

R2-1912964 Broadcast Handover in LEO-Satellite based NTN Mediatek India Technology Pvt. discussion R2-1903062

R2-1912973 Service continuity between TN and NTN NEC Telecom MODUS Ltd. discussion

R2-1913339 Discussion on handover procedure for NTN OPPO discussion Rel-16 FS_NR_NTN_solutions

R2-1913346 Considerations on CHO in NTN LG Electronics discussion Rel-16 FS_NR_NTN_solutions

R2-1913354 Location report in NTN Sony discussion Rel-16 FS_NR_NTN_solutions R2-1909903

R2-1913355 Bulk handover signalling for mobility enhancement in NTN Sony discussion Rel-16 FS_NR_NTN_solutions R2-1909908

R2-1913387 Baseline NTN-TN service continuity and mobility mechanism HUGHES Network Systems Ltd discussion Rel-16 Late

R2-1913603 Conditional measurement configuration for LEO NTN InterDigital discussion Rel-16 FS_NR_NTN_solutions

R2-1913791 Service continuity between terrestrial network (TN) and non-terrestrial network (NTN) HUGHES Network Systems Ltd discussion Rel-16 38.821

R2-1913866 Signalling Delay in NTN LG Electronics Inc. discussion Rel-16 FS_NR_NTN_solutions R2-1911110

R2-1913924 Pre-trigger based mobility for NTN LEO with fixed beams Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions R2-1910694

R2-1913925 To agree on the remaining NTN-TN service continuity aspects Nokia, Nokia Shanghai Bell discussion Rel-16 FS_NR_NTN_solutions

R2-1913927 Consideration on LEO mobility in NTN CENC discussion

6.6.4.2 Idle mode

Identify RAN2 specific issues/aspects to address related to tracking area management
Paging capacity analysis and solutions.
Impacts to cell selection reselection.
Contributions should address aspects of LEO and GEO separately (i.e. different sections/proposal within each contribution)
Including output of email discussion [107#64][NR/NTN] Cell selection and reselection (LG)
Contributions on aspects that are already covered in the email discussions are highly discouraged

R2-1913345 Report of email discussion [107#64][NTN] Cell selection&reselection LG Electronics discussion Rel-16 FS_NR_NTN_solutions Late
=> The TP is revised in R2-1914070

R2-1914070 Report of email discussion [107#64][NTN] Cell selection&reselection LG Electronics discussion Rel-16 FS_NR_NTN_solutions Late
- LG explains that we have to discussion cell identification information

Proposal 5: Discuss further whether indication of the satellite type of an NTN cell is required even if different PLMN is deployed between GEO and LEO.

- Thales thinks we should have both option. Vodafone thinks that in the WI phase we will need to be able to distinguish and identify whether we have a GEO cell or LEO cell.
- Ericsson explains that the PLMN ID provides enough distinction.

=> Both options will be captured in the TR and we will leave final decision for WI phase. The TP for this will be provided by LG next meeting
=> The TP is agreed

R2-1912597 Ephemeris data Ericsson discussion Rel-16
=> The TP is revised in R2-1914195

R2-1914195 Ephemeris data Ericsson discussion Rel-16
- Ericsson proposes to continue the discussion over email
- Nokia would like to know what would be the typical size of what would be broadcast.

=> Moved to email discussion

✉ **[107bis#67][NTN] Ephemeris data handling (Ericsson)**
Intended outcome: Agreeable proposals and TP
Deadline: Next Meeting

Tracking area management

R2-1914199 TP on tracking area management in NTN ZTE, Sanchips, Huawei, Ericsson, LG, CATT, Oppo, Hughes
- Nokia would like some time to review
=> The TP will be included in the rapporteur running TP to be reviewed until next meeting
=> Noted

R2-1912670 Further consideration on tracking area management in NTN ZTE Corporation, Sanechips discussion Rel-16 FS_NR_NTN_solutions R2-1909263
=> Noted

Not treated

R2-1912079 Left issue on idle mode mobility for NTN OPPO discussion FS_NR_NTN_solutions

R2-1912156 Cell Selection and Reselection Issue between NTN and TN System CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1912158 Paging Load in Two Sub-options of Fixed TA CATT discussion Rel-16 FS_NR_NTN_solutions

R2-1912655 Improving Cell Reselection using Next Cell Information in NTN Mediatek India Technology Pvt. discussion R2-1908857

R2-1913175 Discussion on TA management and cell reselection in NTN Huawei, HiSilicon pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions

R2-1913176 Discussion on inactive state in NTN Huawei, HiSilicon pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions

R2-1913345 Report of email discussion [107#64][NTN] Cell selection&reselection LG Electronics discussion Rel-16 FS_NR_NTN_solutions Late

R2-1913348 Remaining issues of tracking area management in NTN LG Electronics discussion Rel-16 FS_NR_NTN_solutions

R2-1913580 Methods of Paging in GEO Satellite-Based 5G Networks HUGHES Network Systems Ltd discussion Rel-16 38.821

R2-1913917 Considerations on satellite location sharing ETRI discussion Rel-16 R2-1911424

6.6.4.3 Other

Not treated

R2-1912696 Multiple PLMN Identities in NTN Nomor Research GmbH discussion Rel-16 38.821 R2-1908988

R2-1912697 System Information in NTN Nomor Research GmbH discussion Rel-16 38.821 R2-1908989

R2-1913174 Service continuity and feeder link switch in NTN Huawei, HiSilicon pCR Rel-16 38.821 0.7.0 FS_NR_NTN_solutions

R2-1913347 Dual connectivity use cases in NTN LG Electronics discussion Rel-16 FS_NR_NTN_solutions

6.7 NR Industrial Internet of Things (IoT)

(NR_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: RP-192324)
Time budget: 3 TU
Tdoc Limitation: 12 tdocs

6.7.1 General

Rapporteur input etc.

LS in

R2-1912027 Reply LS on propagation delay compensation for reference time information delivery (R1-1909906; contact: Nokia) RAN1 LS in Rel-16 NR_IIOT-Core To:RAN2, RAN4, RAN5
- Nokia indicate that R1 are still working on propagation delay compensation and suggest we wait for further updates from R1.
- CMCC think that R1 is finished on the high level work and have concluded that TA is used, and the rest in R1 and R4 is mainly accuracy work.
- Samsung think R1 hasn't agreed to use TA, this is just an example.
- Oppo think it is clear from R1 that TA based method is used and think we can wait.

⇒ **noted**

Work Plan

R2-1913450 Updated Work Plan for NR Industrial IoT WI Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

✉ **[107bis#05][IIOT] Running CR 38300 (Nokia)**
Intended outcome: Endorsed Running CR, Capture agreements incl 107bis
Deadline: 2 weeks
=> Endorsed in R2-1914009

✉ **[107bis#41][IIOT] Running CR 38331 (Ericsson)**
Intended outcome: CR submitted to next meeting, Capture agreements incl 107bis, include the whole WI
Deadline: Next Meeting

✉ **[107bis#42][IIOT] Running CR 38321 (Samsung)**
Intended outcome: CR submitted to next meeting, Capture agreements incl 107bis
Deadline: Next Meeting

✉ **[107bis#43][IIOT] Running CR 38323 (LG)**
Intended outcome: CR submitted to next meeting, Capture agreements incl 107bis
Deadline: Next Meeting

6.7.2 TSC

6.7.2.1 Accurate reference timing

Accurate reference timing delivery from gNB to UE using broadcast and unicast RRC signalling (with EUTRA Rel-15 signalling solution as baseline) for synchronization requirements defined in TS 22.104)

Propagation Delay compensation

Chair: We wait for further input from R1

R2-1913267 Propagation Delay Compensation by the gNB MediaTek Inc. discussion Rel-16 NR_IIOT-Core R2-1910073

R2-1912311 Propagation delay compensation for reference time vivo discussion

R2-1912549 On downlink delay compensation Ericsson discussion NR_IIOT-Core

R2-1912927 Analysis on RAN1 LS on propagation delay compensation CMCC discussion Rel-16 NR_IIOT-Core

R2-1913645 Discussion of RAN1 LS on propagation delay compensation and way forward Qualcomm Incorporated discussion

R2-1913470 Propagation delay compensation for accurate reference timing Huawei, HiSilicon discussion NR_IIOT-Core
=> Revised R2-1913962

R2-1913962 Propagation delay compensation for accurate reference timing Huawei, HiSilicon discussion NR_IIOT-Core

General

R2-1912897 Signalling aspects for accurate reference timing delivery in TSC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-16 NR_IIOT-Core R2-1908859
DISCUSSION
P3
- Intel are not sure this is needed, and also do not know if it works. QC agrees, and think the timing would not be different in any reasonable deployment. Xiaomi agrees.
- Docomo think we might need to take mobility into account, but think there is extra Xn latency.
- Oppo think we should not discuss handover.
- MTK wonder if the intention is to change master clock. ZTE think that only he cell is changed. Ericsson think that the gNBs are synchronized to the same clock.
- Nokia support the ZTE intention to take handover into account, but think this may be for the next release. Samsung also support the intention. CMCC also support this intention, but agrees it can be addressed in the next release.

P4
- Ericsson think this is too course and think it is better to indicate as a integer number. Huawei support Ericssons principle but think we don't need 10ns granularity. Nokia wold be ok either way, but think the range should be wider up to 1ms or 0.5ms.
- CATT think we can use the LTE way but need more bits for wider range.
- CMCC think we don't need to extend the range
- QC wonders why 10ns granularity would be good. Ericsson think that fine grained granularity is needed in the lower end of the range.
- Nokia think that in IEEE uncertainty is specified similar to the LTE way.
- Chair we will decide the encoding for the uncertainty without much discussion next meeting. The majority view seems to be the ZTE proposal.

⇒ **SIB9 is used for accurate reference timing delivery by broadcast.**

⇒ ***DLInformationTransfer* message is used for serving cell's accurate reference timing delivery by unicast.**

⇒ **R2 assumes there will be no particular functionality to ensure accurate timing distribution at the moment of handover in Rel-16**

R2-1912548 Remaining issues for reference time delivery Ericsson discussion NR_IIOT-Core
- ZTE wonders how many bits for uncertainty. Ericsson replies 17bits.
- Samsung think 17 bits is too much. CMCC agrees, and think 11 or 12 bits are sufficient, and think 1ms uncertainty is not required.
- Nokia think we just need to decide on something.
- Docomo think the safe approach is the LTE way with 12 values
- Nokia proposes 12 bits times 25ns granularity.

P1
- CMCC think this value is too large.

P7
- Samsung think that the gNB can determine this by reception of TSC assistance info.
- Nokia think the gNB will need to know which UE need time, but think also non-TSC use cases can be supported if time ref can be requested by the UE.
- Samsung think it would be ok to ask SA2.
- QC support proposal 7 but would be ok with a UE request method
- Two ways a) Ue request unicast reference time (e.g. by RRC), b) gNB determine that reference time need to be provided by some other way.
- CATT think that we need a capability bit
- Ericsson think we can just ask SA2 without requesting new work.
- Huawei think we should rely on UE request.

⇒ **The uncertainty of reference time info is unspecified, if the uncertainty field is absent.**

⇒ **We send an LS: RAN2 asks SA2 to provide information on whether and how the need for reference time information can be determined for any given connected UE**

Offline 36, Draft LS to SA2 on Reference time delivery in R2-1914185 (Ericsson)

R2-1914185 [DRAFT] LS to SA2 on reference time delivery Ericsson LS out Rel-16 NR_IIOT To:SA2

⇒ **Add ", in Rel-16" to the end of the 3rd paragraph.**

⇒ **With this change, approved, in R2-1914213**

R2-1913451 Remaining issues for accurate reference time delivery Nokia, Nokia Shanghai Bell, NTT DOCOMO discussion Rel-16 NR_IIOT

⇒ **noted**

R2-1912208 Open Issues of Reference Timing Delivery CATT discussion Rel-16 NR_IIOT-Core R2-1908822

⇒ **noted**

R2-1912498 Leftover Issues on Accurate Timing Delivery Samsung discussion Rel-16 NR_IIOT-Core

P1

- QC wonder why we need to specify. Chair wonder if we then require all cells e.g. in DC to be SFN synchronized.
- Samsung think the Pcell and Scell may result in different timing.
- Ericsson think that for broadcast there is no issue, as the SIB is received on Pcell.
- MTK think we don't keep track of which cell the message arrived on so we should have a reference.
- Huawei support that the Pcell is the reference.

⇒ **FFS if The referenceSFN field indicates the time at the ending boundary of the SFN indicated by referenceSFN of PCell.**

R2-1912951 Discussion on IE design of TimeReferenceInfo used for IIOT CMCC discussion Rel-16 38.331 NR_IIOT-Core R2-1909442

⇒ **Noted**

R2-1913471 Remaining issues of reference time delivery Huawei, HiSilicon discussion NR_IIOT-Core

=> Revised R2-1913963

R2-1913963 Remaining issues of reference time delivery Huawei, HiSilicon discussion NR_IIOT-Core

P2

- Ericsson think this is not needed as we have a unicast method.

⇒ **Noted**

R2-1913643 Reference timing delivery determination by RAN Qualcomm Incorporated discussion

⇒ **Noted**

R2-1913648 Draft LS on signalling of reference timing delivery determination information Qualcomm Incorporated LS out To:RAN3, SA2

R2-1912900 TP for accurate reference timing delivery in TSC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd draftCR Rel-16 38.331 15.7.0 B NR_IIOT-Core R2-1908886

Further optimizations

R2-1912898 Other issues related to accurate reference timing delivery in TSC ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-16 NR_IIOT-Core R2-1908860

6.7.2.2 Scheduling Enhancements

6.7.2.2.1 CG and SPS for TSC - General and configuration impact

Including output of email discussion [107#55][NR IIOT] CG/SPS for TSC (Oppo). Including support for TSC message periodicities with non-integer multiple of NR supported CG/SPS periodicities, configuration and ranges and limits.

Email Discussion

R2-1912726 Email discussion summary of [107#55][IIOT] CG/SPS for TSC OPPO discussion Rel-16 Late
=> Revised in R2-1913952

R2-1913952 Email discussion summary of [107#55][IIOT] CG/SPS for TSC OPPO discussion Rel-16 Late
DISCUSSION
P1
- Ericsson think we should wait for R1 reply to understand if 16 is possible. It should be possible.
- LG think that for SPS DL 8 should be sufficient as time requirements can be met also by dynamic sched.
- Nokia think we can assume 16 for the signalling.
- Docomo indicate that in R1 didn't think it was needed as dyn sched can meet the time requirements. R1 has replied that 8 is sufficient.
- Ericsson think R1 replied something different than what we asked.
- Oppo think R1 didn't analyse up to 16.

P7
- QC wonders what is the use case for this. Samsung think that when we have 2 flows where one is CBR, and the other is CBR with silence periods. ZTE think that type 2 is for continuous traffic and type 1 for event triggered traffic. Huawei think we don't need to restrict.
- Ericsson also don't see any benefit with allowing both.

P8
- Nokia agrees with the proposal and think we can even have finer granularity e.g. n*2symbols, and think it doesn't cause any additional cross slot boundary issues. MTK think that then P14 is a consequence.
- Huawei think that the integer slot is a starting point.
- CATT would like to check with R1 on the slot boundary potential issue for the N*2symb or 7 symb.

P10
- MTK would like to ensure that HARQ processes are not shared between CG. Otherwise the timer handling gets complicated. QC agrees there maybe an issue, so there may need to be a restriction.
- Docomo think that for configurations where the UE anyway only can use one CG in a group, the group can share HARQ process. LG agrees and think this is network implementation.
- CATT think there is an issue of HARQ process pool fragmentation, and would like to avoid frequent RRC reconfiguration. LG think this is a small problem

P12
- QC wonders what is the assumed unit for periodicity. Samsung think it is symbol for UL and slot for DL.
- QC would like to check

P13
- Huawei would prefer the legacy confirmation as there may be signalling load concerns with the new MAC CE.

⇒ **R2 assumes to support 8 as the maximum number of simultaneously activated SPS configurations per BWP per serving cell.**

⇒ **Introduce SPS/CG index to identify each SPS/CG among multiple SPS/CG configurations, i.e., as in Rel-15 LTE.**

⇒ **The association between "state" (used in the joint release DCI) and the CG configuration(s) for type-2 CG is configured via RRC message.**

⇒ **Each CG configuration is always configured independently, as in Rel-15 LTE.**

⇒ **The association between "state" (used in the joint release DCI) and the SPS configuration(s) is configured via RRC message, if RAN1 working assumption for joint release for multiple SPS configuration is confirmed.**

⇒ **Each SPS configuration is always configured independently, as in Rel-15 LTE.**

⇒ **Support simultaneous Type 1 & 2 CG configurations in a BWP.**

⇒ **CG periodicities of any integer-multiple of one slot (FFS if we go even lower, e.g. 2 symb, 7 symb) below a maximum value should be supported. FFS on the maximum value of integer N.**

⇒ **SPS periodicities of any integer-multiple of one slot below a maximum value should be supported in Rel-16. FFS on the maximum value of integer N.**

⇒ **R2 assumes that HARQ offset parameter is explicitly configured by the network for each CG/SPS configuration.**

⇒ **For CG, HARQ Process ID = [floor(CURRENT_symbol/periodicity)] modulo nrofHARQ-Processes + harq-procID-offset.**

⇒ **FFS (for checking) if For SPS, HARQ Process ID = [floor(CURRENT_slot/periodicity)] modulo nrofHARQ-Processes + harq-ProcID-offset, Where CURRENT_slot = [(SFN × numberOfSlotsPerFrame) + slot number in the frame].**

⇒ **Introduce a new confirmation MAC CE format in Rel-16, which reflects the confirmation of multiple configured grant configurations**

Traffic CG/SPS alignment

R2-1913622	Configured Grant enhancements for TSC traffic Rel-16 FS_NR_IIOT R2-1911380	Sequans Communications	discussion
R2-1913453	Support for arbitrary TSC message periodicities Rel-16 NR_IIOT	Nokia, Nokia Shanghai Bell	discussion
R2-1912928	Support on TSN periodicities of non-integer multiple CG-SPS periodicities Rel-16 NR_IIOT-Core	CMCC	discussion

On the 3 tdocs above:

S Support configuration of "pseudo-periodic" pattern, matching as far as possible traffic pattern (either from modifying existing CG, or selecting subset of existing CGs)

N: Cyclic SPS/CG shifting should be used as basis for further work on support for arbitrary TSC periodicities.

C: it is proposed to extend the function of the current PDCCH DCI of activation of Type 2 CGs/SPS configuration to update the start offset in time domain of CG/SPS configuration, which demands RAN1's investigation as well.

DISCUSSION

- Chair point out that we already have agreed that overprovisioning / multiple CG/SPS can address the traffic misalignment issues.
- MTK wonder if the resource waste of overprovisioning is really a problem as the network will know when the traffic will happen. Nokia think there will be collisions between UEs and think there will be some jitter.
- Samsung think we don't need any of these solutions. LG agrees with Samsung. Intel also. ZTE too, Ericsson also think there is no need, and think it would be difficult to agree.
- Oppo think that the overhead is an issue and we need additional solution, and prefer S,
- Docomo think the additional solutions has lower priority. Overprovisioning etc is not perfect solution but will resolve the issues.
- CMCC think that in the TSN network the UE is a hub or gateway, and think without additional solutions there will be a lot of resource waste ..
- Nokia think that overprovisioning requires many configurations, more that the currently planned 8/12.

- CATT think we should also consider this in the light of SFN wraparound, and a UE autonomous adjustment approach can resolve this. Huawei think that a pattern solution could address this.
- Nokia think that for DL something is needed, SPS cannot resolve this by over provisioning. MTK think for DL dynamic scheduling is ok. ZTE and LG also think DL is not an issue.

- Chair summary: there is significant support to have some additional solution, at current meeting, the pattern approach (S) seems to have the strongest support. However there is also strong support to not do anything, i.e. resolve the Traffic/CG-SPS misalignment by overprovisioning / multiple configurations (which we already agreed earlier)
- Samsung proposes to have the working assumption to not look for additional solutions further in this release.

⇒ **3 docs above noted**

R2-1912929 Draft LS on support of the activation DCI of Type 2 CGs/SPS to adjust the start offset CMCC LS out Rel-16 NR_IIOT-Core To:RAN1

R2-1913468 Solutions to mitigate the periodicity misalignment between TSC traffic and CG/SPS Huawei, HiSilicon discussion NR_IIOT-Core

R2-1912246 Handling of periodicity misalignment between CG periodicity and TSN traffic periodicity Spreadtrum Communications discussion

R2-1913043 Remaining issue on scheduling ehancement for TSN ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1910396

R2-1912318 SPS and CG configuration issue on the partial overlapping TSN traffic pattern vivo discussion R2-1910010

R2-1912724 Scheduling enhancements for TSC network OPPO discussion Rel-16

R2-1913133 Periodicity misalignment between TSN traffic and SPS/CG LG Electronics Inc. discussion NR_IIOT-Core

R2-1912316 Discussion on the periodicity misalignment between TSC traffic and SPS/CG vivo discussion R2-1910006

Collisions

R2-1913455 SPS collisions with multiple SPS configurations Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT R2-1909491

Configuration etc

R2-1912550 SPS and UL CG remaining configuration aspects Ericsson discussion NR_IIOT-Core

R2-1912494 Support of Multiple Active CG/SPS Configuration Samsung discussion Rel-16 NR_IIOT-Core

R2-1912715 Support of multiple SPS and CG configurations Intel discussion Rel-16 NR_IIOT-Core

R2-1912915 Further discussion on scheduling enhancement for TSN traffic Lenovo, Motorola Mobility discussion Rel-16 R2-1910288

6.7.2.2.2 CG and SPS for TSC - L2 impacts

Including CG SPS Confirmation, LCP impact if any etc.

LCP restrictions CG

R2-1913134 LCP enhancements for mapping between LCH and CG LG Electronics Inc. discussion NR_IIOT-Core

DISCUSSION
P3

- Ericsson comment that that if there is no configuration for a LCH, then there should be no restriction. Nokia think this is stage-3 details.

⇒ **A single LCH can be map to multiple CG configurations.**

⇒ **Multiple LCHs can be map to a single CG configuration.**

R2-1913664 LCP restrictions for configured grant Intel Corporation discussion Rel-16 NR_IIOT-Core

R2-1913266 Misalignment Between TSC and SPS/CG Periodicities MediaTek Inc. discussion Rel-16 NR_IIOT-Core R2-1910074

LCP restriction DG

R2-1912502 LCP Restriction on Reliability Samsung discussion Rel-16 NR_IIOT-Core

R2-1913458 LCP restrictions enhancements Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-1913642 LCP restriction enhancements for Industrial IoT Qualcomm Incorporated discussion

DISCUSSION on the three tdocs above

- LG think MCS-C-RNTI is not a good condition. QC agrees, CATT think that a MCS threshold should be used as a condition, the gNB can configure this as the gNB knows the coverage situation of the UE. Oppo think MCS-C-RNTI is a good.
- Docomo think MCS-C-RNTI is not a good condition, and support Nokia proposal 4. IDT Ericsson and Lenovo also support Fujitsu agrees that MCS-C-RNTI is not only for URLLC but can be used also e.g. for bad coverage.
- CMCC think R1 has introduced a new DCI format for URLLC.
- Samsung don't want to agree DCI indication in R2 but want to use R1 outcome of discussion.
- Chair: it seems the configured LCP restriction based on MCS or MCS-C-RNTI condition it not acceptable to a number of companies.

⇒ **R2 think it would be useful to introduce a new LCP restriction in the following way: The DCI that is scheduling PUSCH may include a specific indication. LCH configuration in RRC contains information on whether the LCH can utilize grant with this indication or not. R2 intends that this mechanism can be used to differentiate grants for traffic that requires high reliability.**

Offline 38, DRAFT LS to RAN1 on LCP restriction for Dynamic Grant in R2-1914187 (QC)

R2-1914187 [DRAFT] LS to RAN1 on LCP restriction for Dynamic Grant Qualcomm LS out Rel-16 NR_IIOT To:RAN1

⇒ **Approved in R2-1914214**

CG confirmation

R2-1912725 Discussion on confirmation MAC CE for TSC network OPPO discussion Rel-16

R2-1913143 Confirmation MAC CE for multiple CG configurations LG Electronics Inc. discussion NR_IIOT-Core R2-1911201

R2-1913472 Further discussion on Configured Grant Confirmation MAC CE Huawei, HiSilicon discussion NR_IIOT-Core

Other

R2-1912551 L2 aspects of SPS and UL CG Ericsson discussion NR_IIOT-Core

R2-1913738 L2 impacts on supporting IIoT traffic NTT DOCOMO, INC. discussion Rel-16 NR_IIOT-Core

R2-1913469 Remaining issues of LCP enhancement for TSC traffic Huawei, HiSilicon discussion NR_IIOT-Core

R2-1912930 Repetitions Transmission for SPS configurations CMCC discussion Rel-16 NR_IIOT-Core

R2-1912886 Scheduling enhancements for TSC traffic InterDigital discussion Rel-16 FS_NR_IIOT R2-1909601

R2-1912209 Remaining Issues on Multiple Active SPS/CGs CATT discussion Rel-16 NR_IIOT-Core

R2-1913454 CG and SPS occasions determination for new periodicities Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-1913353 Consideration on activation/deactivation for CG Type 1 Sony discussion Rel-16 NR_IIOT-Core R2-1909911

6.7.2.2.3 Other

Including systems aspects such as TSC assistance information, other L2 impacts if any,

TSC assistance info

R2-1913452 Periodicity and burst arrival encoding in TSCAI Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT
=> Revised in R2-1913934

R2-1913934 Periodicity and burst arrival encoding in TSCAI Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

- CMCC think similar papers were submitted to R3 and think R3 will consider this. Ericsson agrees that R3 can discuss based on input and ask by LS if they need to ask
- Ericsson wonders why we can't use Cg and SPS configurations as a baseline.
- Nokia think this is not sufficient.
- Vivo think TSC info should include absolute time info, not SFN. Samsung also think absolute time is used.
- Nokia think he SFN is only needed over the air, but the rest is an absolute time.
- QC think R2 should provide input on granularity, which is symbol level granularity, i.e. a few us.
- CMCC think we should discuss the unit.
- QC would be ok with the Nokia proposal.
- Nokia think that as we have non-integer periodicities 1us would make sense
- Ericsson wonder if we need uncertainty information as the granularity is very fine.

⇒ **Granularity of burst arrival time and periodicity signalled to RAN should be preferably 1 us.**

CB, Ericsson would like to check if FFS can be removed.

- Ericsson confirms that remove of FFS is ok

R2-1913636 DRAFT LS on granularity of periodicity and burst arrival time in TSCAI Qualcomm Incorporated LS out To:RAN3 Cc:SA2

- Nokia think we should remove the explanations on symbol duration
- Nokia think we should include something on absolute time, and suggest to recommend using RRC IE *referencetimeinfo*. QC think these are different things, are not certain that uncertainty is needed, think we should not be too specific
- Ericsson don't want to inform on anything beyond the agreement.
- Nokia think we can just send an LS with the agreement then.

Revised in R2-1914215, only include our agreement (QC)

R2-1914215 DRAFT LS on granularity of periodicity and burst arrival time in TSCAI Qualcomm Incorporated LS out To:RAN3 Cc:SA2

⇒ **Approved in R2-1914223**

R2-1913637 TSCAI Encoding: Granularity of burst arrival time and periodicity Qualcomm Incorporated discussion

R2-1912716 TSC assistance information Intel discussion Rel-16 NR_IIOT-Core

Miscellaneous

R2-1913646 More granularity for PDCP discardTimer Qualcomm Incorporated discussion R2-1910763

R2-1913467 On Layer 2 parameter values to support delay critical GBR QoS flows Huawei, HiSilicon discussion NR_IIOT-Core

R2-1912552 Miscellaneous issues with L2 impact Ericsson discussion NR_IIOT-Core

R2-1913135 Measurement gap skipping for TSN traffic LG Electronics Inc. discussion NR_IIOT-Core R2-1909831

6.7.2.3 Ethernet Header Compression

Specify Ethernet header compression based on structure-aware algorithm.
Including output of email discussion [107#54][NR IIOT] EHC (Vivo)

LS in

R2-1912006 Liaison response on Ethernet header compression (liaison-response-3GPP-RAN2-Ethernet-header-compression-0719-v01; contact: Ericsson, Nokia) GSMA LS in NR_IIOT To:RAN2

⇒ **noted**

Email Discussion

R2-1912312 Email discussion summary on EHC vivo discussion

DISCUSSION

P2

- Ericsson think more details may be needed. Ericsson think some part of EHC control info is in PDCP header, i.e. before SDAP.
- Vivo think there is no EHC information in the PDCP header.
- LG think that for UDC we agreed that UDC header is ciphered and we should apply the same here.
- Ericsson wonders if all EHC control info would then be ciphered.

P3

- Oppo think that PAD can be reconsidered and if PAD is removed the length field can be removed. Vivo think we can still keep the length field.
- Nokia think that Pad and length removal can be up to compressor implementation. Intel support this.
- QC think that we don't need to do padding removal.
- LG also think removal of padding is not important.
- Huawei think that Pad removal could be significant and that length field can be dynamic.
- Intel think we don't need to spend time on length field. CATT agrees and also think padding removal is not important.
- MTK think the main reason to do the EHC is because the packets are small, and pad removal is significant.
- Huawei think that compressor always need to do parsing to interpret the fields so padding removal should be possible.
- Oppo think e.g. ARP packet have different type and PCP and DEI subfields in Q-TAG cannot be compressed. Ericsson agrees that sometimes we might need to not compress some subfields.
- LG think the main discussion is if we have multiple formats or not. Nokia agrees.
- Nokia think we can have a single profile and if there are some packets that don't fit this profile we don't compress for those packets. Nokia would be ok to have multiple profiles but they should be static. LG agrees.
- Ericsson think that the format can be updated when context is updated. LG are ok with multiple formats but think we have not much time, and think a single format is ok.
- Vivo agree with Nokia. Intel also prefer to have a single format and we don't indicate a profile ID.
- ZTE think that we should have multiple formats differentiated by profile ID. Huawei would support multiple formats, we don't need many but only one is very restrictive. QC agree with Huawei. Samsung are ok with multiple formats.
- CATT don't know how many formats would need to be supported and think the Nokia proposal would work.

- LG think we should limit to static hardcoded formats. Futurewei agrees.
- MTK think we don't need to settle the format rigidly.
- Ericsson think that when the context is setup, it would be indicated which fields are static and which fields are sent. Then no particular profiles are needed.
- QC think at least 3 formats should be supported.
- Oppo think at least 4 formats. ZTE agrees.
- Intel think that Q-Tag is self decodable and need no separate format.
- LG think if we remove source and destination, we have removed most overhead with this, and this would be super simple. MTK think we can additionally compress type,

P6
- QC wonders if we need to have length field in order to remove padding.
- Ericsson think padding removal is complex. LG agrees. Nokia think the specification is simple.
- Huawei think that if we remove the type field, it means we interpret the type, and know the length and padding removal should be very simple.
- Futurewei think that for the most common formats there is no length field and padding can be removed regardless length fileld.

P9
- Ericsson think that transmission would typically be reliable and repetitions would resolve the problem. Huawei think that feedback should be used. Intel agrees feedback is not needed. LG too and think PDCP duplication can be used. Samsung are concerned what happens at packet loss even if rare so we should have feedback. QC agrees.
- Docomo think it could depend on the scenario. Is it used only for URLLC scenario. Oppo wonders if there will always be a reverse link, and think we may need to support two cases. Nokia think there is always two directions.
- Nokia think the feedback would be very simple.
- Ericsson think if we have feedback then we need to tolerate delay and would typically be for low reliability. Samsung think no delay is added.
- LG think that proponents of feedback are assuming ack while ROHC uses nack.
- vivo think that the repetition solution is also not simple, e.g. when handling reestablishment.
- QC wonders what the concerns are for the feedback solution.
- MTK think the concerns with feedback were a) delay, b)
- Nokia think that we can start sending packets earlier with feedback.
- Ericsson wonder about the complexity, do we need more PDU format, feedback request etc.
- CATT also think feedback is good.
- LG think we need to allow unidirectional EHC
- Ericsson wonder if the PDCP SN is included in the feedback.
- Ericsson think that if we have feedback it would be nice to not have feedback for every uncompressed packet.

P12
- Ericsson think they are independent

P10
- QC think that if we avoid using control PDU we can port this solution and it is generic.

⇒ **The EHC function is in PDCP**

⇒ **The EHC header is located after the SDAP header, and it is ciphered**

⇒ **The EHC can removes the following fields: SOURCE/DESTINATION ADDRESS, TYPE, and EHC do not support multiple formats**

⇒ **FFS: Pad removal**

⇒ **For context establishment the compressor send the full header and the context ID via PDCP data PDU**

⇒ **ROHC and EHC are independent, e.g. from specification point of view they could both be configured for a DRB.**

⇒ **FFS if for context establishment the explicit feedback is sent via PDCP control PDU.**

Baseline feedback mechanism, enhancements not precluded:

⇒ **For context establishment the de-compressor sends an explicit feedback to the compressor after the establishment of the context, i.e. when a full header packet is received with a context id.**

⇒ **For context establishment the explicit feedback includes the "Context ID".**

⇒ **When the compressor receives the feedback it is confident that the context is successfully established, and from this time compressed header packets can be transmitted.**

⇒ **FFS if EHC is allowed to be configured for a unidirectional link.**

General

R2-1913881 Handling of new flow when the number of stored contexts are already equal to the MAX_CID SHARP Corporation discussion Rel-16 NR_IIOT-Core

R2-1912717 Details for Ethernet header compression solution Intel discussion Rel-16 NR_IIOT-Core

R2-1912901 Remaining issues for EHC in TSC ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1908862

R2-1912528 EHC header handling for IIoT Samsung Research America discussion NR_IIOT R2-1911001

R2-1912313 Remaining issues for EHC vivo discussion

R2-1912314 TP on TS 38.323 of EHC vivo discussion

R2-1912315 TP on TS 38.331 of EHC vivo discussion

R2-1912553 Ethernet header compression Ericsson discussion NR_IIOT-Core

R2-1912727 Discussion on Ethernet Header Compression OPPO discussion Rel-16

R2-1913265 Ethernet Header Compression Message Format MediaTek Inc. discussion Rel-16 NR_IIOT-Core R2-1910075

R2-1913456 Padding removal Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

R2-1913473 Discussion on EHC header format Huawei, HiSilicon discussion NR_IIOT-Core

R2-1913644 Principles for EHC header design Qualcomm Incorporated discussion

Feedback

R2-1912307 Remaining Issues on Ethernet Header Compression China Telecommunications discussion

R2-1912527 Feedback for EHC algorithm Samsung Research America discussion NR_IIOT R2-1910982

ROHC and EHC

R2-1913836 Discussion on performing ROHC LG Electronics Inc. discussion Rel-16 NR_IIOT-Core R2-1907557R2-1913457 Joint IP and Ethernet Header compression Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT

6.7.3 Intra-UE prioritization and multiplexing

NOTE RAN2 will deprioritize work on Intra-UE prioritization and multiplexing until R1 has made more progress, except for handling of deprioritized transmission (expectation that normal priority can be assumed for R2#108). Resource conflicts between dynamic grant (DG) and configured grant (CG) PUSCH and conflicts involving multiple CGs. UL data/control and control/control resource collision according to WID.

6.7.3.1 Handling of deprioritized transmissions

Including Summary on Deprioritized PDUs (CATT), deadline Tuesday Oct 8th.

R2-1912214 [107#80][NR IIOT] Summary on Deprioritized PDUs (CATT) CATT discussion Rel-16 NR_IIOT-Core Late
=> Revised in R2-1913955

R2-1913955 [107#80][NR IIOT] Summary on Deprioritized PDUs (CATT) CATT discussion Rel-16 NR_IIOT-Core Late

DISCUSSION
Simplest solution, rely on gNB to schedulde
- QC think that the gNB will not know if there is a de-prioritized transmission in the buffer as the timeline is not specified
- LG think both the option of network approach and UE approach may be needed. If a lot of CG resources can collide the UE approach seems better, but in other cases gNB approach is ok. Nokia agrees and think autonomous trex could be ok. Sequans agrees that both options may be needed and think CG should be used for autonomous retransmission. Docomo agrees. CMCC agrees as well. CMCC think that there may be cases when network don't recognize this.
- ZTE think autonomous transmission may increase the delay, and think the network approach is sufficient. Oppo think gNB only solution is ok, and think retransmission grant can be used for new transmission. Samsung think gNB solution is sufficient. A smart gNB will generate a grant when there is another transmission detected that can have collided with a CG. Samsung think that there can be configurations with which there are not so many collision.
- Ericsson agrees with a network based solution, and think a collision is only for high priority data transmissions and should not be ffrequent.
- Lenovo think we should allow the UE to retransmit in CG resource
- Sony think a UE solution is needed, and the UE behaviour is different, what will a UE do with grant but no data in the buffer. MTK think in this case the UE just ignores.
- IDT think a timeline based approach could be ok, but have been agreed to not do this. Autonomous retransmission is there for NR-U and can be used with small impact.
- Intel also think the network solution is sufficient. Vivo think so too.
- CATT think that if we go with network based solution, there should not be any enhancements.

⇒ **We don't do the solution where the UE indicate explicitly to the network that there is data for a deprioritized PDU**

DISCUSSION on the complexity of the UE autonomous retransmission in CG
- LG think this is already agreed for NR-U, so there is no specification effort.
- CMCC would prefer to let the UE use another HARQ process to not have additional latency. Lenovo think we may need some conditions in addition, to avoid using a HARQ process that is already in use. Nokia think this is possible. Think that if using the same HARQ process maybe a mechanism to discard is need. Docomo think that this could be up to UE impl. CATT think that the only condition is to avoid that the HARQ timer is running for the timer. Ericsson think NR-U has another timer, not sure wewant this. Vivo think it would be complex to use another HARQ process. IDT think NR-U uses the same HARQ process which would be ok as this is deprioritized data. Huawei think we can use the same HARQ process. Vivo and MTK think we shall use the same HARQ process as NR-U if we need autonomous retransmission. MTK think autonomous retransmission is not resource efficient. LG think that only using the same HARQ process is allowed. Lenovo think that a new TB need to be generated so there is no resource problem. CATT agrees with Lenovo, and think that CG in any case need to be over provisioned. Sony agrees with CATT and Lenovo that a new TB need to be generated. Samsung think that gNB need to provide a retransmission grant asap.
- ZTE think that the network will not know that a CG retransmission is a retransmission, it will think it is a new transmission. CATT think that this is true and UE shall generate a new transmission in a CG. Sequans wonder what is means to generate a new transmission, not a new PDU right? Lenovo and Nokia agrees. LG point out that for NR-U, retransmission is generated after a blocked first transmission.
- Sony think there are two cases, either when it is in the HARQ buffer, for which retransmission is good, and also the case when a PDU has not been generated yet,
- CMCC think that if we change HARQ process we should generate a new transmission, if same HARQ process retransmission.
- Oppo wonder if this will impact prioritization in MAC.
- Ericsson wonder if gNB can generate a retransmission grant with the autonomous retransmission solution? Nokia think that for CG case we cannot always rely on gNB for retransmission .. IDT think the gNB could indeed trigger retransmission. CMCC think that

autonomous retransmission is needed. LG think that if the UE receives grant from gNB the UE can retransmit, but if not then the UE can autonomously retransmit.
- Ericsson and QC think we should wait with decision.

Chair summary:
- Everyone think that gNB scheduled retransmission of a deprioritized transmission shall be supported (acc to earlier agreement).
- There is significant support to allow "UE autonomous retransmission in a CG resource". For this case MAC will not re-generate a PDU, but it is open whether the transmission would be considered a HARQ new transmission or a HARQ retransmission.
- There is no consensus to make additional effort if needed to speed up a retransmission by using another HARQ process.
- It seems not clear if the NR-U solution could be reused.

⇒ **There is support to have "UE autonomous retransmission in a CG resource". Allow checking of complexity to next meeting.**

=> Noted

R2-1912215 Handling of Dropped MAC PDU CATT discussion Rel-16 NR_IIOT-Core R2-1908831
R2-1912501 Transmission of Deprioritized Data Samsung discussion Rel-16 NR_IIOT-Core
R2-1912554 Handling of de-prioritized MAC PDUs Ericsson discussion NR_IIOT-Core
R2-1912728 Other issue on intra-UE prioritization in IIoT OPPO discussion Rel-16
R2-1912884 Handling of deprioritized PDUs in MAC InterDigital discussion Rel-16 FS_NR_IIOT
R2-1912933 Handling of deprioritized transmissions CMCC discussion Rel-16 NR_IIOT-Core
R2-1913084 Handling of de-prioritized MAC PDUs III discussion Rel-16 NR_IIOT-Core
R2-1913091 Handling of De-prioritized MAC PDUs Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-1913242 Handling of de-prioritized MAC PDU due to intra-UE prioritization Huawei, HiSilicon, SIA discussion Rel-16 NR_IIOT-Core
R2-1913352 Handling a deprioritized PDU for uplink Intra-UE prioritization in IIoT Sony discussion Rel-16 NR_IIOT-Core
R2-1913624 Handling of collisions with a CG Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1911383
R2-1913625 Enhanced rescheduling for dropped CG Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1911384
R2-1913641 Views on handling of PDUs and data of deprioritized grants Qualcomm Incorporated discussion
R2-1913746 Recovery for deprioritized data transmission NTT DOCOMO, INC. discussion Rel-16 NR_IIOT-Core
R2-1913848 Discussion on de-prioritized MAC PDU on CG resource LG Electronics Polska, LG Uplus discussion Rel-16 NR_IIOT-Core R2-1910976

=> All discussion documents in this AI are noted.

6.7.3.2 Data Data prioritization with CG

R2-1912211 Data/data prioritization CATT discussion Rel-16 NR_IIOT-Core
R2-1912212 Equal-priority handling CATT discussion Rel-16 NR_IIOT-Core R2-1908828
R2-1912216 The prioritization between MAC CEs and UL data CATT discussion Rel-16 NR_IIOT-Core
R2-1912217 LCP restriction enhancement for reliability CATT discussion Rel-16 NR_IIOT-Core
R2-1912247 Discussion on CG and CG collision of equal priority Spreadtrum Communications discussion

R2-1912320 Discussion on the MAC PDU recovery procedure vivo discussion
R2-1912323 Discussion on the PUSCH priority based on MAC CE vivo discussion
R2-1912500 Priority of MAC PDU and MAC CE Samsung discussion Rel-16 NR_IIOT-Core
R2-1912555 Main functions of intra-UE data-data prioritization Ericsson discussion NR_IIOT-Core
R2-1912556 Reliability aspects in LCP restriction enhancement Ericsson discussion NR_IIOT-Core
R2-1912718 Intra UE prioritization of UL Data and Data Intel discussion Rel-16 NR_IIOT-Core
R2-1912729 Intra-UE prioritization involving configured grant OPPO discussion Rel-16
R2-1912883 Intra-UE Prioritization for overlapping PUSCHs InterDigital discussion Rel-16 FS_NR_IIOT
R2-1912934 Handling for CG resource collision of equal priority CMCC discussion Rel-16 NR_IIOT-Core
R2-1912945 Discussion on LCP restriction enhancements for DG CMCC discussion Rel-16
R2-1912950 Handling of de-prioritized MAC PDU CMCC discussion Rel-16 38.321 NR_IIOT-Core Withdrawn
R2-1913047 Consideration on HARQ conflict between configured grant and dynamic grant ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1910402
R2-1913241 Solution for intra-UE prioritization Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
R2-1913662 Some Considerations on intra-UE data-data prioritization China Telecommunications discussion

6.7.3.3 SR Data prioritization

R2-1912213 SR/PUSCH prioritization CATT discussion Rel-16 NR_IIOT-Core R2-1908829
R2-1912322 Remaining issue for the priority of PUSCH and SR vivo discussion
R2-1912495 Prioritization of SR Transmission for URLLC Samsung discussion Rel-16 NR_IIOT-Core R2-1911463
R2-1912557 Intra-UE Control-Data prioritization - SR over PUSCH Ericsson discussion NR_IIOT-Core
R2-1912730 Discussion on SR cancelling on intra-UE prioritization involving SR OPPO discussion Rel-16
R2-1912885 Intra UE prioritization between SR and PUSCH InterDigital discussion Rel-16 FS_NR_IIOT
R2-1913092 Remaining Issues for Resource Conflicts Involving SR Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core
R2-1913136 Impact of intra-UE prioritization on SR cancellation LG Electronics Inc. discussion NR_IIOT-Core R2-1911207
R2-1913243 Prioritization issues for MAC Ces Huawei, HiSilicon, SIA discussion Rel-16 NR_IIOT-Core

6.7.3.4 Other

R2-1912317 URLLC transmission within measurement gap vivo discussion R2-1910009
R2-1912319 Reliability-based LCP Restriction Enhancement for DG vivo discussion
R2-1912731 Intra-UE prioritization between multiple SRs OPPO, Huawei, HiSilicon discussion Rel-16
R2-1912732 Draft LS on intra-UE prioritization for multiple SRs OPPO LS out Rel-16 FS_NR_IIOT To:RAN1
R2-1913046 Consideration on the multiplexing BSR MAC CE and URLLC data ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core R2-1910398

6.7.4 PDCP duplication enhancements

PDCP duplication with up to 4 RLC entities configured by RRC. Mechanisms or enhancements relating to dynamic control of how a set or subset of configured RLC entities or legs are used for PDCP duplication, duplication activation/deactivation.

6.7.4.1 Network Controlled Duplication

Primary path

R2-1913093 On Primary Path of PDCP Duplication Nokia, Nokia Shanghai Bell, NTT Docomo, Samsung, CATT, NEC, III, Qualcomm, Lenovo discussion Rel-16 NR_IIOT-Core

- Huawei don't understand why this is needed. R16 is different to R15. Now we will have a MAC CE to activate/deactivate all legs.
- Ericsson think this would simplify and support.
- LG think there are no technical reasons for primary path. LG think the main reason was to tell where data below split threshold where to be transmitted and tell where PDCP control PDU is sent. LG think PDCP control PDU shall be duplicated or can be sent on any path. MTK agree with LG.
- Vivo think we need nothing specified if the MAC CE control everything. Intel agrees.
- CMCC think PDCP control PDU shall not be duplicated or otherwise duplicates need to be handled. Samsung think duplication of control PDU shall not be done.
- Oppo think we don't need primary path.
- LG think then we can have no primary path for Data PDUs.
- MTK think that if we go this way we need to resolve if Data PDU duplication can be deactivated for primary path.
- CATT support this.
- CMCC think that a primary path need to be reconfigured frequently.

⇒ **The mechanism of primary path defined for Rel-15 PDCP duplication should be retained for Rel-16 (FFS if allowed to deactivate a primary path ie to not send data PDU).**

R2-1913837 Need for Primary path LG Electronics Inc., LG Uplus discussion Rel-16 NR_IIOT-Core

R2-1912953 Discussion of primary path configuration for PDCP duplication CMCC discussion Rel-16 38.321 NR_IIOT-Core

R2-1912558 PDCP Control PDUs and primary path Ericsson discussion NR_IIOT-Core

LCH-to-cell Restriction

R2-1912461 LCH-to-cell Restriction for CA Duplication Deactivation Apple, Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core

DISCUSSION

- LG think this should be avoided
- Futurewei think there is a problem if the Scell is reserved for certain service. Futurewei agree there is an issue for duplication disable/enable, but think that network can use explicit configuration.
- Oppo think the rel-15 behaviour is ok.
- Samsung think we can also keep the LCH restrictions always.
- Google agrees we can keep Rel-15 behaviour and also think RRC reconfig. can be used.
- Lenovo think that we should change in any case.

⇒ **noted**

R2-1913838 Discussion on LCH-to-Cell restriction for PDCP duplication LG Electronics Inc. discussion Rel-16 NR_IIOT-Core

- LG think that we can keep the restriction statically
- Apple think this is even worse.

- Huawei

  ⇒ **noted**

R2-1913245 Cell restriction for PDCP duplication with up to 4 legs Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core
- LG think also this is complex.
- Ericsson think that something is needed, and would prefer the Apple proposal.
- LG think network can configure if specific configurations are needed.

  ⇒ **noted**

MAC CE

R2-1913638 MAC CE structure for PDCP duplication enhancement Qualcomm Incorporated discussion

R2-1913166 MAC CE structure for PDCP duplication activation deactivation Fujitsu discussion Rel-16 NR_IIOT-Core

R2-1912559 Open issues related to MAC CE for PDCP duplication Ericsson discussion NR_IIOT-Core

R2-1912719 PDCP duplication with multiple RLC entities Intel discussion Rel-16 NR_IIOT-Core

R2-1913761 MAC CE format for PDCP duplication activation/deactivation LG Electronics Inc. discussion Rel-16 NR_IIOT-Core

R2-1912503 MAC CE Format for RLC Activiation Samsung discussion Rel-16 NR_IIOT-Core

R2-1912931 Down selection on the PDCP Duplication MAC CE Structure CMCC discussion Rel-16 NR_IIOT-Core

R2-1913094 MAC CE Format and Network Coordination for Uplink PDCP Duplication Nokia, Nokia Shanghai Bell discussion Rel-16 NR_IIOT-Core

General

R2-1912496 Split Bearer Fallback at Deactivation of PDCP Duplication Samsung discussion Rel-16 NR_IIOT-Core R2-1911462

R2-1912460 Leg Selection for Non-duplicated Data Transmission Apple discussion Rel-16 NR_IIOT-Core

R2-1912497 Configuration and initial state of PDCP duplication Samsung discussion Rel-16 NR_IIOT-Core R2-1911458

R2-1912733 Discussion on data duplication enhancement in IIoT OPPO discussion Rel-16

R2-1912971 PDCP Duplication Configuration Mediatek Inc. discussion R2-1909239

R2-1912219 PDCP Duplication Configuration and Activation/Deactivation CATT discussion Rel-16 NR_IIOT-Core

R2-1912235 Consideration on activation/deactivation of PDCP duplication Spreadtrum Communications discussion

R2-1912321 Remaining issues of the network-controlled duplication vivo discussion

R2-1913044 Considerations on support of split bearer in the case of PDCP duplication with multiple copies ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core

R2-1913167 NW-based per-packet PDCP duplication Fujitsu discussion Rel-16 NR_IIOT-Core

R2-1913244 Activation/deactivation of PDCP duplication of up to 4 legs Huawei, HiSilicon discussion Rel-16 NR_IIOT-Core

R2-1912218 On the number of activated legs CATT, Fujitsu discussion Rel-16 NR_IIOT-Core

R2-1913640 PDCP duplication enhancements and RLC AM Qualcomm Incorporated discussion

R2-1913676 Discussion of Guarantee PDCP Duplication Transmission III discussion Rel-16 NR_IIOT-Core

6.7.4.2 UE controlled Duplication

NOTE that UE based mechanisms has lower priority.

R2-1912220 Discussion on UE based Duplication Activation/Deactivation CATT discussion Rel-16 NR_IIOT-Core

R2-1912248 Consideration on packet based duplication Spreadtrum Communications discussion

R2-1912462 Selective PDCP Duplication Enhancement Apple discussion Rel-16 NR_IIOT-Core R2-1909857

R2-1912463 UE based PDCP Duplication Enhancement Apple discussion Rel-16 NR_IIOT-Core R2-1909856

R2-1912499 Discussion on UE Autonomous PDCP Duplication Samsung discussion Rel-16 NR_IIOT-Core R2-1911465

R2-1912720 UE based PDCP duplication activation/deactivation Intel discussion Rel-16 NR_IIOT-Core R2-1910453

R2-1912734 Discussion on UE-based data duplication enhancement OPPO discussion Rel-16

R2-1913045 Discussion on UE based PDCP Duplication activationdeactivation ZTE Corporation, Sanechips discussion Rel-16 NR_IIOT-Core

R2-1913639 Value of UE-based PDCP duplication Qualcomm Incorporated discussion

6.7.4.3 Other

R2-1913759 Redundant retransmission in PDCP duplication LG Electronics Inc., LG Uplus discussion Rel-16 NR_IIOT-Core R2-1909814

R2-1913760 Handling of RLC stuck problem with PDCP duplication LG Electronics Inc. discussion Rel-16 NR_IIOT-Core R2-1909817 Withdrawn

R2-1913805 Handling of RLC stuck problem with PDCP duplication LG Electronics Inc., LG Uplus discussion Rel-16 NR_IIOT-Core R2-1909817

6.8 NR Positioning Support

(NR_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191156). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 5 tdocs

6.8.1 Organisational

Including incoming LSs, rapporteur inputs, etc

Including output of email discussion [107#69][NR/Positioning] Running stage 2 CR on positioning (Intel)

R2-1912011 LS on DL/UL Reference Signals and Measurements for NR Positioning (R1-1909796; contact: Intel) RAN1 LS in Rel-16 NR_pos To:RAN2 Cc:RAN3, RAN4

Nokia understand that the third column in the table is informational, and wonder if we in RAN2 will take the decision about which measurement applies to which technique. Intel understand that we will decide how to group them in the protocol.

⇨ Noted

R2-1912703 Running stage 2 CR on NR positioning 107#69 Intel Corporation, ESA draftCR Rel-16 38.305 15.4.0 NR_pos-Core

Nokia wonder if we should merge in the RAN3 endorsed changes. Intel understand that they are available in a contribution to this meeting (R2-1913396).

⇨ Endorsed as the current running CR

✉ **[107bis#78][NR Pos] Running stage 2 CR on NR positioning (Intel)**
Intended outcome: Update of the running CR to reflect decisions of RAN2#107bis
Deadline: Next Meeting

R2-1913396 TP for 38.305 Baseline CR: Transmission Measurement Function in NG-RAN Qualcomm Incorporated discussion

Huawei think in section 5.1, there is some confusion in the terminology since the ng-eNB cannot have TRPs. Qualcomm agree the TRPs should be only applicable to the gNB, but note that a TRP can have TP or RP functions or both.
Nokia think we shouldn't show the split architecture in RAN2 specs. Qualcomm think it's necessary in the positioning context and further details introduced in RAN3 can be captured in 38.401.
Nokia wonder in section 5.1.1 why "gNB-CU terminates NRPPa protocol" was removed. Qualcomm clarify it was a duplicate sentence: We already have it in section 6.3.1 and it is not really an architectural point.
Intel wonder if we should notify RAN3, and whether they will update their TP in this meeting or the next. Nokia think we are not changing what's proposed for 38.401 and RAN3 can still edit that.
Qualcomm think 38.305 is under RAN2 responsibility and we should make the changes to it, and it would be good to update RAN3.
Ericsson think section 6.7 has a problem because TRP is not a logical node. Qualcomm think this can be fixed once we have more input, but they understand that the LMF may need to address a TRP and think this reflects the current discussion in RAN3.
⇨ To be included in the email discussion of the 38.305 CR

R2-1913412 Running CR for the introduction of NR positioning Ericsson draftCR Rel-16 38.331 15.7.0 B NR_pos-Core

Intel wonder if on-demand SI request will be captured in this CR. Ericsson understand that we do not have related agreements, and considering the discussion of the main session we need to have some further discussion of that topic.
Qualcomm think the CR is missing some aspects, e.g. the GNSS IDs.
⇨ For review by email

✉ **[107bis#79][NR Pos] Running CR to 38.331 on NR positioning (Ericsson)**
Intended outcome: Endorsable running CR
Deadline: Next Meeting

6.8.2 Architecture and protocol aspects

6.8.2.1 Support of NR RAT-dependent positioning

Procedures and protocol design

R2-1912200 Discussion on procedures in RAT-Dependent positioning methods CATT discussion Rel-16 NR_pos-Core

- Follow LPP flows for the positioning methods
- Introduce beam and timestamp info into measurements
- SRS configured by gNB
- Do not group the positioning methods by DL/UL

Discussed jointly with the next document

R2-1912704 Support of NR dependent positioning methods Intel Corporation discussion Rel-16 NR_pos-Core

- Follow LPP flows for positioning methods where possible
- UE Rx-Tx obtained by LPP, gNB Rx-Tx by NRPPa
- SRS configured by gNB

- Do not group the positioning methods by DL/UL; in stage 2, refer to the positioning techniques listed by RAN1, and in stage 3, categorise based on measurements
    - Network asks UE to provide specific measurements and provides corresponding AD
    - No separate procedures for e.g. DL-TDOA; only one procedure for NR RAT-dependent positioning

Qualcomm share the view of CATT that we need to introduce the NR positioning methods as they are listed in the WI rather than grouping them, because the content of the data will be different for different methods even if the high-level procedures are similar. They think this reduces the ASN.1 overhead because of not needing the same message to support all possibilities. The assistance data for DL-TDOA will be different from that for DL-AoD, for example. Also the UE behaviour is different for each method.
Qualcomm think there may be LPP impact to support UL-TDOA: at least capability transfer to inform the LMF that the UE supports UL-PRS, and potentially assistance data related to the SSB configurations of neighbouring cells.
Ericsson share Intel's view that it makes sense to have one procedure (with the exception of E-CID which could be captured separately). They do not see the same level of complexity as described by Qualcomm. In terms of capability they think it would make more sense to support specific measurements rather than specific methods.
Huawei agree with Qualcomm, and think if we adopt Intel's approach it will be a complete shift of paradigm compared to LPP. They think there may be issues in the future that we are not able to identify yet. They also think that for the MO case the gNB may need to know what the positioning method in use is.
Intel think for the MO case the positioning method can still be transparent to the gNB.
Nokia ask for clarification of proposal 13 of the Intel paper; would we capture some aspects as method-specific? Intel clarify the requested measurements would be identified by the required measurement only and the AD would correspond to what was needed for those measurements.
Qualcomm think for measurements of DL-RSRP, a single method does not work, because the UE behaviour for measuring DL-RSRP for E-CID is different from DL-AoD. They understand that for E-CID the UE is not required to make any measurements, only to report what is already available.
Ericsson think it is reasonable in the case of E-CID to extend the existing procedure, and this is the one area where we have full details of RAN1 so far.
Intel think based on current RAN1 status there is no DL-PRS-based RSRP for E-CID, only DL RSRP.
Qualcomm wonder how multi-RTT would be supported with a single method. In the Intel contribution it depends on Rx-Tx time difference which would require AD for E-CID.
Ericsson think measurement of UE Rx-Tx is open in RAN1.
Intel understand that for E-CID, RAN1 did not agree to have UE Rx-Tx-based E-CID. Ericsson understand that the Intel contribution assumes this. Qualcomm think UE Rx-Tx is necessary to support TA type 1.
CATT think there is no conclusion from RAN1 about the UL-PRS design and we should not take detailed decisions about the procedures e.g. configured by RRC vs. LPP, without knowing the design.
Intel think how to use and transfer the UL-PRS configurations can be decided by RAN2. Huawei agree and think we could come to a conclusion about how to transfer them; they support the use of RRC.
Huawei also think we need to discuss whether Rel-15 SRS can be used as UL-PRS. They understand that RAN1 left this for RAN2 to discuss.
Intel think whether Rel-15 SRS can be used is outside RAN2 scope. Huawei understand that RAN1 concluded it would not impact their specifications.
Nokia think we are not tasked to decide what reference signal to use; we should refer to the LS.
Intel think we could discuss by email whether there are serious problems with either approach to categorising the positioning techniques (one method or separate methods), and provide two sets of CRs.
Nokia wonder if DL-TDOA now has two measurements (RSTD and RSRP), are both mandatory to provide or is one optional? Intel understand it would depend on what the LMF requested, and a reasonable LMF would request both of them if it wants to do DL-TDOA.

Huawei wonder if AoA and ZoA would be optional or mandatory for multi-RTT. Qualcomm think it depends what the LMF requests.
CATT understand that RSRP indicates the direction of RSTD, and allows the LMF to select the correct RSTD. So a reasonable LMF would request both.
Ericsson agree that both RSTD and RSRP would be needed, and that the LMF indicates which measurements it would like to use. They think the UE will not support methods but measurements.
Qualcomm think support indications for methods are needed because the measurements are different depending on the method. E.g. what it means to support RSRP is different depending on what method uses the measurement. So they think that the UE needs to know what the purpose of the measurements and AD is.
Ericsson do not see that knowing the method would be needed, or why RSRP measurements would be different depending on what the server would use them for. Intel have the same view but think an LS could be sent to RAN1 for clarification of this point.
Qualcomm clarify if the UE is measuring RSRP for DL-AoD, it receives certain AD that forces it to use the same Rx beam for RSRP, as compared to beam sweeping measurements for RRM. They think RAN1 cannot resolve this question more than RAN2 can.
CATT think we need to determine what the LMF needs based on the positioning technique. They suggest an LS to RAN3 about the measurement and RS requirements, to align.
Intel think RAN1 need to be the ones to determine how RAT-dependent positioning works. They think they should be able to answer whether RSRP measurements are different for different positioning methods, etc.
Ericsson agree we could detail the situations that require different AD, but it might take a round of contributions to converge.
Intel would like to ask RAN1 if there are situations where the measurements and/or RS configurations are different for different positioning techniques.
Qualcomm think as an example, the UE should only measure synchronous cells for DL-TDOA but could measure asynchronous ones for DL-AoD. Intel think this is related to assistance data, which would be different for DL-TDOA than DL-AoD, but not to the measurements. Ericsson think that in this case the LMF would still configure the same measurements. Qualcomm wonder how hybrid positioning would work: Would the LMF indicate to measure RSTD for some cells and AoA for others?
Qualcomm think there is more flexibility and future-proofing if we treat the methods separately. They think there needs to be clear procedural guidance in order to support e.g. UL+DL cases.
Huawei see that AD for DL-TDOA and DL-AoD would be different in that DL-AoD does not require a reference cell, and in this sense the AD cannot be totally agnostic to the positioning techniques.
Ericsson think even for AoD you would need a timestamp.
Qualcomm do not see the advantage of having a generic NR method; they consider that it would introduce more complexity and limit our future extensions. They agree it can be done but doubt if it is beneficial.
Ericsson wonder if we can agree that capability is by measurements, not methods. Qualcomm cannot agree to this.
Intel suggest starting to capture a draft CR with separate techniques and we can see if it's feasible to combine them.
Qualcomm think it would not help us if we just capture the equivalent of PRS-Info based on an update from RAN1. So waiting for RAN1 will not help.
Intel suggest that we start a discussion to capture the RAN1 parameters in LPP, and further discuss based on contributions whether to merge the methods.

Intel wonder if we can conclude on how UL-PRS are configured. Qualcomm think this will be clarified by the parameter update from RAN1. Huawei have the same understanding that RAN1 will indicate whether they are in LPP or RRC. Ericsson think this would be more of a RAN2 issue, and think it is natural that we would configure them in RRC.
Qualcomm agree RAN1 will let RAN2 decide where the parameters go, but think we need to see what is in the configuration in order to know which node can provide it. E.g. the legacy SRS can be configured entirely from the gNB, but the UL-PRS may require input from the LMF.
CATT understand from RAN1 that the DL-PRS should be configured by LMF, not gNB.

⇨ We do not extend the LTE IEs for OTDOA or E-CID to include NR measurements/AD.

- ⇨ The high-level LPP procedures (Request/Provide Assistance Data, Location Information, Capabilities) are extended (as already agreed).
- ⇨ There will be one or more new methods for NR RAT-dependent positioning.
- ⇨ For stage 2, we do not group the NR RAT-dependent techniques with the existing methods.
- ⇨ For stage 2, capture the RAT-dependent measurements and RS types.
- ⇨ For stage 2, capture the six RAT-dependent techniques described in the RAN1 LS (R2-1912011).

✉ **[107bis#80][NR Pos] Capturing RAN1 parameters for positioning (Intel)**
Generate a draft CR based on any LS from RAN1 regarding their agreed positioning parameters.
Intended outcome: Draft CR to next meeting
Deadline: Next Meeting

R2-1913423 RAT dependent positioning methods - architecture and protocol aspects Ericsson discussion Rel-16
R2-1913365 Discussion on RAT dependent NR Positioning techniques Sony discussion Rel-16 NR_pos-Core

Downlink

R2-1913395 DL and UL NR Positioning Procedures Qualcomm Incorporated discussion
R2-1913037 Consideration on DL positioning method in NR Huawei, HiSilicon discussion Rel-16
R2-1912080 Discussion on DL-TDOA positioning ZTE Corporation discussion Rel-16
R2-1912534 Consideration of beam for NR OTDOA Samsung R&D Institute UK discussion
R2-1913593 Angle of Departure UE positioning technique Nokia, Nokia Shanghai Bell discussion Rel-16 NR_pos-Core

Uplink

R2-1912081 Discussion on UL-TDOA positioning in NR ZTE Corporation discussion Rel-16
R2-1913039 Consideration on UL positioning method in NR Huawei, HiSilicon discussion Rel-16

E-CID

R2-1913422 Stage-3 structure details for RAT-dependent NR positioning Ericsson discussion Rel-16
R2-1913041 Consideration on E-CID in NR Huawei, HiSilicon discussion Rel-16
R2-1912533 considerations for NR ECID Samsung R&D Institute UK discussion
R2-1912082 Discussion on multi-cell E-CID in NR ZTE Corporation discussion Rel-16

Multi-RTT

R2-1913040 Consideration on Multi-RTT positioning in NR Huawei, HiSilicon discussion Rel-16

PRS

R2-1913278 On PRS Information for NR Positioning LG Electronics Inc. discussion Rel-16

Others

R2-1913594 On-demand and dynamic PRS configuration for DL-TDOA Nokia, Nokia Shanghai Bell discussion Rel-16 NR_pos-Core R2-1907657

Withdrawn/Not available

R2-1912083 Discussion on multi-cell E-CID in NR ZTE Corporation discussion Rel-16 Late

6.8.2.2 Support of SSR phase 2 (PPP-RTK)

R2-1913397 GNSS SSR Assistance Data Qualcomm Incorporated discussion

✉ **[107bis#81][NR Pos] Update of SSR phase 2 running CRs (Qualcomm)**
Intended outcome: Draft CRs for 36.355 and 36.331 for next meeting
Deadline: Next Meeting

R2-1912519 SSR Atmospheric Correction Points Area Definition u-blox AG discussion Rel-16

R2-1912520 Text Proposal for addition of SSR Atmospheric Correction Points Area Definition u-blox AG discussion Rel-16

Ericsson think we could compare to the Qualcomm approach. Qualcomm understand that there are two issues: where to put the correction points and whether we need to have both a list of coordinates and a grid. They would like to confirm if we have common understanding on the need for both.
u-blox understand that we agreed to have both options (as a reduction from an original proposal with three different representations). They consider that an array of correction points in a grid is a common use case, and the list is useful for sets of disjoint correction points such as clusters of islands.
Nokia thought we agreed to have a simple list of coordinates as opposed to an array definition.
Ericsson think in the case of a cluster of islands you could separate the islands into several small grids.
Qualcomm think you can use a list of coordinates to mimic a grid, but a grid cannot emulate a list of coordinates. If the size is small there is not much efficiency difference.
Swift agree that a list can represent a grid, but think that in many deployments a large grid is applicable and much more efficient. They understand that there are real deployments approaching the maximum of 64 points.
ESA think the point of the grid was the efficiency in the larger cases.
Nokia understand that we would not broadcast based on national coverage but the points around a gNB coverage area.
u-blox think for most cellular networks the number of points broadcast would be small, but if we limit to that we constrain the implementation, thus they would prefer to keep both alternatives.
Qualcomm think significant optimisations are possible on top of the implementation given here. They also think there are some unclear identifiers in the proposal, e.g. the networkID.
u-blox clarify the network ID is in the compact SSR definition and service providers expect to use it.
⇨ Offline discussion to converge the details of the implementation. Offline discussion 402, u-blox. Update of the document in R2-1914073.

⇨ Implement both a list of coordinates and a grid definition for the correction points.

R2-1914073 [RAN2#107bis Offline-402] Converge on details of SSR Correction Points definition u-blox AG discussion Rel-16
⇨ TP to be incorporated into the running CR for email discussion
⇨ Noted

R2-1912325 Adding the Phase Bias Indicator to the SSR Phase Bias message Swift Navigation discussion

R2-1913424 GNSS Integer Ambiguity Level Indications Ericsson discussion Rel-16

R2-1913415 Introduction of additional posSIBs for QZSS PPP-RTK Phase 2 Ericsson draftCR Rel-16 36.331 15.7.0 B NR_pos-Core

6.8.2.3 Broadcast assistance data

Note, documents on on-demand system information in connected mode should be submitted to 6.21. Documents on positioning related SI content should be submitted here.

R2-1913398 Broadcast of Location Assistance Data by NG-RAN Qualcomm Incorporated discussion

Ericsson think we could wait on defining specific posSIBs.
Nokia think we need to discuss the on-demand SI generally and resolve the related open issues.
Huawei wonder if the Msg1/Msg3 on-demand approach is intended to be applicable for connected mode in this proposal. Ericsson understand that it is only for idle/inactive. Chair has the same understanding. Nokia agree.
Nokia suggest we could agree a baseline broadcast support CR and add on-demand later.
Huawei think we have not discussed whether to support posSIB on-demand request for idle/inactive.
Qualcomm think requesting on-demand SI is fundamental as a part of the broadcast feature; otherwise we depend on the assumption that broadcast is always on.
Huawei think GNSS could be supported in idle mode but not RAT-dependent.
Intel wonder if the idle UE needs the posSIBs; if so, it would make sense to include the request at least for GNSS.
T-Mobile would like to be able to do UE-based positioning in idle mode.
Huawei think idle/inactive positioning is not in the scope of the WID. Qualcomm think there is also nothing to prohibit it; we have the objective for broadcast AD. If we limit to connected mode it's not clear why we need broadcast AD at all.
Qualcomm think it doesn't make sense to keep the UE in connected mode to receive the broadcast in an ongoing way for RTK. Ericsson agree and think if we do not have the Msg1/Msg3 based request it would force the broadcast to be always on.
Qualcomm think it could work to have the UE go to RRC_CONNECTED for the request, but there may not be a mechanism to do that. They see no need to prohibit idle/inactive UEs from making the request.
Huawei think the content of the broadcast is clearly FFS, and for the idle mode case we need to understand the use case especially for the RAT-dependent methods.
T-Mobile think the WID identifies UE-based positioning, and the use case is indoor operation when GNSS is not available.
Nokia would like to see a baseline CR providing always-on broadcast support similar to what we have in LTE, and on-demand can be considered in a future meeting. Intel agree.
⇨ Noted

R2-1913038 Discussion on broadcasting of positioning assistance data Huawei, HiSilicon discussion Rel-16
R2-1912201 Considerations on Broadcast Positioning Assistance Data CATT discussion Rel-16 NR_pos-Core
R2-1913410 New SIB for hosting posSI Scheduling Information Ericsson discussion Rel-16

6.8.2.4 UE-based positioning

R2-1912705 Assistance data for UE based DL only positioning Intel Corporation discussion Rel-16 NR_pos-Core R2-1909407
R2-1913399 Assistance Data for DL-only UE-based mode Qualcomm Incorporated discussion
R2-1913416 UE-based configuration options Ericsson discussion Rel-16
R2-1913228 NR UE-based Positioning Modes and Geographical Information ITRI discussion NR_pos-Core

6.8.3 Other

6.9 NR mobility enhancements

(NR_Mob_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-192277). Documents in this agenda item will be handled in a break out session
Treated together with 7.3,
Joint 6.9 and 7.3 Time budget: 3 TU
Joint 6.9 and 7.3 Tdoc Limitation: 12 tdocs

6.9.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc
Note: The running NR Stage-2 CR was endorsed as outcome of email discussion [107#13][NR/Mob-enh] Running stage 2 CR (Intel) in R2-1911559.

R2-1912041 Reply LS on simultaneous RX/TX for NR (R4-1909992; contact: Ericsson) RAN4 LS in Rel-16 NR_Mob_enh-Core To:RAN1, RAN2
⇨ Noted.

R2-1912781 Running CR for the introduction of NR mobility enhancement Intel Corporation CR Rel-16 38.300 15.7.0 0172 - B NR_Mob_enh-Core
⇨ Already endorsed in email discussion, but contains some editorial changes. Will be updated with this meeting changes.

CBF: Offline 105 (Intel): Capturing agreements in running CR. Running CR can be provided in R2-1913995

⇨ Handled in main session
=> To Email [107bis#08][NR MobE] Updated Stage-2 running CR for NR mobility (Intel).
=> Endorsed in R2-1913995

6.9.2 Reduction in user data interruption during handover

No documents should be submitted to 6.9.2. Please submit to 6.9.2.x
Contributions on RUDI handovers using DAPS for LTE and NR are treated jointly in under 7.3.2. Do not use this AI for any item that can be discussed jointly.

6.9.3 Handover robustness improvements

Contributions on conditional handover for LTE and NR are treated jointly under 6.9.3 except where otherwise noted.
No documents should be submitted to 6.9.3. Please submit to 6.9.3.x

6.9.3.1 Conditional handover – configuration and execution details

This AI jointly addresses NR and LTE.
Including outcome of email discussion [107#30][NR/LTE/Mob-enh] Configuration of CHO and execution condition (Intel)
Including Stage-3 details that are either not handled or are left open in the conclusion of the email discussion 107#30 (should also provide TPs to illustrate the required Stage-3 specification changes).

Outcome of email discussion [107#30][NR/LTE/Mob-enh] Configuration of CHO and execution condition (Intel)

R2-1912779 Report of [107#30][NR/LTE/Mob-enh] Configuration of CHO and execution condition Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core Late

Agreements
1 From RAN2 perspective, both source and target can trigger the modification of CHO configuration, and leave the final decision to RAN3.
2. When source configuration needs to be changed, it is up to network to update the UE stored CHO configurations so it remains valid. From RAN2 perspective, whenever source configuration needs to be changed, source sends the updated configuration to target if a new CHO configuration is needed and ask RAN3 to confirm.

3. The handling of CHO configuration can be split into 2 steps as below and inform RAN4 about RAN2 agreements:

Step 1: Decode the RRCReconfiguration/RRCConnectionReconfiguration including source configuration, if present, and CHO execution conditions (both decode and configure upon reception of RRCReconfiguration/RRCConnectionReconfiguration).

Step 2: Apply the target cell configuration (i.e. a stored RRCReconfiguration/RRCConnectionReconfiguration prepared for the selected target), the UE can only do this upon meeting the CHO execution condition for the cell.

Show of hands

1) Do not trigger re-establishment and do early check: 10

2) Do not trigger re-establishment and do late check: 0

3) Trigger re-establishment and do early check: 13

4) Trigger re-establishment and do late check: 3

⇨ **Stick to current specification (to be clarified which option that means).**

Discussion:

Proposal 1

- Ericsson wonders if only CHO cancellation is needed.Intel clarifies target may need to modify some configuration based on load conditions. Charter thinks CFRA -> CBRA change may need modification. Ericsson thinks this is not possible.
- Nokia thinks we should just continue and leave RAN3 to consider their workload.

Proposal 2:

- OPPO wonders how source knows CHO configuration update is needed – only target would know? MediaTek agrees. Intel thinks not all configurations impact the target CHO configuration. Some might not. Futurewei thinks source update makes sense.
- Samsung wonders if UE behaviour is based on this assumption. Intel thinks this is up to network implementation and doesn't affect UE.

Proposal 3:

- Mtek wonders how network knows this. Intel thinks this was discussed over email and most companies left it up to network to solve the problem. Ericsson thinks this just means network provides configuration that UE can use. This doesn't require any additional effort to specify and doing something else would be optimizations. Samsung thinks this is a network restriction to ensure valid CHO configuration. NEC agrees.

Proposal 6

- Qualcomm thinks this is problematic. vivo thinks the proposal is useful. Intel clarifies that the benefit for UE is that there will be more problems upon handover and not while radio conditions to source are still valid. Xiaomi thinks only the timing differs. If we check later, UE can't recover. IDT also agrees. Ericsson thinks this shouldn't impose any restrictions on number of target cells for CHO.

Proposal 9

- Ericsson thinks this is problematic. Futurewei agrees as this is only target configuration, not source. Would cause source to fail even if the link is still good. Nokia agrees this is problematic. IDT agrees. Samsung wonders what is the problem for the network. Ericsson thinks HO doesn't happen immediately. LGE has concern on this. vivo thinks UE could indicate the problem to source and not do re-establishment.
- Intel thinks this is about whether the failure is a rare case or not. Huawei thinks this is a rare case. OPPO agrees. CATT agrees. Ericsson thinks this might be more common in NR.
- Nokia thinks that for RUDI, most didn't want a re-establishment, but now the same companies do want re-establishment.
- Ericsson thinks any solution should ensure network is aware of what caused the problem.

R2-1912780 TS38.331 TP of 107#30 NR_Mob_enh-Core Late — Intel Corporation — draftCR — Rel-16 — 38.331 — 15.7.0

⇨**To be handled in email discussion**

✉ **[107bis#54][NR MobE] 38.331 RRC running CR NR mobility (Intel)**
Update running CR based on this meeting's agreements (not including conditional PSCell aspects).
Intended outcome: Running CR for next meeting.
Deadline: Next Meeting

CHO execution and CHO signalling structure (at least partly repeating the email discussion)

R2-1913483 Further issues for CHO configuration and execution ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

R2-1912632 Open issues from email discussion [107#30][NR/LTE/Mob-enh] Ericsson discussion NR_Mob_enh-Core

R2-1912136 Discussion on Signaling Structure of CHO Configuration Message CATT discussion Rel-16 NR_Mob_enh-Core

R2-1913863 ReportConifg ID for CHO Condition LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

CHO compliance checking:

R2-1913152 On RRC processing and CHO command compliance check Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core

R2-1912740 Discussion on execution aspect for CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

R2-1913590 CHO configuration/ execution, remaining aspects Samsung Telecommunications discussion Rel-16 NR_Mob_enh-Core

R2-1912909 Discussion on configuration of CHO China Telecommunications discussion
(moved from 7.3.3)

R2-1913862 Consideration on Invalid Cell Handling in CHO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

Number of configured CHO target cells

R2-1912342 Discussion on the number of prepared cells for CHO vivo discussion Rel-16 NR_Mob_enh-Core R2-1909537

R2-1912736 On Maximum Number of CHO Candidate Cells and Nodes Charter Communications, Inc discussion Rel-16 NR_Mob_enh, LTE_feMob, NR_Mob_enh-Core, LTE_feMob-Core

R2-1912739 Discussion on configuration aspect for CHO Huawei, HiSilicon, China Telecom discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

Release of CHO configurations (at configuration change, HO command reception, state transition, security key change, re-establishment...):

R2-1912340 Discussion on CHO release vivo discussion Rel-16 NR_Mob_enh-Core

R2-1913668 Validity of CHO configurations based on security configuration Sharp discussion Rel-16

R2-1912633 Handling of a HO command while UE is monitoring CHO Ericsson discussion NR_Mob_enh-Core

R2-1913151 On RRC Reconfigurations in CHO-prepared state Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core

R2-1913909 CHO UE behaviour upon transitioning to RRC_INACTIVE/RRC_IDLE Samsung Electronics Polska discussion
(moved from 6.9.3.3)

R2-1913675 Discussion on a configuration mismatch between a UE and a target gNB KDDI Corporation discussion

R2-1912637 Further details on CHO failure handling Ericsson discussion NR_Mob_enh-Core

R2-1912634 Suspend while monitoring CHO in NR Ericsson discussion NR_Mob_enh-Core

R2-1913860 Consideration of CHO Configuration Update LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

R2-1913861 Draft LS on CHO Configuration Update LG Electronics Inc. LS out Rel-16 NR_Mob_enh-Core To:RAN3

R2-1912464 Consecutive Conditional Handover Apple discussion Rel-16 NR_Mob_enh-Core R2-1909862

R2-1913792 Problems in Evaluation of CHO Execution Condition ETRI discussion Rel-16 NR_Mob_enh-Core R2-1909228

CHO and measurements (e.g. s-Measure applicability, measurement reporting while CHO is configured,...)

R2-1912529 measurement aspects for CHO Samsung R&D Institute UK discussion

R2-1913001 Measurement Report for Conditional Handover Procedures MediaTek Inc. discussion R2-1908947

(moved from 6.9.3.3)

R2-1912240 Measurement report enhancement in conditional handover Spreadtrum Communications discussion R2-1909083

(moved from 6.9.3.3)

R2-1912693 Discussion on the leaving conditions for CHO PANASONIC R&D Center Germany discussion R2-1909255

(moved from 6.9.3.3)

R2-1912339 Conditional Handover without explict trigger condition vivo discussion Rel-16 NR_Mob_enh-Core R2-1910684

TPs to 38.331 on CHO:

R2-1912636 TP for 38.331 on CHO Ericsson discussion NR_Mob_enh-Core

6.9.3.2 Conditional handover – failure handling

This AI jointly addresses NR and LTE.
Including confirmation, or otherwise, of the working assumption from last meeting on handling of RLF and HO failure.

Resolution to the WA on CHO failure handling:

R2-1912784 Confirmation of WA for failure handling Intel Corporation, InterDigital Inc., China Telecom, OPPO, MediaTek, Lenovo, Motorola Mobility, vivo, Spreadtrum, ITRI, Sharp, Panasonic, Xiaomi, ZTE Corporation, Sanechips, LG Electronics, CATT, NEC, Ericsson, Google Inc., Apple discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

Agreements

1. Confirm the working assumption as an optional feature:

At RLF/HO failure/CHO failure, the UE performs cell selection and if the selected cell is a CHO candidate then the UE attempts CHO execution, otherwise re-establishment is performed.

If the CHO performed during failure handling procedure fails, the UE will perform re-establishment, i.e. we do not allow multiple attempts of CHO during failure case.

FFS on how to capture it in specification;

If UE doesn't support this capability, it does re-establishment (just as now). Network can configure what UE does.

Discussion

- MediaTek thinks this allows the other proposed options as well.
- Qualcomm thinks this is an optimization but would like that this is an optional capability. If UE doesn't support, it does re-establishment (just as now)
- Nokia thinks this is too complex and doesn't provide benefits. Could have just a single target. Samsung agrees and thinks this increases delay. Futurewei agrees.
- Samsung thinks the technical merits were not discused.

R2-1913908 Discussion on Performing CHO instaed of RRE in CHO Samsung, Nokia, Nokia Shanghai Bell, Qualcomm Incorporated discussion Rel-16 NR_Mob_enh-Core

R2-1912132 Discussion on the Working Assumption Related Issues CATT discussion Rel-16 NR_Mob_enh-Core

Additional discussion about the WA interpretation and what to do after (C)HO failure:

R2-1912741 Discussion on failure handling for CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

R2-1912972 Discussion on the use case of CHO failure recovery Beijing Xiaomi Software Tech discussion

R2-1913000 Mobility Failure Handling with Conditional Handover Candidates MediaTek Inc. discussion

R2-1913057 Failure handling and RLF report for CHO NEC discussion Rel-16 NR_Mob_enh-Core

R2-1913153 Failure handling in the presence of prepared CHO candidates Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core

R2-1912454 Discussion on the timer design for CHO vivo discussion Rel-16 NR_Mob_enh-Core

R2-1913089 Failure handling with CHO candidate Lenovo, Motorola Mobility discussion Rel-16 R2-1910615 Late

R2-1912812 Access handling for multiple candidate cells in CHO Futurewei Technologies discussion Rel-16

(moved from 6.9.3.1)

T312 instead of WA on CHO failure:

R2-1913904 Discussion on Fast failure recovery alternatives to WA Samsung Electronics Polska discussion

CHO failure with fast MCG recovery:

R2-1913484 Discussion on fast RLF recovery when applying CHO and fast MCG recovery ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core

Withdrawn:

R2-1912341 Discussion on the HOF for CHO vivo discussion Rel-16 NR_Mob_enh-Core R2-1909538 Withdrawn

6.9.3.3 Conditional handover - other aspects

This AI jointly addresses NR and LTE.
Aspects not addressed by the 3 previous agenda items, e.g. UE capabilities, combining RUDI HO and CHO, etc.

UE capabilities for CHO

R2-1913015 UE capabilities for CHO Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1909010

R2-1912137 UE Capability Issue for CHO CATT discussion Rel-16 NR_Mob_enh-Core

R2-1912742 Discussion on UE capabilities for mobility enhancements Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

Other aspects (RRC size limitations, security key derivation, phases of CHO...)

R2-1913513 Timing of Key Derivation in Conditional Handover Futurewei discussion Rel-16 NR_Mob_enh-Core

R2-1913514 Draft LS on the Timing of AS Key Derivation in Conditional Handover Futurewei LS out Rel-16 NR_Mob_enh-Core, LTE_feMob-Core To:SA3 Cc:RAN3

R2-1912241 RRC signaling size restriction in CHO Spreadtrum Communications discussion R2-1909084

R2-1913068 Discussion on phase of the LTE CHO procedure China Telecommunications discussion

(moved from 7.3.3)

Combining RUDI HO and CHO

R2-1912881 On Combining RUDI and CHO InterDigital discussion Rel-16 NR_Mob_enh-Core

R2-1913145 Discussion on simultaneous connectivity in CHO vivo discussion Rel-16 NR_Mob_enh-Core

R2-1913154 Mobility Robustness for DAPS eMBB handover Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core R2-1909039

R2-1913677 LTE Mobility Robustness Enhancements for DAPS eMBB HO Qualcomm Incorporated discussion Rel-16 LTE_feMob-Core R2-1909844

R2-1913793 Combination of CHO and RUDI Handover ETRI discussion Rel-16 NR_Mob_enh-Core

R2-1912743 Discussion on combination of simultaneous connectivity and CHO Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core

R2-1912135 Coexistence of Simultaneous Connectivity and CHO CATT discussion Rel-16 NR_Mob_enh-Core

6.9.3.4 Fast handover failure recovery

Including discussion on how to define the T312 timer functionaility for NR.

Details of NR T312 support:

R2-1913905 Discussion on Remaining issues related to T312 Samsung Electronics Polska discussion

Proposal 1: In NR, T312 is configured for the source frequency and not for the target frequency.

Proposal 2: RAN2 to discuss which of the below signalling options is preferred to configure T312 based on source cell frequency (PCell) in NR

ALT 1: Reuse the LTE baseline - T312 is configured as part of measurement object. All applicable measurement object is configured with the same value.

ALT 2: PCell specific value of T312 is configured

Proposal 3: Use of T312 (useT312) is event specific and configured as part of reporting configuration

Proposal 4: RAN to discuss which of the below triggering conditions to start T312 is preferred

ALT 1: Reuse the LTE baseline – Start timer T312 when T310 is running, and a measurement report is triggered for an event that is configured to use T312.

ALT 2: Start timer T312 when T310 starts running, if measurement report has already been triggered for an event that is configured to use T312, and the condition for triggering the measurement report still holds at the start of T310.

Proposal 5. Introduce T312 based mechanism on PSCell for fast declaration of SCG failure.

Agreements

1 Reuse the LTE baseline for T312 functionality. Can discuss specific optimizations based on company contributions.

Working assumption

2 Introduce T312 based mechanism on PSCell for fast declaration of SCG failure.

=> Proponents should provide CRs for PSCell T312 for next meeting.

Discussion

Proposal 1

- OPPO wonders why we would deviate from LTE. T310 triggers in the source already.
- Qualcomm thinks we should follow LTE baseline. vivo agrees.
- Nokia thinks only MRs triggered after T310 are taken into account and would like to extend MRs triggered before T310.
- Samsung doesn't understand why T312 has different values for different frequencies. CATT has some sympathy for this but re-establishment is done for target. Doesn't understand why source frequency should be used because of that.
- OPPO thinks we spent a long time with this in LTE so shouldn't repeat that. Network can use same value in source and target. MediaTek agrees. Intel agrees. LGE agrees.

- Samsung is fine to follow LTE baseline for configuration but would like the same value for all MeasObjects. Qualcomm thinks FR1 and FR2 values could be discussed.

Proposal 5:
- CATT thinks we don't need T312 for PSCell. Futurewei agrees that network can do this. Ericsson agrees. Intel agrees. Huawei agrees.
- OPPO thinks conditional PSCell change motivates T312 for PSCell. Nokia would like to introduce it for SRB3. Qualcomm would also like SRB1 and EN-DC is a good use case. Samsung thinks we should do this.

R2-1912744 Discussion on fast handover failure recovery Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core
R2-1912402 Discussion on T312 for PSCell OPPO discussion Rel-16 NR_Mob_enh-Core

CHO and T312:

R2-1913155 Further thoughts on RLF detection in NR Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core
R2-1913650 Considerations on T312 enhancements for fast RLF recovery in NR Potevio discussion Rel-16 NR_Mob_enh-Core

Draft CRs for T312 support:

R2-1912530 T312 further enhancement Samsung R&D Institute UK discussion

Other topics (Combining re-establishment and reconfiguration, Early UE context fetch, Event-based faster pseudo-RLF trigger):

R2-1912932 Further discussion on fast HO failure recovery in NR CMCC discussion Rel-16 NR_Mob_enh-Core
R2-1912946 Discussion on fast handover failure recovery CMCC discussion Rel-16
R2-1913794 Faster Handover Failure RecoveryETRI discussion Rel-16 NR_Mob_enh-Core R2-1909230

6.9.3.5 Conditional handover - beam specific aspects

This AI only addresses NR.
Including discussion on beam-related aspects for CHO. New proposals should provide TPs illustrating the required Stage-3 specification changes.

R2-1912134 Further Discussion on Cell Evaluation for CHO Cell Selection CATT discussion Rel-16 NR_Mob_enh-Core
(moved from 6.9.3.3)

6.9.4 Conditional PSCell addition/change

Including CP and UP aspects of the solution: How much can we reuse of the basic CHO agreements for conditional PSCell addition/change? Are there any differences in the procedures for different MR-DC architectures?

Basic procedures conditional PSCell addition/change

R2-1912133 Conditional PScell Addition/Change CATT discussion Rel-16 NR_Mob_enh-Core
Proposal 1: Maintain Rel-15 principle that only one PScell is active at a time even with conditional PScell addition/change.
Proposal 2: For conditional PScell addition, the MN decides on the conditional PScell addition execution condition. The condition is defined by a measurement identity, given by a measurement configuration provided by the MN.
Proposal 3: For conditional PScell change, execution condition:-
A) is decided by the MN and the condition is defined by a measurement identity, given by a measurement configuration provided by the MN or

B) is decided by the SN and the condition is defined by a measurement identity, given by a measurement configuration provided by the SN.
Proposal 4: For conditional PScell change, A3/A5 execution condition should be supported while for conditional PScell addition, A4/B1 like execution condition should be supported.
Proposal 5: For conditional SN change, the source SN configuration can be used as the reference in generation of delta signalling for the candidate SNs.
Proposal 6: RAN2 is requested to discuss whether use of MN configuration as reference is adequate in generation of delta signalling for the candidate SN in conditional SN addition.
Proposal 7: The UE informs the execution of conditional PScell addition/change directly to the MN using SRB1.
Proposal 8: Baseline that the configurations of all candidate SN configurations are released upon the successful completion of conditional PScell addition/change.
Proposal 9: No optimisation is required for handling of SCG failure for conditional PScell addition/change. Ie. SCG failure information procedure is used.
Proposal 10: During the execution of conditional PScell addition/change, the UE does not take into account modification of conditional PScell addition/change configuration, if received.

Discussion
P1-P3:
- Futurewei wonders if inter-RAT is supported. Qualcomm clarifies EN-DC was the original use case.
- Samsung thinks SN-initiated change is the main use case and we could prioritize that. Ericsson agrees. Intel agrees because SN change impacts UE the least. OPPO also agreed. MediaTek agrees but wonders if we will do the rest later.
- DCM wonders if the SN is source or target SN.

P4-10:
- LGE wonders of Network knows about the execution via RACH. Ericsson thinks this could be done via other ways.

Agreements
0 We will prioritize work in SN-initiated PSCell change for conditional PSCell change.
1 Maintain Rel-15 principle that only one PScell is active at a time even with conditional PScell addition/change.
2 For conditional PScell addition, the MN decides on the conditional PScell addition execution condition. The condition is defined by a measurement identity, given by a measurement configuration provided by the MN.
3 For conditional PScell change, execution condition may be decided by MN (MN-initiated) or SN (SN-initiated)
4 For conditional PScell change, A3/A5 execution condition should be supported while for conditional PScell addition, A4/B1 like execution condition should be supported.
5 For conditional SN change, the source SN configuration can be used as the reference in generation of delta signalling for the candidate SNs.

✉ **[107bis#52][NR MobE] Open issues Conditional PSCell addition/change (CATT)**
Determine open issues that need to be resolved for the feature to be completed.
Intended outcome: Report (may include TPs of proposals).
Deadline: Next Meeting

R2-1913916 Study on application of CHO mechanism to Conditional PSCell addition change NTT DOCOMO INC. discussion NR_Mob_enh-Core
R2-1912242 PSCell Conditional Change Considerations Spreadtrum Communications discussion
R2-1912882 Conditional PSCell addition/change InterDigital discussion Rel-16 NR_Mob_enh-Core
R2-1913036 Conditional PSCell addition and change Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core
R2-1912343 Conditional PSCell addition and change vivo discussion Rel-16 NR_Mob_enh-Core

R2-1912344 Text proposal for conditional PSCell addition and change vivo discussion Rel-16 NR_Mob_enh-Core
R2-1912401 PCell monitoring during conditional PSCell addition/change OPPO discussion Rel-16 NR_Mob_enh-Core
R2-1912635 Conditional PSCell addition/change Ericsson discussion NR_Mob_enh-Core
R2-1912745 Discussion on CHO for Pscell change Huawei, HiSilicon discussion Rel-16 NR_Mob_enh-Core
R2-1912816 Procedure and configurations for conditional SN change Futurewei Technologies discussion Rel-16
R2-1912818 Discussion on RLM & RLF reduction for conditional PSCell addition/change Futurewei Technologies discussion
R2-1912983 Applicability of CHO agreements to conditional PSCell change NEC discussion Rel-16 NR_Mob_enh-Core
R2-1913485 Discussion on conditional PSCell addition/change ZTE Corporation, Sanechips discussion Rel-16 NR_Mob_enh-Core
R2-1913515 Handling of Key Derivation in Conditional PSCell Addition/Change Futurewei discussion Rel-16 NR_Mob_enh-Core
R2-1913591 Introducing condition for SN (re-)configurations Samsung Telecommunications discussion Rel-16 NR_Mob_enh-Core
R2-1913656 Inter-node interaction for Conditional PScell addition/change CATT discussion Rel-16 NR_Mob_enh-Core
R2-1913657 Draft LS on Conditional PSCell addition_change CATT LS out Rel-16 NR_Mob_enh-Core To:RAN3
R2-1912400 PCell monitoring during conditional PSCell addition/change OPPO discussion Rel-16 LTE_feMob-Core
(moved from 7.3.3)
R2-1912297 Conditional NR PSCell addition/change procedures Qualcomm Incorporated discussion
R2-1912298 Conditional NR PSCell addition/change failure handling Qualcomm Incorporated discussion

6.10 DC and CA enhancements

(LTE_NR_DC_CA_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-192336, see also guidance in RP 192326)
Time budget: 2 TU
Tdoc Limitation: 8 tdocs

6.10.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc
Including output of email discussion [107#33][NR/DCCA] 38.331 running CR (Ericsson)
Including output of email discussion [107#34][NR/DCCA] 36.331 running CR (Ericsson)

LS in

R2-1912019 LS on DL HARQ timing for FDD Scell for LTE TDD-FDD CA with TDD Pcell, applied to FDD Pcell, for Dual Uplink EN-DC (R1-1909880; contact: Vodafone) RAN1 LS in Rel-16 LTE_NR_DC_CA_enh-Core To:RAN2 Cc:RAN

⇒ **noted**

R2-1912022 Reply LS on NR fast SCell activation (R1-1909893; contact: Qualcomm) RAN1 LS in Rel-16 LTE_NR_DC_CA_enh-Core To:RAN2, RAN4

⇒ **noted**

R2-1912053 Reply LS on NR fast SCell activation (R4-1910574; contact: Huawei) RAN4 LS in Rel-16 LTE_NR_DC_CA_enh-Core To:RAN1, RAN2

⇒ **noted**

R2-1912042 Reply LS on maximum allowed SCell activation delay for Rel16 CA (R4-1909995; contact: Nokia)
RAN4 LS in Rel-16 LTE_NR_DC_CA_enh-Core To:RAN1 Cc:RAN2

⇒ **noted**

Running CRs

R2-1912538 Running CR for 38.331 on CA/DC Enhancements Ericsson draftCR Rel-16 38.331
15.7.0 LTE_NR_DC_CA_enh-Core Late
- Ericsson explains these docs are work in progress with lots of comments, with not so many companies inputting.

=> Revised in R2-1914188

R2-1914188 Running CR for 38.331 on CA/DC Enhancements Ericsson draftCR Rel-16 38.331
15.7.0 LTE_NR_DC_CA_enh-Core

⇒ **endorsed as baseline (resume/stored ctx need further discussion)**

R2-1912539 Running CR for 36.331 for CA/DC Enhancements Ericsson draftCR Rel-16 36.331
15.7.0 LTE_NR_DC_CA_enh-Core Late

=> Revised in R2-1914189

R2-1914189 Running CR for 36.331 for CA/DC Enhancements Ericsson draftCR Rel-16 36.331
15.7.0 LTE_NR_DC_CA_enh-Core

⇒ **endorsed as baseline (resume/stored ctx need further discussion)**

Offline 39, clear up the CRs, revisions in R2-1914188 and R2-1914189 (ericsson)
- Ericsson has removed controversial aspects and replaced them with comments instead and think the updated versions are agreeable. They don't yet contain agreements from this meeting.
- MTK wonder if these need to be endorsed. MTK think there are still controversial items in the CRs. MTK think this main issue is on the resume procedure and the stored context.

R2-1912268 Running CR to 37.340 for CA_DC enhancements vivo, Ericsson draftCR Rel-15 37.340
15.7.0 LTE_NR_DC_CA_enh-Core
- Intel point out that there is a coversheet tdoc allocation problem the CR should be rel-16.

R2-1912540 Running CR for 36.300 on CA/DC Enhancements Ericsson draftCR Rel-16 36.300
15.7.0 LTE_NR_DC_CA_enh-Core

R2-1912541 Running CR for 38.300 for CA/DC Enhancements Ericsson draftCR Rel-16 38.300
15.7.0 LTE_NR_DC_CA_enh-Core
- Ericsson explains that the stage-2 CRs are just provided as baseline ref.

✉ **[107bis#06][DCCA] 36300 38300 (Ericsson)**
Intended outcome: Endorsed Running CRs, capturing agreements incl 107bis
Deadline: 1 week

=> Endorsed in:
R2-1914004 (36.300)
R2-1914005 (38.300)

✉ **[107bis#44][DCCA] Running CRs 38331 36331 (Ericsson)**
Intended outcome: Draft agreeable CRs for next meeting, capturing agreements incl 107bis
Deadline: Next Meeting

✉ **[107bis#45][DCCA] Running CR 37340 (Vivo)**
Intended outcome: Draft agreeable CR for next meeting, capturing agreements incl 107bis
Deadline: Next Meeting

6.10.2 NR-NR Dual Connectivity

RAN2 aspects related to NR-NR Dual Connectivity, to be discussed after RAN1 has made some progress.

Power Control NR-DC

R2-1912269 Power control for NR-DC vivo discussion R2-1909193

R2-1912542 NR-DC power control Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

Further Enhancements

R2-1912120 Bearer type negotiation CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1908893

6.10.3 Early measurement reporting

Early measurement reporting for MR-DC, NR-DC, and CA in IDLE, INACTIVE.

Including output of email discussion [107#35][NR/DCCA] Remaining aspects of early measurement configuration (Vivo)

R2-1912270 Report of [107#35][NR/DCCA] Remaining aspects of early measurement configuration (vivo)
vivo discussion

DISCUSSION

- Ericsson think this is not exactly as the current agreement.
- Nokia wonders if it is possible to have SSB configuration in release message. Vivo think all info is in the release message.
- Samsung wonders if the UE moves to an area with different timing, what do the UE do, just stop measure. Vivo think validity area can resolve this. LG don't think validity area can guarantee that this works. QC think there are problems also with UE changing camping freq.
- Nokia think there is an issue. Nokia think it is not so nice to have to provide SMTC in RRC release.
- Huawei think that if the UE can adjust its timing it would work.
- Oppo think there are issues also for the sycn SSB.
- ZTE and Intel prefer to not have the timing in the release message. QC agrees and think we can reconsider. MTK also prefer to have timing info not in dedicated signalling. Nokia agrees. Vivo think this is different to last meeting.
- Oppo think we can agree P1, but remove the last part, and think the SMTC issue can be discussed separately.
- Intel would be ok with P1 if the UE can stop measuring if broadcast config is not consistent with dedicated information.
- Samsung think that a UE can use the broadcast configuration even if he has a valid dedicated configuration.
- LG think the proposed text is unclear

P3-4

- Nokia think maybe we don't need the validity area. Samsung also think we should not have it.
- Vivo think a majority want this.
- China telecom and CMCC think validity area is useful.
- LG think we can reuse what we have in LTE
- Oppo think Validity area is ok, Spreadtrum too.
- Nokia think we cannot just copy-paste from LTE and then we don't really have time, copy paste would be ok.
- Huawei think the main intention is that the UE shall not measure where it is not needed. It can be kept simple.
- Samsung wonder if this is per UE or per frequency. If we keep it simple it should be per UE.
- QC think this is ok.
- Ericsson think the validity area should be per frequency.
- Chair: there seems to be some doubts on the RAN notification areas

FFS if the following can be agreed:

- **There is a validity area, and the action when the UE exits the validity area is that the UE stops all early measurements.**
- **Validity area is configured by means of dedicated RRC signaling**
- **Validity area can be configured by means of: Lists of PCIs; Lists of CellIdentity;**

- **When UE reselects to a cell that is not part of the validity area (for any of the configured frequencies/cells) while *measIdleDuration* is running, UE should stop measurement. UE stops the timer and clears the entire early measurement configuration.**

Offline 41, Check the above (Ericsson)
- Ericsson report there was no proper offline
- Ericsson still have doubts. Nokia also have doubts, but if we need to agree something the above proposal could be ok.
- Ericsson think the last bullet is controversial. MTK think that this is the same behaviour as LTE. Ericsson could compromise if the very last part is removed. Samsung think many companies think this is not so useful at all so for many companies only the simplest way is acceptable. Nokia and ZTE agrees.
- Samsung proposes the very last part to be WA

⇒ **There is a validity area, and the action when the UE exits the validity area is that the UE stops all early measurements.**

⇒ **Validity area is configured by means of dedicated RRC signaling**

⇒ **Validity area can be configured by means of: Lists of PCIs; Lists of CellIdentity;**

⇒ **When UE reselects to a cell that is not part of the validity area (for any of the configured frequencies/cells) while *measIdleDuration* is running, UE should stop measurement. UE stops the timer. WA that the UE also clears the entire early measurement configuration.**

R2-1913247 Remaining aspects on early measurement configuration Samsung, MediaTek Incorporated, ZTE Corporation, Sanechips, Qualcomm Incorporated discussion Rel-16
LTE_NR_DC_CA_enh-Core

Proposal 3 When it comes to the signalling options (broadcast/ dedicated) used for the different fields, the UE only needs to support a limited set of combinations. The following limitations apply:
- *a) If UE receives the frequency list by dedicated signalling, it may for non-camping frequencies receive the SSB measurement config (includes SMTC) by dedicated or broadcast signalling*
- *b) If UE receives the frequency list by broadcast, for non-camping frequencies it will receive the SSB measurement config (includes SMTC) by broadcast signalling also*
- *c) If UE receives the frequency list by broadcast, for all frequencies it will receive the common control signalling and cell info by broadcast signalling also*
- *d) If UE receives the frequency list by dedicated signalling, for all frequencies it will receive the common control signalling and cell info by dedicated signalling also*

DISCUSSION
- Vivo wonders what is a camping frequency? ZTE think this is from the point of the releaseing cell. Huawei think it doesn't matter if we have the last part of P1 or not. Nokia think camping frequency is the frequencies broadcasted for cell reselection.
- Intel think that as the timing information is provided in dedicated signalling it should be usable a certain area.

P2
- Ericsson think that the UE should continue measuring based on SIB configuration for cell reselection in such case. QC think that if the network doesn't provide a dedicated configuration the measurements will be based on SIB. MTK agrees with QC
- ZTE think that SIB information for early measurement can be both cell reselection configuration and/or new configuration not for cell reselection. Oppo think existing SIBs doesn't work ..
- Intel also think that only the frequencies may be provided by RRC release, and the UE uses the broadcast configuration.

3
- vivo think we already agreed this.

⇒ **The RRC release message can include SSB measurement configuration. It is assumed that information provided for cell reselection by broadcast is not provided in the RRC release message.**

⇒ **No UE requirements will be specified for what UE shall do upon reselection to a cell broadcasting for some frequency an SSB measurement configuration that differs from the values received in the RRC release message i.e. UE may stop early performing measurements for concerned frequency**

⇒ **If the UE has not received a dedicated SSB configuration, the UE does early measurements based on SIB.**

Offline 40, some companies need to think about P3 (Samsung)

R2-1914212 Report of offline discussion 040 on Signaling options for early measurement configuration Samsung report Rel-16 LTE_NR_DC_CA_enh-Core
- Samsung report that the document is not provided but think P3 is now agreeable.
- Ericsson think the proposal text may need to be rewritten. After modification Ericsson indicate that the proposal in the document is OK.

⇒ **Proposal is agreed**

R2-1912192 Remaining issues of NR early measurements Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912282 SMTC for sync SSB frequency and non-sync SSB frequency OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912115 Remaining issues of early measurement configurations CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913615 Idle/inactive NR measurements in LTE and in NR Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913246 Configuration of early measurments by SN Samsung Telecommunications discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913342 Handling early meaurment results upon cell reselection LG Electronics discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912989 Details of early measurement configuration Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913344 Considerations on ways to provide SSB configuration in early measurements LG Electronics discussion Rel-16 LTE_NR_DC_CA_enh-Core

Resume

R2-1912524 Fallback procedure for INACTIVE mode Samsung Research America discussion LTE_NR_DC_CA_enh R2-1910975

R2-1912545 Applicability of early measurement solutions for LTE Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912543 Idle measurement configuration in UE Inactive AS context Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912271 Early Measurement Reporting for INACTIVE State vivo discussion R2-1909195

IRAT mob State trans

R2-1913835 Discussion on early measurement configuration upon state transition MediaTek Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912990 Early measurements and Inter-RAT Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912544 Handling of early measurement configuration and results Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1913488 On Inter-RAT Operation ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1912272 UE measurement behaviour regarding autonomous state transition vivo discussion R2-1909196

Misc

R2-1913487 Remaining Issues on Early Measurements ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1912114 Available Cell Reselection Measurement Result Reporting CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1912236 Consideration on early measurement reporting Spreadtrum Communications discussion R2-1909086
R2-1913343 Validity area enhancements in NR LG Electronics discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1912293 Open issues for early measurement OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1913919 Further consideration on capability reporting LG Electronics Inc. discussion Rel-16
R2-1912283 UE measurement behavior due to lower priority frequency and OOS OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

New Cases

R2-1912546 Extended use cases for early measurement other than fast CA/DC setup Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1912547 On further aspects of early measurement Ericsson discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1912237 Early measurement in NR-U Spreadtrum Communications discussion R2-1909107

UE capability

R2-1912991 UE capabilities for early measurements Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

Not to be treated

R2-1912273 IDC impact for early measurement vivo discussion R2-1909198

6.10.4 Efficient and low latency configuration signalling

Minimizing signalling overhead and latency needed for initial cell setup, additional cell setup and additional cell activation for data transmission. Contributions related to early measurement reporting should not be submitted in this AI.

No documents should be submitted to 6.10.4. Please submit to 6.10.4.x

6.10.4.1 Direct SCell activation

Further details related to direct SCell activation by RRC upon SCell addition or after a handover. Support of MCG SCell and SCG Configuration with RRC Resume (AI 6.10.4.3) should be concluded before discussing whether direct SCell activation by RRC is applicable to RRC Resume (outstanding FFS from RAN2#105).

R2-1912116 Considerations on Direct SCell activation in DC/CA Scenarios CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1912288 SCell or SCG activation in RRC_INACTIVE OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core
R2-1913489 On directly donfiguring SCell as activated ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.10.4.2 Fast SCell activation

Solutions for fast SCell activation including 'dormancy' like behaviour, provision of temporary RS resources at SCell activation, etc. This topic will be discussed again by RAN2 after receiving input from RAN1/4 on the feasibility and benefit of the potential solutions in response to LS R2-1908483 sent from RAN2#106.

SCell Dormancy

R2-1912195 Discussion on fast SCell activation based on RAN1 / RAN4 reply LS Qualcomm Incorporated, Verizon, Vodafone, Sprint, MediaTek Inc., Charter Communications discussion Rel-16 LTE_NR_DC_CA_enh-Core

DISCSUSSION
- Vivo think we should support “sparse” PDCCH monitoring acc to R1 LS. QC think R2 understanding is acc to the proposal. ZTE agrees,
- Oppo think P1 we already agreed. Intel think we can agree.
- QC think R2 can agree.
- Vivo think R1 is looking at ways to bring Scell out of dormancy and sparse PDCCH monitoring is a way to bring Scell out of dormancy.
- Samsung wonders if beam mgmt involves CSI reporting. QC think yes.
- Intel wonder if we really need to say more than stops PDCCH monitoring.

P2
- MTK think the dormancy behaviour is on top of active/deactivated state.

P3
- Intel think we can also just let L1 handle this without BWP handling overhead in L2/L1. MTK think R1 can decide this.
- Nokia think R1 has already agreed this. Ericsson think this is not the case.
- Chair think we can in R2 possibly agree that we see benefits with X and Y etc. R1 input is needed for real decision.
- ZTE think the proposals represents simple solutions.
- Xiaomi think this has no spec impact.

⇒ **Based on RAN1/RAN4 reply LS, introduce ‘dormancy’ behaviour for NR SCell, i.e. the UE stops monitoring PDCCH on SCell but continue performing CSI measurements, AGC and beam management, if configured.**

⇒ **RAN2 confirms that UE “dormancy” operation is part of SCell activated state (i.e. not as part of SCell deactivated state)**

⇒ **Chair: R2 will need to wait for R1 progress**

R2-1912285 Introduction of dormancy behavior in NR OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core
=> Revised in R2-1913942

R2-1913942 Introduction of dormancy behavior in NR OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912992 Dormant behaviour Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912275 Behavior of dormancy SCell and Scell activation vivo discussion

R2-1912465 UE Measurement in SCell Dormant State Apple discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1909865

R2-1913142 Consideration on dormancy behavior LG Electronics Inc. discussion LTE_NR_DC_CA_enh-Core

R2-1913490 Further Consideration on fast SCell activation ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913531 Further RRC impact due to dormancy behaviour Ericsson discussion

R2-1913618 Discussion on dormancy-like behaviour Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

Fast Scell Activation

R2-1912476 To reduce SCell activation delay in NR LTE_NR_DC_CA_enh-Core Samsung discussion Rel-16 R2-1909126

R2-1912284 Fast Scell activation in sTAG OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

Temporary RS

R2-1912117 Temporary RS utilization for SCell and SpCell LTE_NR_DC_CA_enh-Core CATT discussion Rel-16

6.10.4.3 MCG SCell and SCG Configuration with RRC Resume

Support of CA/DC configuration with RRC resume.

Including output of email discussion [107#32][NR/DCCA] MCG SCell/SCG resume (Interdigital)

R2-1912880 Summary of Email Discussion [107#32]NR/DCCA] MCG Scell/SCG Resume InterDigital discussion Rel-16 LTE_NR_DC_CA_enh-Core Late

DISCUSSION

P1

- MTK think this is not useful
- Chair wonder how this can work. Samsung indicate that Network based validation cannot work as it would be too late.
- Ericsson think the baseline is the question whether we can do better than blind resume, based on a configuration received in the release. LG has the same understanding.
- Vivo think the UE can do validation without notifying the network.
- CATT think all of this is not useful.
- Intel think SCG is many cells, and think the UE should only check the PScell.
- Oppo think measurement report is too late to resume SCG so this is useful and support P1.
- Huawei think 10 companies were against and 6 supported this in the email discussion.

DISCUSSION with removal of FFS

- ZTE think still this is not useful as the network likely need to do L1 reconfiguration.
- MTK think that reconfiguration can anyway be done after MSG5.
- QC think this indication need to provided before early measurements
- LG think the check is necessary. Vivo agrees but think it doesn’t need to be reported.
- Samsung wonder if the indication in MSG5 would be an optimization. Samsung think the early measurements shall be used to resume the SCG.
- Ericsson think there is no problems with this, and it is similar to conditional handover.
- Huawei think the measurement report in MSG5 would be the same thing as this. MSG3
- MTK cannot agree to this proposal. Nokia agree and think the MSG3 proposal is complex.
- Oppo reminds that this is similar to conditional handover/conditional PScell addition .. ZTE think this is different as here there is no pre-measurement report.
- IDT and Xiaomi think the procedure can reduce the latency compared to blind resume, and latency for failure and reconfiguration to a better configuration can be faster.

P5

- Oppo think the network will not have any measurement results at the time of resume and think this is required. QC agrees and think this would be a blind operation. R4 can probably not activate Scell, there would need to be a timeline requirement. LG has concerns as well. Nokia think we can send an LS. QC agrees to send an LS.
- Huawei think this is possible. Blind HO can be done. Huawei think that by deployment the network can know that the coverage of certain cells is at least as good as the resume Pcell. Catt, Ericsson, ZTE, Nokia support.
- Xiaomi wonder if the network can do the scheduling. Nokia assumes that the network will not schedule until the UE has sent a CSI report.

P7

- IDT report that the views were split. IDT explains that the purpose is power consumption.
- Intel think there is no further benefits specification wise. Nokia as well. CATT.
- Chair: not enough support.

P10

- LG think that if we confirm dormancy behaviour and discuss this later. IDT think that this is about dormancy for PScell.
- MTK think most companies want to wait until dormancy is specified

- Oppo think this is same as inactive state.
- Several companies think we should await dormancy progress. CATT think this is not so related to Scell dormancy.

P12
- Ericsson and QC think we can make it simple for this release.

P14
- Oppo think this need to be clarified. Oppo claims that the UE can have both LTE and NR serving cells simultaneously in RRC_INACTVE. Huawei don't understand, the UE just camp on one cell.

⇒ **The benefit of P1 seems to be to avoid the potential failure that occur if the UE resumes SCG out of coverage of the SCG (SCG failure)**

⇒ **Direct SCell activation (setting the SCell state to activated or deactivated) in resume message is supported, if R4 can confirm that there are no blocking issues from their point of view**

⇒ **When the UE resumes to a cell included in the stored SCG, particular functionality for swapping of MCG and SCG configurations is not considered for Rel16**

⇒ **New conditions/triggers for resuming directly to the SN are not considered in Rel16.**

R2 assumes the following (can be slightly modified due to progress on Scell dormancy):

⇒ **The UE supports network-controlled suspension of the SCG in RRC_CONNECTED.**

⇒ **UE behaviour for a suspended SCG is FFS**

⇒ **The UE supports at most one SCG configuration, suspended or not suspended, in Rel16.**

⇒ **In RRC_CONNECTED upon addition of the SCG, the SCG can be either suspended or not suspended by configuration.**

Offline 49, Draft LS to R4 on direct Scell activation in R2-1914210 (QC)

R2-1914210 [DRAFT] [LS to RAN4 on Direct Scell Activation] Qualcomm LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN4
- QC report that this is the wrong version.

Revised in R2-1914216

R2-1914216 [DRAFT] [LS to RAN4 on Direct Scell Activation] Qualcomm LS out Rel-16 LTE_NR_DC_CA_enh-Core To:RAN4
- Huawei think we don't need to copy paste the whole discussion in the LS. MTK suggest we copy the agreement only, and not the discussion.

⇒ **Remove the R2 discussion box, remove "discussion notes and" in the line above the box.**

⇒ **With the change above, the LS is approved in R2-1914217**
- [MCC]: Removed "draft" from the LS title

⇒ **Approved in R2-1914227**

R2-1913921 Discussion on UE behavior for stored SCG/SCell configuration MediaTek Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913491 On SCG suspension ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912194 Further discussion on NR SCG resume procedure Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913918 Conditional resumption with validity check LG Electronics Inc. discussion Rel-16

R2-1912238 Enhancements of resuming MR-DC configuration for RRC_INACTIVE Spreadtrum Communications discussion

R2-1912287 RRC Resume for MR-DC with 5GC OPPO discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912399 Consideration on the blind SCG configuration Beijing Xiaomi Mobile Software discussion Rel-16

R2-1913915 Further consideration on SCG resumption LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912118 Dormant SCG state CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

Other

R2-1912119 Signalling enhancement for Inactive state CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.10.4.4 Other

Other enhancements not addressed in the AIs above

Common Configurations

R2-1912121 Common Cell Configuration for Signaling Reduction in NR CATT discussion Rel-16 LTE_NR_DC_CA_enh-Core

DISCUSSION

- Chair wonder is there is interest
- QC, Nokia, ZTE, Oppo and Huawei support this. QC think we should apply also for BWP
- Ericsson has concerns on using LTE as a baseline and this is not stable, and this could take time. Vivo agrees. Samsung agrees with Ericsson but have some interest. Nokia think it should be simple, and think it can be kept simple. Huawei also think it could be ok.
- MTK think signalling priority has low priority. Intel agrees on this.
- Docomo think that for NR there is so much optionality and configurations in NR also for the common parts so it is not clear what the benefits.
- NR RRC rapporteur doesn't like the proposal.

⇒ **We don't attempt this kind of enhancements (Common Cell Configuration for Signalling Reduction) in Rel-16 in WI CADC enh.**

R2-1912196 Discussion on common SCell configuration Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1908678

R2-1913230 Efficient RRC configuration with low latency Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913248 CA/ DC enhancements, signalling reduction Samsung Telecommunications discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912276 Minimize signaling overhead for cell setup of MR-DC vivo discussion R2-1909202

R2-1913492 Signalling overhead reduction for cell configuration and BWP configuration ZTE Corporation, Sanechips discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913530 Use of group signaling for NR-CA Ericsson discussion

R2-1913742 NR group specific cell configuration Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913161 Latency reduction enhancements for SCG RACH procedure Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912197 Introducing suspension of SCG Qualcomm Incorporated discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1908679

6.10.5 Fast MCG link Recovery

Further details of fast recovery of MCG link by utilizing the SCG link for recovery during MCG failure while operating under MR-DC. Including output of email discussion [107#31][NR/DCCA] MCG fast recovery (Ericsson)

R2-1913296 Summary of email discussion [107#31][NR/DCCA] MCG fast recovery discussion Rel-16 LTE_NR_DC_CA_enh-Core Ericsson

DISCUSSION
- Ericsson proposes to not treat P2-P7

P9
- LG think the guard timer was introduced for interaction problems network – UE, and think for this, the UE can resolve it by itself.
- Ericsson think there is no serious problem.
- Samsung think this may happen quite often. LG think we don't want to do reestablishment very often.
- Vivo think this is a corner case. QC think this is a rare case. MTK also think this is not serious.

P12
- Intel think we should discuss a framework rather than particular messages.

P14
- Nokia think that when SRB1 is configured with CA duplication the SRB3 is more reliable.
- Oppo think the purpose is fast recovery and think SRB choice can be left for implementation.
- IDT support the proposal.
- Samsung think that for split SRB there is the reordering problem and think SRB3 should be used if available.
- LG think network will configure which one will be used. ZTE agrees, because for the split SRB1 there is some drawback, but for SRB3 internode message upgrade is required, and the network may not support SRB3 this way. Vivo support. Huawei think the network shall configure.
- QC support the proposal.

P15
- Oppo think even though the network and UE is mismatched there is no problem as we have the guard timer. Ericsson think this deteriorates the UE reestablishment performance in all networks that do not support this. Vivo think the guard timer is anyway configured.

⇒ **Fast PCell recovery via SCell is not introduced in Rel-16.**

⇒ **We add no functionality for optimized RRC re-establishment to SN RAT in Rel-16**

⇒ **No further mechanisms are introduced to resolve outstanding UL/DL RRC deadlock messages situation upon the triggering of MCG failure recovery**

⇒ **For MCG fast recovery via SRB3, the MCGFailureInformation message in UL is encapsulated in the ULInformationTransferMRDC message**

⇒ **A new RRC message, i.e., DLInformationTransferMRDC, is introduced in order to allow the SN to encapsulate (for SRB3) the MN response (i.e., RRCReconfiguration or RRCRelease message) to be send to the UE**

⇒ **The RRC procedure on these encapsulated messages are the same as if they had been received by SRB1**

⇒ **When receiving a MN RRCRelease message encapsulated within an SN RRC message via SRB3, the UE does not send any complete message**

⇒ **Split SRB1 is always used for the transmission of the MCGFailureInformation message. SRB3 is used only if split SRB1 is not configured**

⇒ **MCG failure recovery can be configured by the network.**

R2-1912198 Remaining issues of Fast MCG Recovery LTE_NR_DC_CA_enh-Core Qualcomm Incorporated discussion Rel-16

R2-1912274 Discussion on fast radio link recovery vivo discussion R2-1909199

R2-1912277 Remaining issues on MCG fast recovery vivo discussion R2-1909203

R2-1912286 Supporting RRC reestablishment to SN RAT cell LTE_NR_DC_CA_enh-Core OPPO discussion Rel-16

R2-1912308 Fast Recovery with CA Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912449 Further discussion on MCG failure recovery via SRB3 SHARP Corporation discussion

R2-1912466 PCell Fast Recovery Apple discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1909864

R2-1912490 Discussion on MCG Fast Recovery Samsung discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912491 Discussion on FailureInformation Samsung discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1911457 Withdrawn

R2-1912492 DL Reordering Problem at MCG Link Recovery Samsung discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912521 MCG RLF reporting via SCell Samsung Research America discussion LTE_NR_DC_CA_enh-Core R2-1910909 Withdrawn

R2-1912879 Remaining Aspects of Fast MCG Link Recovery using SRB3 InterDigital discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912984 Configuration of fast MCG recovery NEC discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1912993 Aspects of MCGFailureInformation over SRB3 Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913596 RRC Framework for handling MN failure indication and recovery over SRB3 Intel Corporation discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913617 Handling of primaryPath when fast MCG link recovery via split SRB1 fails Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913745 Other recovery mechanisms for MCG fast recovery Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1907496

R2-1913839 PDCP SN gap issue in fast MCG link recovery LG Electronics Inc. discussion Rel-16 LTE_NR_DC_CA_enh-Core

6.10.6 Cross-Carrier scheduling with different numerologies

RAN2 aspects related to cross-carrier scheduling, to be discussed after RAN1 has made some progress.

R2-1912193 CR to 38.331 on support of cross-carrier scheduling with different numerology Qualcomm Incorporated, ZTE Corporation, Sanechips draftCR Rel-16 38.331 15.7.0 F LTE_NR_DC_CA_enh-Core

R2-1912941 Impact analysis of NR CA frame timing relaxation CMCC discussion Rel-16

R2-1912994 CR on how to introduce x-scheduling with different numerologies Nokia, Nokia Shanghai Bell draftCR Rel-16 38.331 15.7.0 LTE_NR_DC_CA_enh-Core

R2-1913743 RAN2 impact to support cross-carrier scheduling with different numerologies Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1911155

6.10.7 Other

Including any RAN2 aspects related to the objectives 6, 7 and 8 (for which the WID did not identify RAN2 impact)

R2-1912477 Support of unaligned frame boundary for inter-band TDD CA Samsung discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913616 UE capabilities for DC and CA enhancements Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core

R2-1913744 Clarification on RAN2 impact to support DL HARQ timing for dual UL EN-DC Huawei, HiSilicon discussion Rel-16 LTE_NR_DC_CA_enh-Core R2-1910194

6.11 UE Power Saving in NR

(NR_UE_pow_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: RP-191607, See also guidence in RP-192326). Documents in this agenda item will be handled in a break out session. NOTE: "SCell dormancy" like behaviour will be discussed in MR-DC WI.

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

6.11.1 Organisational

Including incoming LSs, running TS, rapporteur inputs, etc

Including output of email discussion [107#65][NR/Power Saving] Running CR for 38.300 (CATT)

Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

R2-1912107 RAN2 work plan for UE Power Saving WI CATT (rapporteur) discussion Rel-16 NR_UE_pow_sav-Core
=> Noted

R2-1912108 [107#65][NR/Power Saving] Running CR for 38.300 (CATT) CATT (rapporteur) discussion Rel-16 NR_UE_pow_sav-Core Late
=> RAN2 will wait for RAN1 to provide stage 2TP this week on the RAN1 specific enhancements e.g. dynamic cross-slot
- Ericsson thinks that it would be great to choose a simple name for WUS.
- Xiaomi asks if the intention was that the UE triggers the measurement relaxation if any of the conditions were triggered.
=> The CR is endorsed

R2-1914183 LS on PDCCH-based Power Saving Signal/Channel carrying indication of UE wakeup before DRX ON (R1-1911475; contact: CATT)
- Ericsson explains that from a RAN2 perspective we can have it.
=> Noted

R2-1914192 LS on UE adaptation to maximum number of MIMO layers (R1-1911528; contact: vivo)
=> Noted

✉ **[107bis#69][PowerSaving] Running CR 38.300 (CATT)**
Scope: Capture agreements up to RAN2#107bis
Intended outcome: Running CR
Deadline: Next Meeting

✉ **[107bis#70][PowerSaving] Running CR 38.331 (Mediatek)**
Scope: Capture agreements up to RAN2#107bis at least for MIMO and SCell Identify and discuss open issues related to stage-3 modelling aspects if needed
Intended outcome: Running CR
Deadline: Next Meeting

✉ **[107bis#71][PowerSaving] Running CR 38.321 (Huawei)**
Scope: Identify and Discuss open issues related to stage-3 modelling aspects, with the aim to capture agreements up to RAN2#107bis
Intended outcome: Proposals on open issues and potential running CR
Deadline: Next Meeting

6.11.2 PDCCH-based power saving signals/channel Additional stage-3 RAN2 aspects

NOTE: 3. As per plenary guidance (RP-192289), RAN2 is not expected to discuss any aspects related to whether additional UE behavior is needed when UE is also configured for receiving PDCCH based power saving signal/channel outside active time. No contributions on this topic should be submitted under power savings.

Short DRX cycle

R2-1912330 WUS impact on Short DRX cycle vivo, Qualcomm Inc., Spreadtrum, Huawei, Hisilicon
discussion Rel-16 FS_NR_UE_pow_sav
=> Noted

R2-1912910 Simulations on PDCCH-WUS not applying to the DRX short cycles Xiaomi Communications
discussion
=> Noted

Discussion on DRX short cycles

- Vivo indicates that RAN1 has made a working agreement that DRX short cycles will not be supported
- Qualcomm thinks that DRX is a RAN2 topic and there is simulations showing that there is gains. Interdigital agrees and xiaomi's paper has shown the benefits.
- Intel explains that in RAN1 evaluations have been discussed and we should support RAN1. Samsung agrees. Oppo respects RAN1 agreements.
- Ericsson thinks from RAN2 perspective it should be supported and if there is a problem from RAN1 perspective we can re-discuss.
- Nokia is also is wondering how RAN1 makes this working assumptions. We should support short DRX cycle and have it configurable.
- LG doesn't support short DRX cycle.
- CATT doesn't hear any argument in support of short DRX and it requires a huge overhead in the DL which network vendors were concerned and there is some concerns in RAN1.
- Vivo explains that in RAN1 there was no study and that's why it was a working assumption.

R2-1914057 LS to RAN1 to ask about feasibility of short DRX vivo
=> Delete CSI/SRS reporting part
=> Update actions to RAN1 as "RAN2 kindly ask RAN1 if there are technical feasibility concerns to support WUS for short DRX"
=> The LS is approved in R2-1914060 with the change above

R2-1914061 LS to RAN1 on question related to CSI/SRS reporting Vivo
- indicate RAN2 agreements on active time and ask RAN1 if they have concerns
=> Update: "Based on the above RAN2 agreements, as a consequence, RAN2 understands the UE would not report P/SP SRS and CSI during the next on-duration if PDCCH-WUS does not wake the UE up. RAN2 did not explicitly discuss whether this is the desired behaviour or not regarding P/SP SRS and CSI reporting and would like to check if RAN1 has any views/concern on this behaviour.
=> The LS is approved with the changes above in R2-1914200

Agreements
=> From RAN2 perspective, it is desirable to support WUS for both short and long DRX and it can be configurable by the network. However, RAN2 will follow the final RAN1 decision.
=> Ask RAN1 if there are technical feasibility concerns to support WUS for short DRX
=> Ask RAN1, what is the assumption regarding whether the UE considers also PDCCH-WUS during WUS occasion(s) to determine when/whether to report P/SP SRS and CSI (i.e. CSI/SRS are performed only during active time).

Misdetection

R2-1912785 RAN2 details of the wake-up signal Intel Corporation discussion Rel-16 NR_UE_pow_sav
- Ericsson asks whether the UE has to read the WUS. Intel understands that if it is group specific the UE has to read it, but UE specific is only sent to wake up the UE. Ericsson would like to have some discussion on wording.
=> wait for RAN1 to progress misdetection issues
=> Noted

Not treated

R2-1913787 Further discussion on the impact of PDCCH-WUS Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core
R2-1913197 RAN2 impact of WUS in connected mode Ericsson discussion Rel-16 NR_UE_pow_sav-Core

CSI/SRS

R2-1913050 Remaining issues on the impact from WUS signal ZTE Corporation, Sanechips discussion Rel-16 NR_UE_pow_sav-Core R2-1910403
=> Noted
R2-1912689 CSI/SRS reporting for WUS Lenovo, Motorola Mobilty discussion Rel-16 NR_UE_pow_sav-Core
- Lenovo think that we should agree that we consider WUS signal to report CSI
=> Noted
R2-1913259 Periodic CSI and SRS with wake-up indication MediaTek Inc. discussion Rel-16 FS_NR_UE_pow_sav R2-1910085
=> Noted

Discussion
- Lenovo thinks that we should consider reporting upon reception of WUS. Nokia thinks that we should tie WUS with SRS transmission. Ericsson agrees.
- Qualcomm thinks that the rel-15 agreement still applies, UE reports in active time. Lenovo has the same view. Apple agrees.
- Mediatek thinks that the reporting should take place regardless of WUS. LG has a similar view.
- Ericsson thinks this is not ok as we will lose the UE. CATT explains that the network still has the ability to wake up the UE.

Not treated
R2-1912090 Remaining issues on configuration of PDCCH-WUS OPPO discussion
R2-1912089 Remaining issues on UE behaviours when PDCCH-WUS is configured OPPO discussion
R2-1912091 Impacts of power saivng signalling on CSI reporting OPPO discussion Late
R2-1912109 Stage-3 aspects of PDCCH-WUS CATT discussion Rel-16 NR_UE_pow_sav-Core
R2-1912331 WUS impact upon BWP switching vivo discussion Rel-16 FS_NR_UE_pow_sav
R2-1912694 SI update notification and PWS notification in WUS PANASONIC R&D Center Germany discussion R2-1909237
R2-1912918 Discussion on PDCCH-WUS missing problems during BWP switching and handover Xiaomi Communicationsdiscussion
R2-1912919 Some issues on the PDCCH-WUS working with C-DRX Xiaomi Communicationsdiscussion
R2-1912920 Considerations on UE power saving for BWP scenarios Xiaomi Communicationsdiscussion
R2-1913107 Further details on WUS Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core
R2-1913140 Discussion on the impact of WUS on drx-onDurationTimer LG Electronics Inc. discussion NR_UE_pow_sav-Core
R2-1913141 Consideration on PDCCH-based power saving signals LG Electronics Inc. discussion NR_UE_pow_sav-Core
R2-1913606 Further considerations for the WUS InterDigital discussion Rel-16 NR_UE_pow_sav-Core
R2-1913892 Configuration aspects of wakeup signaling Qualcomm Inc discussion Rel-16 Late
R2-1913899 Configuration aspects of wakeup signaling Qualcomm Inc discussion Rel-16

6.11.3 Efficient transition from RRC_CONNECTED to RRC_IDLE/RRC_INACTIVE

Stage 3 details of report mechanisms for a UE to indicate its preference of transitioning out of RRC_CONNECTED state

R2-1912493 Remaining Issues on Efficient Transition Samsung discussion Rel-16 NR_UE_pow_sav-Core
=> Noted

R2-1913198 UE assistance for RRC connection release Ericsson discussion Rel-16 NR_UE_pow_sav-Core
=> Noted

Discussion whether we need to specify something
- Ericsson would like to specify when the UE is expected to send this and that the network should be able to supress.
- Mediatek explains that for RAI we did define that the UE is not expected to send or received data in the near future. Intel explains that in LTE we had a long discussion.
- Nokia would like to define the future with explicit time configured by the network.
- LG thinks in NR we should come up with a more testable terminology. Ericsson thinks that by copying the RAI we are showing that this is similar feature.

Whether the network can configure the Preferred state
- Huawei asks why it needs to be configurable as the network can just ignore it. Ericsson thinks that the UE doesn't have to send it if the network will not use it. Huawei asks if we need two separate capabilities for this.
- Ericsson thinks that we should have a capability and if the UE is configured the UE should report state preference.
- LG and mediatek think that this preferred state should be optional as the UE may not know anyways.

R2-1914058 Summary of offline discussion Ericsson
- Qualcomm doesn't see the need for a timer that is larger than the inactivity timer.

=> Noted

Agreements:
1. UE assistance information for release request is network configurable.
2. Preferred state is optionally included in Release Request in UE assistance information
3. Triggering condition of Release Request in the UE assistance is up to UE implementation and we will specify what we expect from the UE.
4. Specify that UE may signal via UE assistance that it prefers to be released when the UE may expect not to send or receive more data on near future (like NB-IoT).
5. Introduce a RRC prohibit timer for the release request.
6. A prohibit timer value = 0 can be configured for UE assistance information for release indication.
7. A prohibit timer with value infinity can be configured and large values don't have to be introduced. FFS on the additional values and try to keep the values shorter

Not treated

R2-1913104 On efficient transition from RRC_CONNECTED to RRC_IDLE/RRC_INACTIVE Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-1912110 Remaining issues on UE RRC state transition request CATT discussion Rel-16 NR_UE_pow_sav-Core

R2-1912674 Introduction of efficient transition out of RRC_CONNECTED by UE assistance in TS38.331 ZTE Corporation, Sanechips,China Southern Power Grid Co., Ltd draftCR Rel-16 38.331 15.7.0 B NR_UE_pow_sav-Core

R2-1912786 Efficient RRC state transition out of RRC_CONNECTED Intel Corporation discussion Rel-16 NR_UE_pow_sav

R2-1913138 Need for fast transition to RRC_IDLE LG Electronics Inc. discussion NR_UE_pow_sav-Core

R2-1913788 Discussion on efficient RRC state transition Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core

6.11.4 MIMO layer adaptation

stage-3 related aspects of per-BWP DL MIMO layer configuration

R2-1912111 Maximum MIMO layers configuration in power saving CATT discussion Rel-16 NR_UE_pow_sav-Core

- Ericsson points out that according to RAN1 nothing new is needed for UL MIMO in the specs.

=> This will be included in the running CR

=> Noted

Not treated

R2-1913199 UE adaptation to maximum number of MIMO layers Ericsson discussion Rel-16 NR_UE_pow_sav-Core

R2-1912092 MIMO layer adaptation for power saving OPPO discussion

R2-1912332 Stage-3 design for per-BWP MIMO layer adaptation vivo discussion Rel-16 FS_NR_UE_pow_sav

R2-1912787 Configuration of MIMO layers per DL BWP Intel Corporation discussion Rel-16 NR_UE_pow_sav

R2-1913109 On adaptation of maximum number of MIMO layers Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core

R2-1913789 Further discussion on the MIMO layer adaptation Huawei, HiSilicon discussion Rel-16 NR_UE_pow_sav-Core

6.11.5 UE assistance

Details related to C-DRX UE assistance and whether DRX on duration and offset are included.

C-DRX

R2-1912788 UE assistance for C-DRX configuration Intel Corporation discussion Rel-16 NR_UE_pow_sav

=> Noted

R2-1913200 UE Assistance Information for cDRX configuration Ericsson discussion Rel-16 NR_UE_pow_sav-Core

=> Noted

R2-1912333 UE assistance information for power saving vivo discussion Rel-16 FS_NR_UE_pow_sav

=> Noted

Discussions

To discuss how UE provides "UE's preferred C-DRX configuration" information: option (1) UE provides its preference based on any value of the corresponding parameter range, or option (2) UE provides its preference based on pre-defined values or set of configurations that were previously conveyed to the UE by the network.

- Ericsson thinks this is a good question and would like to think. Qualcomm doesn't think we should restrict and option 1 gives enough flexibility. Mediatek thinks we should report what the network wants us to report (e.g. option 2). Option 1 is more flexible and we should go that way. LG has similar view. Xiaomi prefers option1. Nokia thinks that flexilbility doesn't help the network as at the end it is up to network implementation. ZTE has similar view as Nokia and would like to think further. CMCC prefers option 2.

If UE has a preferred C-DRX information, UEAssistanceInformation message includes that as discussed in proposal 5. Otherwise (i.e. UE does not have a preferred C-DRX information),

UEAssistanceInformation message is sent without including "UE's preferred C-DRX configuration".

- Qualcomm doesn't see why otherwise is needed. If the UE has no preference it keeps the existing configuration and this seems to mandate UE behaviour.
- LG thinks the UE preference is optional. Intel would like to be able to tell the network it no longer has a preference. LG thinks that if the UE doesn't send a preference it means it doesn't have a preferred state.
- Ericsson and mediatek don't understand what is the network action. ZTE also doesn't think this is needed as it is up to network to decide for how long the previous preference was valid for.

Agreements

1. UE assistance of C-DRX configuration will not include UE's preference for "DRX on duration" and "DRX start offset".
2. FFS how UE provides "UE's preferred C-DRX configuration" information: option (1) UE provides its preference based on any value of the corresponding parameter range, or option (2) UE provides its preference based on pre-defined values or set of configurations that were previously conveyed to the UE by the network
3. Prohibit timer will be used as the general framework for UE assistance information and configured per UE assistance type.
4. FFS UEAssistanceInformation message can be sent without including "UE's preferred C-DRX configuration" (i.e. if the UE doesn't have a preference anymore)

SCell

R2-1912112 UE assistance for SCell CATT, Qualcomm Inc., Apple, Huawei, HiSilicon, vivo, Samsung, Intel, MediaTek discussion Rel-16 NR_UE_pow_sav-Core

Proposal 1: RAN2 is kindly requested to specify SCell-related information as part the UE assistance information in Rel-16.

- LG and Nokia thinks that this should be out of scope. Qualcomm thinks that number of cells is already in the overheating UE assistance information. Apple also thinks we can reuse UE assistance.
- ZTE doesn't want to have any SCells information. Ericsson is open to discuss aggregated bandwidth provided that it is clarified. Nokia is ok to re-use the overheating.

=> Noted

R2-1914059 Summary of offline discussion on UE assistance for SCell CATT

- agreeable proposals where overheating information are re-used

Proposal 5: Introduce a new I.E. in UEAssistanceInformation message including the above selected fields from overheatingAssistance I.E.

- Nokia thinks this is not efficient and an indicator may be more efficient if the UE supports both. Ericsson was hoping that if the UE supports both there would be no overheating. Intel explains that overheating is a temporary situation.
- Samsung agrees with Nokia. LG thinks that it would be simpler to have an additional IE and this would allow us to set a separate prohibit timer.

=> Noted

Agreements:

1 The network should be able to distinguish from the received message whether it is for overheating or power saving purpose.
2 The maximum aggregated bandwidth DL/UL (FR1 and FR2) from Rel-15 overheatingAssistance I.E is re-used for power saving.
3 The total number of DL/UL SCells from Rel-15 overheatingAssistance I.E is re-used for power saving
4 The maximum number of MIMO layers DL/UL (FR1 and FR2) from Rel-15 overheatingAssistance I.E is re-used for power saving.
5 Introduce a new I.E. in UEAssistanceInformation message including the above selected fields from overheatingAssistance I.E.
6 The new type of UE assistance information in support of power saving has its own prohibit timer

R2-1913790 UE assistance information in MR-DC Huawei, Huawei Device, CMCC, MediaTek Inc., China Telecom, vivo discussion Rel-16 NR_UE_pow_sav-Core
Proposal 2: For the MR-DC with NR as SN, to enable the transfer of UE assistance information for power saving to NR SN, the UE assistance information for power saving is either conveyed via the NR SRB3 or included as a container in the LTE message ULInformationTransferMRDC
- Samsung indicates that this issue was discussed in the main session for overheating.
=> Noted

Agreements:
1 RAN2 confirms that the UE power saving in NR network in MR-DC scenarios are within the scope of the WID.
2 The solution on how to transfer UE assistance information to NR SN should be discussed together with other UE assistance information (e.g. overheating) in main session.

Not treated

R2-1912093 UE assistance information for power saving OPPO discussion
R2-1912458 On Reusing Overheating Assistance Information for UE Power Saving Samsung discussion NR_UE_pow_sav-Core
R2-1912467 UE Assistance Information for EN-DC Apple discussion Rel-16 NR_UE_pow_sav-Core R2-1909868
R2-1913105 On UE assistance for C-DRX configuration Nokia, Nokia Shanghai Bell discussion Rel-16 NR_UE_pow_sav-Core
R2-1913139 Consideration on UE assistance information LG Electronics Inc. discussion NR_UE_pow_sav-Core
R2-1913201 UE Assistance Information for SCell configuration Ericsson discussion Rel-16 NR_UE_pow_sav-Core
R2-1913358 Power Saving techniques, UE assistance information Sony discussion Rel-16 NR_UE_pow_sav-Core R2-1909907
R2-1913894 UE indication on expected data Qualcomm Inc, Apple discussion Rel-16 R2-1911304 Late
R2-1913901 UE indication on expected data Qualcomm Inc, Apple discussion Rel-16 R2-1911304

6.11.6 RRM measurement relaxation

Contributions should focus on additional enhancements to LTE relaxed monitoring criteria that are specific to NR and whether neighbour cell RSRP should also be considered in cell-edge criterial.
Discuss type of RRM measurement relaxation by allowing measurements with longer intervals, and/or by reducing the number of cells/carriers to be measured. NOTE: this topic should be considered together with RAN4.

Triggering criteria

R2-1912113 Considerations on the criterions of RRM measurement relaxation CATT discussion Rel-16 NR_UE_pow_sav-Core
R2-1912459 On Triggering RRM Measurement Relaxation Samsung discussion NR_UE_pow_sav-Core
R2-1913002 Power Saving for RRM Measurements in NR MediaTek Inc. discussion
=>Noted

Agreements:
1. Network can configure the triggering criteria independently (i.e. either cell-edge or low mobility or both)
2. Cell-edge criteria will not consider neighbour cell measurements

✉ **[107bis#68][PowerSaving] RRM measurement relaxation (Mediatek)**

Intended outcome: Report, possibly Draft LS
- Stage 3 details for the triggering criterion based on papers from RAN2#107bis
- Summarize and discussion of RRM measurement relaxation based on papers from RAN2#107bis
- Agreable proposals and possible LS to RAN4
Deadline: Next Meeting

Not treated

RRM measurement relaxation

R2-1912789	Relaxation of RRM measurements	Intel Corporation	discussion	Rel-16	NR_UE_pow_sav
R2-1912094	RRM relaxation for power saving	OPPO	discussion		
R2-1912334	RRM measurement relaxation criteria	vivo	discussion	Rel-16	FS_NR_UE_pow_sav
R2-1912335	UE Power Consumption Reduction in RRM Measurement	vivo	discussion	Rel-16	FS_NR_UE_pow_sav
R2-1912531	relaxed RRM support	Samsung R&D Institute UK	discussion		
R2-1912691	Considerations on the RRM measurement relaxation	PANASONIC R&D Center Germany	discussion		
R2-1912959	Discussion on power saving in inter-frequency measurements	CMCC	discussion	R2-1909432	
R2-1913106	Dedicated RRM Measurement Relaxation	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913108	Further details on RRM measurement relaxation	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913202	RRM measurement relaxation	Ericsson	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913340	Considerations on performing and criteria of measurement relaxation	LG Electronics	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913341	Considerations on reporting measurement relaxation upon access => Revised in R2-1913940	LG Electronics	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913940	Considerations on reporting measurement relaxation upon access	LG Electronics	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913359	UE power saving for inter frequency measurements	Sony	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913360	Relaxed monitoring for beam measurement	Sony	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913361	Details of Relaxed monitoring for NR UE power saving	Sony	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913568	Remaining issues on time domain measurement relaxation	Huawei, HiSilicon	discussion	Rel-16	NR_UE_pow_sav-Core
R2-1913569	Reducing the number of neighbour cells/carriers to measure	Huawei, HiSilicon	discussion	Rel-16	NR_UE_pow_sav-Core

6.12 SON/MDT support for NR

(NR_SON_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; target; Mar 20; WID: RP-191776). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 10 tdocs

6.12.1 General

Including LSs, work plan, rapporteur inputs, running TS

Including output of email discussion [107#46][NR/MDT] Running 37.320 CR (CMCC, Nokia)

Including output of email discussion [107#47][NR/MDT] Running 38.331 CR for introducing logged MDT (Huawei)
Including output of email discussion [107#48][NR/MDT] Running 38.331 CR for introducing imm MDT and other MDT functions (Ericsson)
Including output of email discussion [107#49][NR/L2 measurement] Running TS38.314 (CMCC)

6.12.2 MDT

The procedure, signaling and corresponding measurement quantities for MDT
Stage 2 running CR:

R2-1912962 Running TS 37.320 CR CMCC draftCR Rel-16 37.320 15.0.0 B NR_SON_MDT-Core
=> Revised in R2-1913950

R2-1913950 Running TS 37.320 CR CMCC, Nokia draftCR Rel-16 37.320 15.0.0 B NR_SON_MDT-Core
=> endorsed as the running CR baseline after this meeting.

R2-1913949 Some open issues for TS 37.320 to support NR MDT CMCC discussion Rel-16 NR_SON_MDT-Core

Agreements:
1 The maximum logging area for NR MDT is the same with that of LTE, i.e. 8 TAs.

✉ **[107bis#82][NR MDT] 37.320 running CR (CMCC, Nokia)**
Intended outcome: Running CR, to be endorsed next meeting
Deadline: Next Meeting

Stage3 running CRs:

R2-1912746 Reprot of email discussion 107-47 Huawei discussion Rel-16 NR_SON_MDT-Core Late

Agreements:
1 For reporting the IE locationInfo should be common for logged MDT and immediate MDT. 2 The following IEs should be common for logged MDT and immediate MDT: - the uncompensated barometric pressure measurement - UE speed - UE orientation 3 For inter-RAT measurements configuration in logged MDT: - for SA scenario, the inter-RAT measurements includes LTE neighbour cells

R2-1912823 Report on [107#48][NR/MDT] Running 38.331 CR for introducing Immediate MDT and other MDT functions Ericsson discussion Rel-16 NR_SON_MDT
=> Noted

R2-1912747 Running 38.331 CR for introducing logged MDT Huawei draftCR Rel-16 38.331 15.7.0 NR_SON_MDT-Core Late

R2-1912824 Running 38.331 CR for introducing Immediate MDT and other MDT functions Ericsson CR Rel-16 38.331 15.7.0 1276 - B NR_SON_MDT

=> R2-1912747 and R2-1912824 are endorsed as baseline and merged into one running CR for MDT.

✉ **[107bis#83][NR MDT] Running 331 CR for introducing MDT (Huawei)**
Capture agreements from this meeting
Including stage3 details event triggered MDT
Divided into 2 phases. Phase1 is targeted to provide a merged MDT CR in one week.
Intended outcome: Report and Running CR to be endorsed next meeting

Deadline: Next Meeting

Everything mixed together:

R2-1912749 Discussion on remaining aspects on logged MDT and Accessibility measurements Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core

Agreements:

1 FFS: Introduce state indications (i.e., inactive and idle) in the logged measurement results.
2 Introduce the logged MDT measurement frequencies and cell IDs (i.e. PCI) for neighbour cell measurement in the area configuration. UE only need to log and report measurement results for the configured frequencies if the results available. FFS the serving cell case.
3 If the signalling based logged MDT received by the NG-RAN when UE is in RRC_INACTIVE:
- The NG-RAN stores the logged MDT configuration in the UE context.
- When the UE resumes the RRC connection in the last serving NG-RAN, the NG-RAN can configure the MDT configuration for the UE.
- When the UE resumes the RRC connection in one new NG-RAN, the last serving NG-RAN can propagate the logged MDT configuration to the new NG-RAN.
This agreement should be confirmed by RAN3.
4 If the management based logged MDT received by the NG-RAN when UE is in RRC_INACTIVE,
- No requirement for the NG-RAN to store the logged MDT configuration in the UE context
- When the UE resumes the RRC connection in the last serving NG-RAN, the NG-RAN can configure the MDT configuration for the UE.
- When the UE resumes the RRC connection in another NG-RAN, the source NG-RAN will not propagate the management based logged MDT configuration. The source NG-RAN should inform the target NG-RAN of UE consents.
5 Introduce the available indicator(s) (e.g. connEstFailInfoAvailable) for the accessibility measurements in the following RRC message:
- RRCSetupComplete
- RRCResumeComplete
- RRCReestablishmentComplete
- RRCReconfigurationComplete message
6 Use the UEInformationRequest/UEInformationResponse message to request and report the accessibility measurements.
7 Use the same available indicator for failure of sending RRCSetupRequest/ RRCResumeRequest/RRCResumeRequest1.
8 The information (e.g. ConnEstFailReport-r11) included in Connection establishment failure reporting of LTE is the baseline of the 5G accessibility measurements. The structure is the baseline and others are FFS.

R2-1912750 Discussion on remaining aspects on immediate MDT Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
=> noted

R2-1912827 Leftover issues for Logged MDT Ericsson discussion Rel-16 NR_SON_MDT

Agreements:
1 A UE can be configured with the periodical logging or the event-triggered logging.
2 For Logged MDT, the report IE for the both periodical logging and event-triggered logging MDT through the same IE (i.e., LogMeasReport).
3 introduction of a greater value of the maximum number of MDT logged measurements entries that can be stored by the UE in NR compared to LTE maxLogMeas-r10. The value of maxLogMeas-r16 is FFS.

MR DC:

R2-1913072 Discussion on MDT in DC scenario ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1909803

R2-1912826 Logged MDT Configuration & Reporting handling in DC scenarios Ericsson discussion Rel-16 NR_SON_MDT

R2-1913250 Logged MDT, inter-node aspects (SN configuration) Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core

R2-1913658 Logged MDT for NR-DC and EN-DC Kyocera discussion

R2-1912142 Issues for Log MDT Configuration in DC Scenario CATT discussion Rel-16 NR_SON_MDT-Core R2-1908758

R2-1912245 Consideration on Logged MDT Report in MR-DC Spreadtrum Communications discussion

R2-1912578 Logged MDT Configuration and Reporting for MR-DC Qualcomm Incorporated discussion Rel-16 NR_SON_MDT

✉ **[107bis#84][NR MDT] MR DC related issue (Ericsson)**
How to handle MDT in DC scenario
Intended outcome: Report
Deadline: Next Meeting

Out of coverage:

R2-1913546 Logged MDT configuration events Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late

R2-1912143 Detection and Reporting of Out-of-coverage CATT discussion Rel-16 NR_SON_MDT-Core R2-1908759

R2-1912144 [Draft] LS on MDT Configuration of Event triggered Out-of-coverage CATT LS out Rel-16 NR_SON_MDT-Core R2-1908760 To:RAN3

R2-1912483 Details on Event-triggered Logged MDT Samsung discussion NR_SON_MDT-Core

R2-1913075 Discussion on out-of-coverage measurement and report ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1909806

User consent:

R2-1912748 Discussion on user consent for MDT Huawei, HiSilicon, LG Uplus discussion Rel-16 NR_SON_MDT-Core R2-1909711

Mobility history:

R2-1912825 Mobility history information reporting from the UE Ericsson discussion Rel-16 NR_SON_MDT

R2-1912152 Mobility History and State in NR CATT discussion Rel-16 NR_SON_MDT-Core R2-1908762

R2-1912487 On Providing Mobility State and Mobility History Information in NR Samsung discussion NR_SON_MDT-Core Withdrawn

R2-1912488 On Providing Mobility State and Mobility History Information in NR Samsung discussion NR_SON_MDT-Core

✉ **[107bis#85][NR MDT] Mobility history (CATT)**
Intended outcome: report
Deadline: Next Meeting

Accessibility:

R2-1912482 Accessibility Measurements for NR MDT Samsung discussion NR_SON_MDT-Core

Area scope:

R2-1912830 Area Scope in MDT configuration Ericsson discussion Rel-16 NR_SON_MDT

RLF report:

R2-1912486 NR RLF Report Samsung discussion NR_SON_MDT-Core

R2-1912579 Cross-RAT RLF Report Qualcomm Incorporated discussion Rel-16 NR_SON_MDT

Continuity of imm MDT:

R2-1913074 Immediate MDT continuity upon handover procedure ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1909804

Inactive state:

R2-1912571 Management based MDT configuration Handling for RRC Inactive state Qualcomm Incorporated discussion Rel-16 NR_SON_MDT

R2-1912574 Signalling Based MDT Configuration Handling for RRC_INACTIVE Qualcomm Incorporated discussion Rel-16 NR_SON_MDT

R2-1913073 MDT activation for INACTIVE&IDLE mode UE ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1909805

Capabilities:

R2-1912829 UE Location Report capability indication for MDT Ericsson discussion Rel-16 NR_SON_MDT

R2-1912751 Discussion on UE impacts and UE capabilities due to MDT Huawei, HiSilicon, LG Uplus discussion Rel-16 NR_SON_MDT-Core

R2-1912278 UE capability parameters for SON_MDT vivo discussion

R2-1912279 Running CR to 38.306 for NR_SON_MDT vivo discussion 38.304 NR_SON_MDT-Core

R2-1912828 CR on introducing UE capability for MDT in NR Ericsson CR Rel-16 38.306 15.7.0 0173 - B NR_SON_MDT

Others:

R2-1913547 Impact of SNPN on PLMN check for MDT Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late

R2-1912395 Indication of contentionDetected per SSB Beijing Xiaomi Mobile Software discussion Rel-16

R2-1913292 Further consideration on logged MDT CMCC discussion R2-1909451

R2-1912485 Further Logged Information in NR MDT Samsung discussion NR_SON_MDT-Core

R2-1912397 Consideration on MDT in NR Xiaomi Communicationsdiscussion Rel-16 R2-1909213

R2-1912594 Periodical logged measurements and event-triggered logged measurements configuration Qualcomm Incorporated discussion Rel-16 NR_SON_MDT

R2-1912963 LS on Logged Measurements CMCC LS out Rel-16 NR_SON_MDT-Core To:RAN4

R2-1913076 Restriction on MDT measurement and report ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1909807

R2-1913249 Immediate MDT, inter-node aspects Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core

R2-1913251 MDT for early measurments (Logged, immediate) Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core

R2-1913545 Logged MDT for RRC_INACTIVE state Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late

6.12.3 L2 measurements

Definition of L2 measurements in TS 38.314

Runing CRs of 38.314:

R2-1912957 Draft TS 38.314 v002 CMCC draft TSRel-16 38.314 0.0.2 NR_SON_MDT-Core
=> the skeleton is endorsed and used as the baseline running CR after this meeting.

Everything mixed together:

R2-1913441 Open issues of L2 measurements in NR Ericsson discussion Rel-16 NR_SON_MDT-Core

Agreements:
1 LTE's definition of received random access preambles is the baseline for NR L2 measurements.
2 The time of successful reception of a transport block at the MAC layer is considered for the calculation of UL over-the-air transmission delay.

R2-1912754 Discussion on new L2 measurements Huawei, HiSilicon, LG Uplus discussion Rel-16 NR_SON_MDT-Core
=> Noted

R2-1912956 [107#49][NR L2 measurement] Running TS38.314 CMCC discussion NR_SON_MDT-Core

=> Noted

Agreements
1 For SA case, introduce the following measurements for number of users for RRC_CONNECTED:
- number of active UEs in the DL per mapped 5QI per cell
- number of active UEs in the UL per mapped 5QI per cell
- number of active UEs per cell
- number of active UEs per mapped 5QI per cell
LTE definitions on number of active UEs can be a baseline.
2 Introduce both mean and max number for active UE.
3 Introduce both mean and max number for stored inactive UE contexts. The level is per at least gNB.
4 For SA case, reuse the DL/UL throughput measurement in the RLC entity in SA5.

=> Draft LS to SA5 to indicate the above agreement 4 on DL/UL throughput measurement. (Offline#888, R2-1914086, Huawei)

R2-1914086 Reply LS on PDCP end user throughput measurements Huawei LS out Rel-16 NR_SON_MDT-Core To:SA5 Cc:RAN3
=> Approved in R2-1914089

✉ **[107bis#86][NR L2 meas] running 38.314 (CMCC)**
Capture the related agreements from this meeting
Intended outcome: Report and running CR for next meeting
Deadline: Next Meeting

PRB usage:

R2-1913081 Discussion on PRB usage of a cellZTE Corporation, Sanechips discussion NR_SON_MDT-Core R2-1909222

Number of UEs:

R2-1913079 Further consideration on INACTIVE UE counting ZTE Corporation, Sanechips discussion NR_SON_MDT-Core
R2-1912958 TP for TS 38.314 on number of Ues CMCC pCR Rel-16 38.314 0.0.2 NR_SON_MDT-Core
R2-1913755 Discussion on per beam number of active UEs measurement NTT DOCOMO INC. discussion Rel-16 NR_SON_MDT-Core
R2-1913551 Counting number of inactive Ues Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late

UL delay:

R2-1912755 Discussion on delay measurement and collection Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-1912145 Clarification of UL Delay Measurement CATT discussion Rel-16 NR_SON_MDT-Core R2-1908763
R2-1913080 Correction on the definition of over-the-air delay in UL ZTE Corporation, Sanechips discussion NR_SON_MDT-Core
R2-1912752 Discussion on L2 measurements based on SA5 TS 28.552 Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core R2-1909723

Throughput:

R2-1913907 L2 Throughput measurement Samsung Electronics Polska discussion

Others:

R2-1912146 Uncertainty of L2 Measurement Result Related to URLLC CATT discussion Rel-16 NR_SON_MDT-Core R2-1908764
R2-1912753 Draft LS on L2 measurements in TS 28.552 Huawei LS out Rel-16 NR_SON_MDT-Core To:SA5, RAN3
R2-1913855 Discussion on L2 measurement in EN-DC NTT DOCOMO INC. discussion Rel-16 NR_SON_MDT-Core

6.12.4 SON

UE reporting necessary to enhance the network configuration for MRO, MLB and RACH optimization
Including output of email discussion [107#45][NR/SON] RACH and Mobility Robustness optimisation checking (CATT)

R2-1912147 Output of Email Discussion [107#45][NRSON] RACH and Mobility Robustness Optimisation Checking CATT discussion Rel-16 NR_SON_MDT-Core

Agreements
1-1 One indicator is needed to differentiate the uplink carrier type, e.g.NUL/SUL for one RACH procedure. RAN2 can further discuss which of the following option is more desirable to capture the requirement through implicit method. NUL/SUL RACH carrier related info is included in the RACH report to implicitly indicate the uplink carrier type.
1-2 ‘Contention detection indication’ is included in the RACH report. ‘Contention detection indication’ is per RACH attempt granularity.
1-3 ‘Indexes of the SSBs and number of RACH preambles sent on each tried SSB listed in chronological order of attempts’ is included in the RACH report.
1-4 ‘The frequency (NR ARFCN) of tried SSBs’ is not included in the RACH report.
1-5 RAN2 confirm ‘Indication whether the selected SSB is above or below the rsrp-ThresholdSSB threshold’ is included in the RACH report and this indication is per RACH attempt granularity.
1-6 RAN2 confirm ‘Elapsed time from the last measurement prior to the beam selection time’ is not included in the RACH report.
1-7 All RACH scenarios are applicable for RACH report.
For RLF report:
2-1 Reuse the following RLF report parameters inherited from LTE for NR RLF report:

- The CGI of the last cell that served the UE (in case of RLF) or the target of the handover (in case of handover failure).
- The CGI of the cell towards which the UE wants to initiate re-establishment attempt.
- The CGI of the cell that served the UE at the last handover initialization.
- Time elapsed since the last handover initialization until the RRC connection failure.
- An indication whether the RRC connection failure was due to RLF or handover failure.
- C-RNTI allocated for the UE in the last serving cell.
- RLF trigger of the last RLF that was detected.
- Time elapsed from the RRC connection failure till RLF Report signalling.

2-2 Add a new cause “BeamFailure RecoveryFailure” for RLF branch which in parallel with “t310-Expiry”, “randomAccessProblem” and “rlc-MaxNumRetx” and no BFR specific records are needed in RLF report.
2-3 RAN2 confirm the beam level measurement associated to SSB/CSI-RS of both serving cell and neighbour cells can be included in RLF report.
2-4 Only support SSB/CSI-RS based measurements records and no more measurements will be collected in RLF report based on other RS types.
2-5 RAN2 confirm that at least the available uncompensated barometric pressure measurement, UE speeds and UE orientation can be reported as sensor information.
2-6 Working assumption: the UE speed state info (i.e., just flag) if available is included in RLF report. The feasibility and the details depending the email discussion on mobility history.
2-7 LTE RLF can be reported in NR. How to support this is FFS.
2-8 Support available Bluetooth and WLAN measurements report in RLF report.

CB on Friday:=> Draft LS in R2-1914087 to RAN3 to indicate our agreements on SON aspect. (Offline 886, CATT)

R2-1914087 Reply LS on RACH Optimization and Mobility Robustness Optimization RAN2 LS out Rel-16 NR_SON_MDT-Core To:RAN3
=> Approved.

✉ **[107bis#87][NR SON] Running 331 CR for introducing SON (Ericsson)**
Capture agreements from this meeting
The merged MDT running CR should be taken as baseline
Intended outcome: Report and Running CR for next meeting
Deadline: Next Meeting

R2-1912148 [Draft] Reply LS on RACH Optimization and Mobility Robustness Optimization CATT LS out Rel-16 NR_SON_MDT-Core To:RAN3
R2-1912149 RACH Report Optimization CATT discussion Rel-16 NR_SON_MDT-Core
R2-1912150 Recording and Reporting of RACH Failure CATT discussion Rel-16 NR_SON_MDT-Core R2-1908767
R2-1912151 Consideration on Successful HO Report CATT discussion Rel-16 NR_SON_MDT-Core R2-1908768
R2-1912438 UE reporting for mobility optimization vivo discussion
R2-1912592 UE History Information Qualcomm Incorporated discussion Rel-16 NR_SON_MDT
R2-1912593 Discussion about Successful HO in MRO Qualcomm Incorporated discussion Rel-16 NR_SON_MDT
R2-1912756 Discussion on RLF report and RACH report for SON Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core
R2-1913077 Discussion on RLF & CEF report ZTE Corporation, Sanechips discussion Rel-16 NR_SON_MDT-Core R2-1909802
R2-1913078 Further consideration on RACH optimization ZTE Corporation, Sanechips discussion NR_SON_MDT-Core
R2-1913442 Open issues related to RACH report Ericsson discussion Rel-16 NR_SON_MDT-Core

R2-1913443 Open issues related to RLF report Ericsson discussion Rel-16 NR_SON_MDT-Core
R2-1913444 Successful handover report Ericsson discussion Rel-16 NR_SON_MDT-Core
R2-1913548 RACH Scenarios and their presence in the RACH Report Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late
R2-1913549 RACH Fallback from NUL to SUL Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late
R2-1913550 TP to 38.300 on SON support Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late
R2-1913777 Discussion on UE location information in SCG failure report NTT DOCOMO INC. , Ericsson discussion Rel-16 NR_SON_MDT-Core

6.12.5 Others

R2-1912757 Discussion on mobility history information Huawei, HiSilicon discussion Rel-16 NR_SON_MDT-Core R2-1909741
R2-1913252 General framework to harmonise transfer of UE information Samsung Telecommunications discussion Rel-16 NR_SON_MDT-Core
R2-1913552 Measurement event for interference-forced inter-RAT/inter-freq HO Nokia, Nokia Shanghai Bell discussion Rel-16 NR_SON_MDT-Core Late

6.13 2-step RACH for NR

(NR_2step_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: RP-192330). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

6.13.1 General

Running CRs, Incoming LSs, Including output of [107#66][NR/2-step RACH] Running CR for 38.300 (Nokia). Including output of [107#67][NR/2-step RACH] Running CR for 38.321 (ZTE)

Contributions in this AI are restricted for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

R2-1912009 LS Reply on overall procedure for 2-step RACH (R1-1909554; contact: ZTE) RAN1 LS in Rel-16 NR_2step_RACH To:RAN1 Cc:RAN2
=> Noted

R2-1913291 Stage-2 running CR for 2-step RACH Nokia (rapporteur), Nokia Shanghai Bell draftCR Rel-16 38.300 15.7.0 B NR_2step_RACH-Core
=> The CR is endorsed

✉ **[107bis#74][2step RACH] Running 38.300 CR for 2-step RACH (Nokia)**
Intended outcome: Running MAC CR to be endorsed
Deadline: Next Meeting

R2-1913370 Running MAC CR for 2-step RACH ZTE Corporation (email rapporteur) draftCR Rel-16 38.321 15.7.0 B NR_2step_RACH-Core
=> The CR will be used as a baseline for the next email discussion

✉ **[107bis#75][2step RACH] Running MAC CR for 2-step RACH (ZTE)**
Intended outcome: Running MAC CR to be endorsed
Deadline: Next Meeting

R2-1913448 Discussion on some open issues in running MAC CR Email discussion rapporteur (ZTE Corporation) discussion

Proposal 1: The RSRP threshold for 2-step vs 4step CBRA can be configured separately for NUL and SUL
- CATT wants to understand why the thresholds are different. ZTE explains it is because the coverage will be different for NUL and SUL

Proposal 2: Use MSG3 buffer to store the MSGA payload in case of 2-step RACH
- Samsung thinks that to have a msgA buffer would be clearer. Nokia thinks it's simpler to use msg3 as we may need to fallback to 4-step RACH. LG thinks for readability it may be better in the MAC spec.
- Oppo thinks that we should have a msgA terminology. Vivo thinks that we can use separate buffer but in implementation we can use the buffer. Qualcomm thinks that msgA buffer is better.
- Lenovo thinks that msg3 is simpler.

Proposal 3: gNB response addressed to C-RNTI of the UE need not be considered as MSGB. The current wording in the running CR can be kept as is for this case.
- Oppo is concerned that for CFRA there will be no msgB

=> Noted

Agreements:
1. The RSRP threshold for 2-step vs 4step CBRA can be configured separately for NUL and SUL
2. Use MSGA buffer to store the MSGA payload in case of 2-step RACH, unless the implementation in the MAC spec it becomes too complex.
3. UE monitors the MSGB window regardless of the occurrence of the measurement gap
4. The name of the new timing advance command MAC CE is: Absolute Timing Advance Command MAC CE

R2-1913449 Summary of running MAC CR review issue list report ZTE Corporation (email disc Rapporteur)

=> Not treated

6.13.2 Stage-2 open issues

HARQ aspects of msgB, How to distinguish between msg2 and msgB (RNTI design and coreset/search space aspects of RAN2)

msgB and msg2 differentiation

R2-1912432 2 Step RACH_RNTI for Receiving Network Response discussion Rel-16 NR_2step_RACH-Core Samsung Electronics Co., Ltd

Discussion

Option 1: RA-RNTI is used as MsgB-RNTI. Search space for monitoring PDCCH for MsgB can be configured differently from search space configured for monitoring Msg2.

Option 2: Modify RA-RNTI formula such that RA-RNTIs used for 2 step RACH and 4 step RACH are different.
- Samsung prefers to have search space as it is simpler and we already define several search spaces. Huawei has similar view and according to rel-15 we can configure many search spaces and there is no overhead issue.
- Nokia prefers RA-RNTI as after speaking to RAN1 colleagues there may be difficulty to have orthogonality between 2-step and 4-step RACH. If we want to go with search space we should ask RAN1 if this is feasible. ZTE clarifies that this can be coreset and if there is overlap in time domain there is also the frequency domain.
- LG thinks option 2 gives more scheduling flexibility and resource efficiency.
- Intel prefers option 1 and being able to configure different search spaces is not difficult.
- Oppo and CATT also prefer option 1 and there is no resource efficiency use.
- Lenovo and Qualcomm prefers option 2 and option 1 can be decided by RAN1.
- Ericsson prefers option 2.
- ZTE is concerned that if we use RA-RNTI we can't expand RA-RNTI space in the future and the question is if we are willing to take the risk of exhausting the space. Interdigital explains that we had a discussion in NR-U and decided to not extend RA-RNTI.

- Ericsson had a proposal to have a UE specific RNTI. CATT thinks that we don't need to have this discussion. Ericsson explains that this allows the network to send multiple SRBs to multiple UEs in the same slot.
=> Send LS to RAN1 asking about feasibility of having different search space and explain the RAN2 concern
=> Noted

R2-1914051 LS to RAN1 on 2-step RACH ZTE
- Send LS to RAN1 asking about feasibility of having different search space/coreset and explain the RAN2 concern
=> Update "RAN2 notes that Alt1 will consume more of the available RNTI space for random access response ~~and might limit the possibility of doing such extensions for potential future use cases~~
=> The LS is approved in R2-1914067 with the change above.
- [MCC]: replaced the tdoc header with the correct meeting header
=> Approved in R2-1914191

Not treated

R2-1912186 Differentiation Between 2-step and 4-step RACH vivo discussion

R2-1913366 Differentiating between MSG2 and MSGB ZTE Corporation, Sanechips discussion Rel-16

R2-1913870 RNTI design for msgB LG Electronics Inc. discussion Rel-16 NR_2step_RACH-Core R2-1909826

R2-1913009 Discussion on MsgB reception Huawei, HiSilicon discussion Rel-16

R2-1913217 RNTI design for MsgB reception Nokia, Nokia Shanghai Bell discussion Rel-16 NR_2step_RACH-Core

R2-1913218 Draft LS on MsgB RNTI design Nokia, Nokia Shanghai Bell LS out Rel-16 NR_2step_RACH-Core To:TSG RAN WG1

R2-1912085 msgB MAC PDU format in 2-step RACH OPPO discussion

R2-1912468 MsgB Retransmission Scheme Apple discussion Rel-16 NR_2step_RACH-Core

Preamble grouping

R2-1912086 Remaining stage-2 open issues OPPO discussion

Proposal 2 For load-balancing purpose, UE shall randomly select between 2-step RACH and 4-step RACH, with equal probability or according to the broadcasted probability.
- Panasonic thinks that if time allows we can try to discuss.

Proposal 5 When msgB contains only one successRAR, the legacy HARQ feedback for msg4 can be re-used.

Proposal 6 When msgB contains multiple successRARs, it's up to RAN1 how to design the HARQ feedback. RAN2 assumes there is no impact to msgB MAC PDU format.
- Oppo highlights that we should ensure that there is no impact to MAC PDU format for multiple success RAR.
- Nokia thinks that we should clarify to RAN1 that we only expect them to provide ACK and not NACK.
- ZTE thinks that we need something new anyways in msgB.
- Oppo explains that for proposal 5 it is like legacy. Intel explains that it is only for C-RNTI case.
- Intel thinks we should leave it up to RAN1 whether we should have implicit or explicit (i.e. impact MAC PDU).
- Nokia would like to at least minimize the size of the response.
=> Leave the design up to RAN1
=> Noted

R2-1913221 Preamble groups for 2-step RACH Nokia, Nokia Shanghai Bell discussion Rel-16 NR_2step_RACH-Core

Proposal 1: Introduce preambles group A and B for 2-step RACH.

Proposal 2: Apply the same selection formulas to select between 2-step preambles group A and B as specified for 4-step in Rel-15. For the purpose of data threshold, ra-MsgASizeGroupA parameter can be introduced.
- Vivo thinks that the pathloss selection is not clear. Huawei and oppo don't think the message size is needed. Interdigital explains that in the fallback case you need the message size and the pathloss.

Proposal 3: Support configuration where fallback from 2-step RA to 4-step RA after 'N' retries over 2-step RACH is only allowed for one of the preamble groups A or B in 2-step RA.
- ZTE thinks that we should have same configuration for 2-step and 4-step RACH. Nokia explains that we may have different sizes for msgA and msg3. Nokia would like to support same configuration or configuration only one preamble group can fallback.
- Ericsson would be fine to support a scheme like this for the cases where it is not feasible to support same configuration.

Rebuilding:
- Lenovo thinks that this discussion needs to be taken with rebuilding. Nokia thinks that the problem with rebuilding is that we can segment CCCH. ZTE thinks that we can't segment but we can remove padding if we added the padding.

Proposal 4: Support configuration where fallback from 2-step RA to 4-step RA is not allowed, ie., when the number 'N' is not configured.
- Oppo thinks that we need this proposal. Lenovo thought it was already agreed as it could be set to infinity or not configured. CATT agrees.

=> Noted

R2-1912795 Preamble grouping selection or PUSCH TBS size selection for 2-step RACH Intel Corporation discussion Rel-16 NR_2step_RACH-Core
=> Noted

Discussion on preamble groups
- Huawei thinks that preamble group is needed and RAN1 has already agreed

R2-1914052 Summary of discussion on rebudiling and fallback Nokia

Proposal 4: No UE specific RNTI will be designed for 2-step RACH in case CCCH SDU was included in MsgA.
- Ericsson would like to note that they still have a concern that the impact for NR-U is an additional LBT. Qualcomm explains that the gNB can send within the same COT.
- Ericsson points out that RAN1 has concluded that there is no new coreset and possibly no separate search space.

=> Noted

Agreements:
1. Introduce preambles group A and B for 2-step RACH.
2. Apply the same selection formulas to select between 2-step preambles group A and B as specified for 4-step in Rel-15. For the purpose of data threshold, ra-MsgASizeGroupA parameter can be introduced.
3. Support configuration where fallback from 2-step RA to 4-step RA is not allowed
4. TB size offered in UL grant in the Msg2 RAR in 4-step RACH shall be the same as the TB size offered for payload transmission in MsgA in 2-step RACH; otherwise, the UE behavior is not defined (i.e. it is up to UE implementation). Rebuilding is not supported in the specification (i.e. it is up to UE implementation).
5. If switching to 4-step RACH is expected to be supported, then support network configuration where the same TB sizes offered for 2-step RACH preamble groups are the same with those of 4-step RACH preamble groups.
6. No UE specific RNTI will be designed for 2-step RACH in case CCCH SDU was included in MsgA.
7. Confirm the Working Assumption: SRB RRC messages of multiple UEs cannot be multiplexed in same MsgB (i.e. same MAC PDU).
8. RAN2 will work on specifying a new RA-RNTI design for msgB

RA prioritization support

R2-1912431 2 Step RA_RACH prioritisation Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core
=> Noted

R2-1913402 Prioritized 2-step RACH Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core
Proposal 1. The same random access prioritization in four-step RACH can be applied to two-step RACH when triggered by handover and beam failure recovery.
Proposal 2. When UE transmits a msgA, it can indicate the priority of its request in the payload of the msgA.
- Mediatek asks why this is a 2step RACH specific problem. ZTE explains that the UE already includes the payload so there is no need to indicate priority.

=> Noted

Discussion on RA prioritisation
- Vivo agrees.
- Oppo agrees but notes that there are new cases being discussed in TEI16

Discussion on RA prioritisation
- Oppo asks why separate parameters. Samsung explains that it depends on network configuration. Vivo explains that we have a new parameter for msgA that doesn't exist for msg1.

Agreements
1. For 2 step CBRA, RA prioritisation is supported at least for handover and beam failure recovery.
2. RA prioritisation for 2 step CBRA is controlled by networkRA prioritisation parameters are separately configured for 2 step CBRA and 4 step CBRA. -ra-Prioritization2Step is optionally added to BeamFailureRecoveryConfig IE and RACH-ConfigDedicated IE.

Other

R2-1913914 Clarification on criteria selection for 2-step RACH and 4-step RACH Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core
=> We will come back to this if we decided on a new criteria
=> Noted

R2-1913367 Remaining Stage 2 issues for 2-step RACH ZTE Corporation, Sanechips discussion Rel-16
Proposal 6: For the RACH procedure triggered by BFR (if supported in Rel-16):
- *Once the MsgA is transmitted, the UE should monitor for a PDCCH transmission identified by the C-RNTI on the search space indicated by recoverySearchSpaceId of the SpCell while ra-ResponseWindow is running.*
- *The RACH procedure will be considered as successfully completed if notification of a reception of a PDCCH transmission on the search space indicated by recoverySearchSpaceId is received from lower layers and the PDCCH transmission is addressed to the corresponding C-RNTI*

- Nokia thinks that we should support it just like in Rel-15. LG doesn't understand why we need a MAC CE. ZTE asks how the network will know that this is for BFR. Huawei explains that similar to Rel-15 this is up to network implementation. Oppo agrees with Nokia as this is similar to 4step BFR.
- Nokia explains that the searchspace is not needed as the network may not know that the UE is sending BFR. ZTE thinks that if we do nothing we may have a false positive and this is ok. Ericsson thinks that we should wait for eMIMO discussion.
- Qualcomm thinks that it is up to UE implementation whether it includes it or not and if it includes it we need to define behaviour as per proposal 6.

=> Noted

Agreements:

1. 2-step RACH resources can only be configured on SpCell
2. The 2-step RACH resources can be configured on a BWP where 4-step CBRA resources are not configured. In that case we will not have 4-step switch.
3. The PDCCH triggered 2-step CFRA RACH will not be supported in Rel-16
4. The 2-step CBRA for SpCell BFR is supported in Rel-16.

R2-1912679 RNTI design and HARQ aspects for 2-step RA Ericsson discussion Rel-16 NR_2step_RACH-Core

Proposal 1 Adopt the coding of the E/T/R/R/BI subheader in Figure 2 to prevent legacy UEs to parse beyond the subheader and use it as identifier of NR-U RAR or msgB.

- Nokia thinks that we can agree that legacy UEs are not required to decode msgB
- Oppo explains that this is linked to the previous discussion on RA-RNTI

Proposal 2 MsgB scrambling for Idle and Inactive UEs can be done by a msgB-RNTI which allows multiplexing.

- Ericsson thinks that this related to specifying UE specific ID for msgB. ZTE thinks that we should design a common solution for multiplexed and one for non-multiplexed.
- Ericsson would like to be able to schedule CCCH messages in same slot as we can't multiplex the messages. Nokia explains that this is related to the working assumption and doesn't understand why we can't just multiplex the CCCH messages. Ericsson explains that by being able to schedule them separately we don't have to create the large TB size and have the coverage issue that led to the agreement last time.
- Google has sympathy for this proposal.

=> Noted

Agreements:
1. Legacy UEs are not required to decode msgB

Not treated

R2-1913357 HARQ support for MsgB of 2-Step RACH Sony discussion Rel-16 NR_2step_RACH-Core

R2-1912224 Load balancing between RACH Types CATT discussion Rel-16 NR_2step_RACH-Core

R2-1912692 Loading Control in the RACH Type Selection PANASONIC R&D Center Germany discussion R2-1909238

R2-1912794 Further consideration on the SucessRAR design and Fallback RAR Intel Corporation discussion Rel-16 NR_2step_RACH-Core

R2-1912947 HARQ feedback for MsgB CMCC discussion Rel-16

R2-1912954 Further discussion on RA type selection CMCC discussion

R2-1913008 Discussion on the MsgA transmission Huawei, HiSilicon discussion Rel-16

R2-1913144 Discussion on HARQ and RNTI design for msgB Google discussion

R2-1913168 Considerations on MsgB receptionFujitsu discussion Rel-16 NR_2step_RACH

R2-1913401 Discussion on HARQ feedback for msgB and RNTI design for msgB Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core

6.13.3 MAC PDU formats

Including output of [107#68][NR/2-step RACH] MAC PDU format for msgB (Qualcomm)
Contributions dealing with MAC PDU format for msgB that were covered in the email discussion are discouraged
Design of new TA MAC CE and other open issues related to MAC PDU formats

R2-1913403 Report of email discussion [107#68] [NR/2-step RACH]: MAC PDU format for msgBQualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core

=> Noted

Agreement
1. The 12-bit TA command, 16-bit C-RNTI and 48-bit UE Contention Resolution Identity are included in successRAR MAC subPDU.
2. The UE Contention Resolution Identity field should be placed in the payload of the successRAR MAC subPDU. As a baseline, UE Contention Resolution Identity field is in front of the payload of MAC subPDU.
3. We will discuss whether we include SFN after NR-U design is completed.
4. As a baseline, the indication for presence of RRC message following the successRAR MAC subPDU is needed. The detailed indication method is FFS.
5. For the case of msgB with RRC message, the SRB RRC message is included in a separate MAC subPDU, not inside the successRAR subPDU.
6. More than one RRC message for a given UE can be included in msgB (i.e. for re-establishment case). FFS whether we need to indicate number of RRC messages
7. The fallbackRAR MAC subPDU is composed of 12-bit TA command, 16-bit TC-RNTI, 27-bit UL grant, and 6-bit RAPID. The RAPID is in the MAC subheader of fallbackRAR subPDU.
8. For NR 2-step RACH, the payload of fallbackRAR MAC subPDU should reuse msg2 RAR format.
9. The sub-header should differentiate the different types of MAC subPDU (e.g. fallback, success, backoff). FFS how to indicate.
10. The MAC subheader for SRB MAC subPDU should use a full LCID field (6-bit)
11. The MAC subheader for SRB MAC subPDU should reuse the Rel-15 MAC subheader which supports both 8-bit and 16-bit Length field with additional F indicator field
12. As a baseline, the RAPID field is not included in the MAC subheader for successRAR MAC subPDU.

Proposal 10: As a baseline, two fields in msgB subheader are needed for indicating the different types of MAC subPDU. RAN2 can further study the detailed design.
- Nokia thinks we need a field but whether it is one or two fields.

Proposal 11: As a baseline, the RAPID field is not included in the MAC subheader for successRAR MAC subPDU.

Proposal 12: As a baseline, the 'E' bit is included in msgB MAC subheader. Detailed definition of 'E' bit is FFS.
- Nokia thinks that if we get rid of the E bit we can save a byte. Oppo thinks that we can use the subheader to differentiate the padding. Ericsson also thinks that we don't need the E bit.

✉ **[107bis#76][2-step RACH] MSG B format design (Samsung)**
- Discuss remaining open issues (e.g. E bit)
- Design MAC PDU format based on agreements made on RAN2#107bis and possible outcome of E bit discussion

Intended outcome: TP on agreeable MAC PDU format for MsgB
Deadline: Next Meeting

Not treated

R2-1913404	msgB MAC PDU format	Qualcomm Incorporated	discussion	Rel-16	NR_2step_RACH-Core
R2-1912251	Discussion on the SuccessRAR for SI request	Spreadtrum Communications	discussion		
R2-1912430	2 Step RA_12bit Timing Advanced Information	Samsung Electronics Co., Ltd	discussion	Rel-16	NR_2step_RACH-Core
R2-1912678	Open issues for msgB formats for 2-step RA	Ericsson	discussion	Rel-16	NR_2step_RACH-Core
R2-1913006	PDU format for msgB	Huawei, HiSilicon	discussion	Rel-16	
R2-1913219	Further design aspects of MsgB MAC subheader formats	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_2step_RACH-Core
R2-1913220	New TAC MAC CE for 2-step RACH	Nokia, Nokia Shanghai Bell	discussion	Rel-16	NR_2step_RACH-Core
R2-1913264	MsgB format proposal for 2-step RACH	MediaTek Inc.	discussion	Rel-16	NR_2step_RACH-Core

R2-1913756 MAC PDU format of Success RARETRI discussion

R2-1913874 MAC PDU formats for msgB LG Electronics Polska discussion Rel-16 NR_2step_RACH-Core R2-1909828

R2-1913875 Need for RAPID MAC CE in payload of msgA LG Electronics Inc. discussion Rel-16 NR_2step_RACH-Core R2-1909825

6.13.4 RRC stage-3 related aspects

Initial discussion on configuration of 2-step RACH (dedicated signalling, SIB signalling etc)

R2-1912680 Configuration of 2-step RA Ericsson discussion Rel-16 NR_2step_RACH-Core
=> This will move to an email discussion

✉ **[107bis#77][2-step RACH] RRC details and Running CR (Ericsson)**
Intended outcome: Agreeable proposals for configuration of 2-step RACH according to proposals submitted in RAN2#107bis and Running RRC CR capturing agreements from this meeting
Deadline: Next Meeting

Not treated

R2-1912084 Remaining issues on supporting only 2-step RACH configuration on a UL BWP OPPO discussion
=> moved from 6.13.2

R2-1913369 Configuration aspects of 2-step RACH ZTE Corporation, Sanechips discussion Rel-16

R2-1912433 2 Step RA_RACH Configuration Samsung Electronics Co., Ltd discussion Rel-16 NR_2step_RACH-Core

R2-1912683 2-step RA 38.331 Draft CR Ericsson draftCR Rel-16 38.331 15.6.0 B NR_2step_RACH-Core

R2-1912955 System information for 2-step RACH resources configuration CMCC discussion

R2-1913007 msgA resource configuration and selection Huawei, HiSilicon discussion Rel-16

6.13.5 Stage-3 aspects

Remaining stage-3 aspects and details of overall procedures that are not covered by other AIs.

R2-1912087 Stage3 issues on contention resolution for 2-step RACH OPPO discussion

R2-1913405 Remaining issue on contention resolution and fall back procedure Qualcomm Incorporated discussion Rel-16 NR_2step_RACH-Core

R2-1912188 Remaining Issue on Fallback from 2-step to 4-step RACH vivo discussion

R2-1912223 On the remaining open issues of 2-step RACH CATT discussion Rel-16 NR_2step_RACH-Core

R2-1912187 Remaining Issue on Contention Resolution in 2-step RACH vivo discussion

R2-1912189 Resource Selection for MsgA vivo discussion

R2-1912225 Remaining Issue of RA Type Selection CATT discussion Rel-16 NR_2step_RACH-Core

R2-1912478 TA handling in 2-step RACH Samsung discussion Rel-16 NR_2step_RACH-Core R2-1909127

R2-1912682 PUSCH selection and MsgA payloads in 2-step RA Ericsson discussion Rel-16 NR_2step_RACH-Core

R2-1912948 PUSCH segmentation and repetition CMCC discussion Rel-16 R2-1909454

R2-1912949 Discussion of the PUSCH transmission of MsgA CMCC discussion Rel-16 R2-1909453

R2-1913010 fallback procedure for 2-step RACH Huawei, HiSilicon discussion Rel-16
R2-1913011 Differentiation for two-step random access Huawei, HiSilicon discussion Rel-16
R2-1913356 Fallback to 4-step RACH with BI Sony discussion Rel-16 NR_2step_RACH-Core
R2-1913872 Remaining issues on 2-step random access resource LG Electronics discussion NR_2step_RACH-Core

6.13.6 Other

CFRA for 2-step RACH for HO if time permits as per plenary guidance

R2-1913368 Support of CFRA with 2-step RACH ZTE Corporation, Sanechips, Qualcomm, Fujitsu discussion Rel-16
- Rapporteur suggests an email discussion to just align some understanding between companies
- Ericsson is concerned that this is a lower priority from the plenary

=> The intention is to provide a single paper that summarizes the open issues and solutions and set of agreeable proposals to be presented next meeting
=> Noted

Not treated

R2-1912226 Open issues of 2-step CFRA CATT discussion Rel-16 NR_2step_RACH-Core
R2-1912088 Contention free 2-step RACH OPPO discussion

R2-1912469 2-step CFRA Apple discussion Rel-16 NR_2step_RACH-Core
R2-1913169 On open questions to 2-step CF-RACH Fujitsu discussion Rel-16 NR_2step_RACH

R2-1912190 Prioritized RA Parameters for 2-step RACH vivo discussion R2-1908705
R2-1912191 Discussion on the 2-step CFRA vivo discussion
R2-1912681 2-step CFRA Ericsson discussion Rel-16 NR_2step_RACH-Core
R2-1912796 Support of CFRA in 2-step RACH Intel Corporation discussion Rel-16 NR_2step_RACH-Core
R2-1913222 CFRA for 2-step RACH Nokia, Nokia Shanghai Bell discussion Rel-16 NR_2step_RACH-Core
R2-1913877 Logical channel based RA type selection LG Electronics Inc. discussion Rel-16 NR_2step_RACH-Core R2-1909827
R2-1913879 Consideration on 2-step CFRA LG Electronics discussion NR_2step_RACH-Core

6.14 Single Radio Voice Call Continuity from 5G to 3G

(SRVCC_NR_to_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: RP-190713). Documents in this agenda item will be handled in a break out session
Time budget: 0.5 TU
Tdoc Limitation: 2 tdocs

6.14.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc

R2-1912043 LS Reply on measurements for SRVCC from 5G to 3G (R4-1910026; contact: Huawei) RAN4 LS in Rel-16 SRVCC_NR_to_UMTS-Core To:RAN2
⇨ Noted
⇨
R2-1912643 Running CR for introduction of SRVCC from 5G to 3G Ericsson draftCR Rel-15 38.300 15.7.0 SRVCC_NR_to_UMTS-Core

- Huawei suggests to improve the wording of "Inter RAT measurements are limited to E-UTRA and UTRA." in the last section
- Oppo suggests to highlight that this is for UTRA-FDD
- Intel suggests to change NG-RAN into NR
- Nokia notes this uses a previous version of the spec

⇨ Endorsed in principle with the comments above

R2-1913126 Running CR for the introduction of SRVCC from 5G to 3G Huawei, HiSilicon, China Unicom draftCR Rel-16 38.331 15.7.0 SRVCC_NR_to_UMTS-Core

- Nokia/QC think that some aspects differ from the outcome of the email discussion. Huawei thinks this is also due to the remaining FFS
- QC thinks the procedural text is missing, also some text is missing in the part of capabilities and ASN.1 does not allow FR1/FR2 split

⇨ Revised in R2-1914014
Offline discussion 203 (Huawei) - Revised 38.331 CR taking meeting agreements into account and trying to resolve the FFSs

R2-1914014 Running CR for the introduction of SRVCC from 5G to 3G Huawei, HiSilicon, China Unicom draftCR Rel-16 38.331 15.7.0 SRVCC_NR_to_UMTS-Core

⇨ CR to be used a baseline for a resubmission at the next meeting considering latest comments received offline

6.14.2 Inter RAT handover to UTRAN for SRVCC

R2-1912641 Outstanding issues for SRVCC from 5G to 3G Ericsson discussion SRVCC_NR_to_UMTS-Core

- ZTE/Huawei/Mediatek are fine with proposal 1
- ZTE supports to support both quantities, the suggestion to remove reportQuantityUTRA-FDD is because only one filter is allowed. Huawei also supports to support both quantities.

> Agreements:
> 1: Introduce new branches for event B1 and B2 for UTRAN in EventTriggerConfigInterRAT.
> 2. Support both quantities by including filter coefficients for both in QuantityConfigUTRA-r16. FFS further ASN.1 aspects
> FFS whether to define the range for utra-Q-OffsetRange as (-24..24). FFS whether this is defined as INTEGER or ENUMERATED

R2-1912773 Remaining issues on UTRAN measurement ZTE Corporation, Sanechips discussion Rel-16 SRVCC_NR_to_UMTS-Core

R2-1912774 Corrections on UTRAN measurement ZTE Corporation, Sanechips draftCR Rel-16 38.331 15.7.0 F SRVCC_NR_to_UMTS-Core

⇨ Noted

R2-1913124 Discussion on leftover issues of Inter-RAT measurement Huawei, HiSilicon, China Unicom discussion Rel-16 SRVCC_NR_to_UMTS-Core

6.14.3 Other

R2-1913125 Discusion on the SRVCC capability Huawei, HiSilicon discussion Rel-16 SRVCC_NR_to_UMTS-Core

R2-1912642 Measurements for SRVCC from 5G to 3G Ericsson discussion SRVCC_NR_to_UMTS-Core

6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR

(NR_CLI_RIM; leading WG: RAN1; REL-16; started: Dec 18; target; Dec 19; WID: RP-191997) Documents in this agenda item will be handled in a break out session.

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

Including output of email discussion [107#36][NR/CLI] draft CR for 38.331 (LG)

Including output of email discussion [107#37][NR/CLI] draft CR for 38.306 (Ericsson)

Including output of email discussion [107#38][NR/CLI] draft CR for 38.300 (Huawei)

Incoming LS

R2-1912039 Reply LS on measurement gap for SRS-RSRP or CLI-RSSI measurements (R4-1908777; contact: LGE) RAN4 LS in Rel-16 NR_CLI_RIM-Core To:RAN2 Cc:RAN1

- QC wonders whether RAN4 decision to apply scheduling restriction for CLI measurement symbols has Xn impacts. ZTE thinks this is similar to scheduling restrictions for SSB (semi-static restrictions). Nokia thinks there are no Xn impacts, it relates to restrictions between CLI and PDSCH

⇨ Noted

New Incoming LS

R2-1914168 LS on CLI measurement reporting range (R4-1911416; contact: LGE) RAN4 LS in Rel-16 NR_CLI_RIM-Core To:RAN2

Draft CRs

R2-1913714 Introduction of cross link interfernce management Huawei, HiSilicon draftCR Rel-16 38.300 15.7.0 B NR_CLI_RIM

- VC thinks we should add abbreviations for RSRP and RSSI
- QC suggests to remove changes on changes

⇨ Endorsed in principle with the addition of new abbreviations and removal of changes on changes

⇨ Submit updated version to the next meeting

R2-1913535 Draft CR on CLI for TS 38.306 Ericsson(rapporteur) draftCR Rel-16 38.306 15.7.0 B NR_CLI_RIM

- ZTE suggests to send LS to RAN1 asking about FR1/FR2 differentiation

⇨ Endorsed in principle

⇨ We will wait before sending an LS to RAN1/RAN4

R2-1913748 draft CR on CLI for TS38 331_v3_Alt1 LG Electronics Inc CR Rel-16 38.331 15.7.0 1342 - B NR_CLI_RIM

R2-1913749 draft CR on CLI for TS38 331_v3_Alt2 LG Electronics Inc CR Rel-16 38.331 15.7.0 1343 - B NR_CLI_RIM

- VC suggests to change "highest SRS resource" with something like "most interfering SRS resource" and correspondingly for RSSI (i.e. "most interfering RSSI resource")
- Intel/QC suggest to use the term "CLI-RSSI resource" when addressing the resource and "CLI-RSSI measurements" for measurements. Ericsson suggests to use a more general term (for future use) and not just refer to CLI-RSSI. QC thinks we don't know how this will look like for NR-U.
- ZTE thinks there are still some ASN.1 issues

⇨ Revised in R2-1914012 (which version depends on the next discussion) with the suggested wording changes above and ASN.1 fix. Offline discussion 201 (LG) - Revised 38.331CR taking new agreements into account

R2-1914012 CR on CLI for TS38 331_v3_AltX1 LG Electronics Inc CR Rel-16 38.331 15.7.0 1343 B NR_CLI_RIM

- Companies agreed there is no need to limit the number of MO for CLI. QC thinks we still need to look exactly at the maximum number
- QC notes there are still changes on changes
- Huawei/QC think we still need to clarify if the number of CLI resources is per UE or per MO. QC/Huawei/LG/Ericsson thinks this should be per UE

⇨ We come back to whether the number of CLI resources is per UE or per MO
⇨ Continue via email discussion

✉ **[107bis#57][CLI] Running RRC CR (LG)**
Update running CR based on the comments and solve remaining issues
Intended outcome: Running CR, to be endorsed next meeting
Deadline: Next Meeting

Main remaining issues

R2-1913747 Remaining issues on CLI LG Electronics Inc discussion Rel-16 NR_CLI_RIM

- Nokia wonders how the serving cell knows about the number of ports used by the aggressor. Is Xn coordination needed for this? QC thinks this is needed, UE measures on single port. Ericsson thinks that RAN3 agreed this can be done via proprietary means. Nokia and ZTE think RAN3 did not discuss this.
- VC wonders whether CLI applies to NR SA only or to MR-DC as well. Huawei thinks we need to further check with RAN1, e.g. about UE capabilities. ZTE thinks this should be supported for NR CA and MR-DC as well.

⇨ Further discussion on whether CLI applies to NR SA only or to NR CA / MR-DC as well is expected in RAN2. RAN1 to be consulted about the impact on UE capabilities after a RAN2 decision.

- QC, ZTE, Nokia, Huawei think we don't need s-measure

Agreements:
1. Multiple CLI measurement objects can be configured for an UE
FFS on the max number
FFS whether each MO applies to a given cell (e.g. Pcell, PScell, Scell), also depending on the decision to apply CLI also to NR CA/ MR-DC or not
2. SRS-RSRP results and CLI-RSSI results cannot be included in the same measurement report. (I.e. report quantity cannot be set to 'SRS-RSRP and CLI-RSSI'.)
3. s-measure is not applicable to CLI measurements.

R2-1912775 Remaining issues on CLI measurement ZTE Corporation, Sanechips discussion Rel-16 NR_CLI_RIM-Core

R2-1913393 Too strong interference during CLI-RSSI/SRS-RSRP measurement Qualcomm Incorporated discussion Rel-16 NR_CLI_RIM

R2-1913536 Remaining issues on CLI Ericsson discussion Rel-16 NR_CLI_RIM

R2-1913537 On s measure for CLI Ericsson discussion Rel-16 NR_CLI_RIM

R2-1913715 Leftover issues on CLI Huawei, HiSilicon discussion Rel-16 NR_CLI_RIM

Other issues and RAN3 involvement

R2-1912408 UE CLI Measurement Configuration, Reporting and NW Signalling Nokia, Nokia Shanghai Bell discussion Rel-16 Late

- QC thinks that RAN1 already agreed that UE only measures the SRS-RSRP resources having the same SCS of active BWP among the all SRS-RSRP resources configured within the measurement object. For CLI-RSSI different SCS are allowed. We can introduce a UE capability for CLI-RSSI measurements with a different SCS. Huawei/Nokia think there is no need for such capability

⇨ FFS whether we introduce a UE capability for CLI-RSSI measurements with a different SCS

- QC/ZTE/Huawei think RAN2 cannot conclude on the timing aspects
- Ericsson think that RAN1 agreed that coordination should be done via proprietary means. Nokia does not think so

⇨ Offline discussion 202 (Nokia) - Discuss the possible content of an LS to RAN3 about standardization of inter-gNB exchange of SRS configurations used in different cells, as well as options for exchange of received UE CLI measurements between network elements over Xn (i.e. between gNBs) and F1 (i.e. between CU-DUs).

R2-1914013 Draft LS to RAN3 For Exchange of Information related to UE CLI measurement configuration and reporting Nokia, Nokia Shanghai Bell LS out Rel-16 To:RAN3
- QC wonders about the RSSI case. Nokia clarifies that this is already part of the mechanisms defined by RAN3.
- change CLI-SRS-RSRP measurements into SRS-RSRP measurements for CLI
- remove "in downlink"
- add "for UE" after "SRS resource configuration" in second paragraph, last sentence

⇨ This LS is not intended to preclude RAN3 work on exchanging information to address RSSI measurements if needed

⇨ LS approved with changes above in R2-1914021

R2-1914021 LS to RAN3 For Exchange of Information related to UE CLI measurement configuration and reporting Nokia, Nokia Shanghai Bell LS out Rel-16 To:RAN3

⇨ Approved unseen

R2-1912409 LS to RAN3 For Exchange of Information related to UE CLI measurement configuration and reporting Nokia, Nokia Shanghai Bell LS out Rel-16 To:RAN3 Late

UE capabilities

R2-1913392 CLI measurements UE capabilities Qualcomm Incorporated discussion Rel-16 NR_CLI_RIM
- Nokia/Huawei/ZTE/Samsung are fine with proposals 3 and 4
- ZTE thinks it's hard to agree on the FFSs about proposals 3 and 4 in RAN2

Agreements:
1. Define a UE radio capability to indicate whether serving cell DL signal/channel (e.g. PDSCH/PDCCH) and SRS-RSRP FDMed reception is supported. FFS - UE behavior when DL signal/channel and SRS RSRP are FDMed for UEs indicating the FDMed reception is not supported.
2. Define a UE radio capability to indicate whether serving cell DL signal/channel (e.g. PDSCH/PDCCH) and CLI-RSSI FDMed reception is supported. FFS - UE behavior when DL signal/channel and CLI RSSI are FDMed for UEs indicating the FDMed reception is not supported.

✉ **[107bis#58][CLI] CLI measurements UE capabilities (Qualcomm)**
Discuss other possible UE capabilities, clarifications on the FFSs and possible questions to RAN1/RAN4 on aspects that cannot be decided by RAN2
Intended outcome: List of agreements regarding UE capabilities and updated running CR for TS 38.306
Deadline: Next Meeting

6.16 Enhancements on MIMO for NR

(NR_eMIMO-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192271). Documents in this agenda item will be handled in a break out session.

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

6.16.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc

R2-1912013 Reply LS on MAC CE design for SCell BFR (R1-1909833; contact: Apple) RAN1 LS in Rel-16 NR_eMIMO-Core To:RAN2

- Update from RAN1, regarding the case where the SR-like dedicated PUCCH resource for SCell BFR is not configured, RAN1 agrees that the UE performs CBRA on SpCell

⇨ Noted

R2-1912596 [Rapporteur input] RRC parameter list for NR eMIMO Samsung discussion Rel-16 NR_eMIMO-Core

- Samsung also thinks that RAN1 will send a list of updated parameters

⇨ Noted

New incoming LSs

R2-1914207 Reply LS on single PDCCH-based multi-TRP operation (R1- 1911550; contact: Huawei) RAN1 LS in Rel-16 NR_eMIMO-Core To:RAN2

⇨ Noted

R2-1914208 Reply LS on MAC CE design for SCell BFR (R1-1911587; contact: Apple) RAN1 LS in Rel-16 NR_eMIMO-Core To:RAN2

⇨ Noted

6.16.2 Single-PDCCH multi-TRP operation

Issues:

1) RRC configuration vs modified/new MAC CE approach

2) For MAC CE approach: New MAC CE (new LCID) vs modified MAC CE (reusing existing LCID, e.g. using the "R" bit)

3) Options for new MAC CE / modified MAC CE:

- inclusion of 1 or 2 explicit TCI state IDs for each TCI codepoint

- inclusion of mapping relationship between 1 or 2 activated TCI states (as in Rel-15 TCI state MAC CE) and TCI codepoint

- new/modified MAC CE to activate/deactivate TCI states for TRP#2 only

- duplicated bitmap for TRP#1 and TRP#2

Aspects to consider in the discussion:

- Does the UE need to know via MAC CE that a TCI state corresponds to a specific TRP?

- Does the mapping between the TCI codepoints and activated TCI states for TRP#1/TRP#2 need to be flexible enough to support all the possible combination? (e.g. can we assume that TCI codepoint 0 will be mapped to the activated TCI state(s) with smallest TCI state ID(s) in TRP#1 and TRP#2, or not?)

- In case the TCI codepoint is only linked to one TCI state, will it always be a TCI state for TRP#1, or can it also be a TCI state for TRP#2?

R2-1912699 MAC CE signaling impact of enhanced TCI indication framework Ericsson discussion R2-1910144

- Samsung thinks we should rule out the RRC configuration option. ZTE/QC think RAN1 already agreed to go for a MAC CE based approach.
- Ericsson thinks we should not rely on the combination of two MAC CEs. Samsung agrees. ZTE thinks it's too early to decide.

⇨ RAN2 understands that the UE does not need to know via MAC CE that a TCI state corresponds to a specific TRP.

- Docomo/vivo think we could ask RAN1 for confirmation.

⇨ Add RAN2 understanding to the LS to RAN1, clarifying this is for the single PDCCH case (renaming the LS) and ask for confirmation.

Agreements:
1. We will adopt a dynamic MAC CE based approach.

✉ **[107bis#59][NR eMIMO] MAC CE design (Vivo)**
DL MAC CE design to activate/deactivate TCI states for mTRP operation. Both single PDCCH and multiple PDCCH mTRP should be considered
Intended outcome: List of agreeable proposals
Deadline: Next Meeting

R2-1913620 MAC CE signalling enhancement for TCI indication of single-PDCCH based multi-TRP transmission Huawei, HiSilicon discussion Rel-16 NR_eMIMO-Core

R2-1913407 Enhanced TCI States Activation/Deactivation PDSCH MAC CE for Multi-TRP Qualcomm Incorporated discussion Rel-16 NR_eMIMO-Core R2-1911375

R2-1913239 MAC CE format for single PDCCH multi-TRP MediaTek Inc. discussion Rel-16 NR_eMIMO-Core R2-1911129

R2-1913171 Consideration on MAC CE design for single PDCCH based multi-TRP transmission CMCC discussion Rel-16 R2-1909773

R2-1912510 MAC CE format to indicate up to two TCI states OPPO discussion Rel-16 NR_eMIMO-Core

R2-1912511 MAC CE format to indicate up to 2 TCI state per indication OPPO draftCR Rel-16 38.321 15.7.0 NR_eMIMO-Core

R2-1912514 MAC CE design for support of multiple beam indication for single PDCCH-based multiple TRPs Samsung discussion Rel-16 NR_eMIMO-Core R2-1911359

R2-1913049 Consideration on Enhancement of TCI state for Multi-TRP transmission ZTE Corporation, Sanechips discussion Rel-16 NR_eMIMO-Core

6.16.3 Multi-PDCCH multi-TRP operation

Including output of email discussion [107#39][NR/eMIMO] Multi PDCCH multi TRP impact to RAN2 (Ericsson)

Possible Agreements (based on email discussion report):

1. RAN2 assumes that, for Rel-16 normative work, mPDCCH mTRP operation is always intra-gNB/intra-DU and, also in "non-ideal backhaul" scenarios, transmission from two TRPs is always slot/frame/SFN-aligned

2. mPDCCH mTRP operation is supported via a single shared MAC entity

Possible Working Assumption (based on email discussion report):

1. mPDCCH mTRP operation is modelled as a single cell/single HARQ entity operation, with separate HARQ processes for the different TRPs

R2-1912700 Report of email discussion [107#39] [NR - eMIMO] Ericsson discussion Late
- ⇨ Offline 001, based on the email discussion, to draft questions to R1 (Ericsson). Face to face offline expected Wednesday morning coffee break, see schedule update.

Agreements: 1. RAN2 assumes that also in "non-ideal backhaul" scenarios, transmission from two TRPs is always slot/frame/SFN-aligned 2. mPDCCH mTRP operation is supported via a single shared MAC entity Working Assumption: 1. mPDCCH mTRP operation is modelled as a single cell/single HARQ entity operation. This does not mean that RAN1 has to do anything to support retransmission between TRPs

R2-1914011 Draft LS on multi PDCCH-based multi-TRP operation Ericsson LS out Rel-16 NR_eMIMO-Core To:RAN1
- Futurewei suggests to use the RAN1 wording: If "*multiple-PDCCH based multi-TRP/panel transmission with inter-cell (different Cell IDs)…*"
- Ericsson thinks that we should explain what our working assumption means
- ⇨ we add the agreements but not the Working assumption to the LS to RAN1
- ⇨ Offline discussion for reformulating Q3. Offline discussion 204 (Ericsson): Update draft LS to RAN1

R2-1914015 Draft LS on multi PDCCH-based and single PDCCH -based multi-TRP operation Ericsson LS out Rel-16 NR_eMIMO-Core To:RAN1
- ⇨ remove Q1 and renumber the questions
- ⇨ remove type "T"
- ⇨ LS approved with these changes in R2-1914020

R2-1914020 LS on multi PDCCH-based and single PDCCH -based multi-TRP operation Ericsson
LS out Rel-16 NR_eMIMO-Core To:RAN1
⇨ Approved unseen

R2-1912515 Further considerations of support for multi-PDCCH based multi-TRP operation Samsung
discussion Rel-16 NR_eMIMO-Core

R2-1913619 RAN2 specification impacts of multi-TRP transmission Huawei, HiSilicon discussion
Rel-16 NR_eMIMO-Core

✉ **[107bis#60][NR eMIMO] RRC CR (Ericsson)**
Draft running CR for TS 38.331, including ASN.1 details for available RRC parameter list (including rapporteur excel input for the whole WI)
Intended outcome: Initial draft CR for TS 38.331
Deadline: Next Meeting

6.16.4 General beam management enhancements

Other aspects, if any, can also be covered here

R2-1912351 RAN2 specification impacts of SCell BFR vivo discussion Rel-16 NR_eMIMO-Core
⇨ Come back to this on Friday
- At the moment we don't say BFD is performed in the active BWP
- Ericsson wonders about the need for different thresholds
- Ericsson thinks we still need to discuss whether we need a specific BFR-SR configuration
- QC wonders the valid uplink grant has timing restrictions (whether this needs to be valid before a given time). Ericsson thinks this could be an optimization. Nokia thinks this can be discussed later. Lenovo understands the concern from QC.

Agreements:
1. The Scell beam failure detection is per cell.
2. Each DL BWP of a SCell can be configured with an independent SCell BFR configuration (the content is FFS)
3. One SR ID is configured for BFR within the same cell group.
4. The SCell BFRQ MAC CE triggers a SCell BFRQ SR if there is no valid uplink grant which can accommodate the SCell BFRQ MAC CE.
5. FFS whether the transmission of the SCell BFRQ MAC CE cancels the pending BFRQ SR of the failed SCell(s).(depends whether the MAC CE provides info for one or more Scells)
6. When the number of the BFRQ SR transmission reaches the sr-TransMax, the UE triggers a RACH procedure (i.e. reuse Rel-15 behaviour)

✉ **[107bis#61][NR eMIMO] Scell BFR MAC CR (Nokia, Samsung)**
Phase 1: Continue the discussion on details of BFR procedure for Scell (Nokia)
- Beam Failure Detection
- BFR-SR modelling
- MAC CE – transmission and format
Phase 2: Tentatively draft running CR for TS 38.321 (Samsung)
Intended outcome: Initial draft CR for TS 38.321, covering Scell BFR aspects
Deadline: Next Meeting

R2-1913048 Considerations on Beam failure Recovery for SCell ZTE Corporation, Sanechips
discussion Rel-16 NR_eMIMO-Core

R2-1913223 BFR procedure for SCell Nokia, Nokia Shanghai Bell discussion Rel-16 NR_eMIMO-Core

R2-1913013 Analysis of RRC impacts from multi-beam enhancements Ericsson discussion Rel-16 NR_eMIMO-Core

R2-1912128 Discussion on multi-beam enhancements CATT discussion Rel-16 NR_eMIMO-Core

R2-1912352 Text proposal for 38.321 of SCell BFR vivo discussion Rel-16 NR_eMIMO-Core

R2-1912353 Text proposal for 38.331 of SCell BFR vivo discussion Rel-16 NR_eMIMO-Core
R2-1912436 RAN2 Aspects of SCell BFR Samsung Electronics Co., Ltd discussion Rel-16 NR_eMIMO-Core
R2-1912470 SCell BFR Operation Apple discussion Rel-16 NR_eMIMO-Core
R2-1912509 Discussion on SCell BFR OPPO discussion Rel-16 NR_eMIMO-Core
R2-1912690 SCell Beam Failure Recovery Procedure Lenovo, Motorola Mobility discussion Rel-16 NR_eMIMO-Core
R2-1913012 MAC aspects of BFR on SCell Ericsson discussion Rel-16 NR_eMIMO-Core
R2-1913137 Discussion on beam failure recovery for SCell LG Electronics Inc. discussion NR_eMIMO-Core
R2-1913224 Candidate detection and MAC CE format for SCell BFR Nokia, Nokia Shanghai Bell discussion Rel-16 NR_eMIMO-Core
R2-1913225 Draft CR on Introduction of SCell BFR Nokia, Nokia Shanghai Bell draftCR Rel-16 38.321 15.7.0 NR_eMIMO-Core
R2-1913240 Support BFR for SCell MediaTek Inc. discussion Rel-16 NR_eMIMO-Core
R2-1913621 Beam failure recovery for SCell Huawei, HiSilicon discussion Rel-16 NR_eMIMO-Core
R2-1913833 Procedures and MAC CE design for BFR for SCells Qualcomm Incorporated discussion Rel-16 NR_eMIMO-Core R2-1911504
R2-1913880 Draft LS on SCell BFR Operation Apple LS out Rel-16 NR_eMIMO-Core To:RAN1

6.18 Private Network Support for NG-RAN

(NG_RAN_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; target; Mar 20; WID: RP-191563). Documents in this agenda item will be handled in a break out session.
Time budget: 0.5 TU
Tdoc Limitation: 2 tdocs

6.18.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc

Workplan

R2-1912841 NPN Work Plan Nokia, China Telecom (Rapporteurs) discussion Rel-16 NG_RAN_PRN-Core R2-1909112
⇨ Noted

Incoming LSs

R2-1912003 LS on sending CAG ID during resume procedure (C1-195157; contact: Samsung) CT1 LS in Rel-16 Vertical_LAN To:SA2 Cc:RAN2
- Huawei thinks we should address this in RAN2. Nokia and CMCC think we should wait for SA2 reply

⇨ Noted

R2-1912035 Reply LS on RAN sharing and Emergency services with Non-Public Networks (R3-194785; contact: Qualcomm) RAN3 LS in Rel-16 Vertical_LAN To:SA2, RAN2 Cc:SA1
⇨ Noted

R2-1912036 LS on clarifications on Private Networks (R3-194786; contact: Nokia) RAN3 LS in Rel-16 NG_RAN_PRN To:SA2 Cc:RAN2
⇨ Noted

R2-1912059 LS on Sending CAG ID in NAS layer (S3-193142; contact: Qualcomm) SA3 LS in Rel-16 FS_Vertical_LAN_SEC To:SA2, RAN2, RAN3 Cc:CT1
⇨ We need to answer this.

Draft Reply LSs and related documents

R2-1912952 [DRAFT] LS to SA3 on privacy concern of transmission of CAG ID CMCC LS out Rel-16 NG_RAN_PRN-Core To:SA3

R2-1913946 Draft Reply LS on Sending CAG ID in NAS layer Qualcomm Incorporated LS out Rel-16 NG_RAN_PRN-Core To:SA3, SA2, RAN3 Cc:CT1

R2-1913721 Discussion on providing CAG ID to AS during resume procedure Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN

R2-1913722 draft Reply LS to CTI on providing CAG ID to AS during resume procedure Huawei, HiSilicon LS out Rel-16 NG_RAN_PRN To:CT1 Cc:SA2

R2-1913906 Transmission of CAG ID during Resume Procedure Samsung discussion

⇨Revised in R2-1913959

R2-1913959 Transmission of CAG ID during Resume Procedure Samsung discussion Rel-16

Draft Stage 2 CR

R2-1912842 NPN Stage 2 Draft CR Nokia, China Telecom (Rapporteurs) draftCR Rel-16 38.300 15.7.0 B NG_RAN_PRN-Core R2-1909113

⇨ We can use this as a baseline for further email discussion

✉ **[107bis#62][PRN] Stage 2 running CR (Nokia)**
Intended outcome: Update the running CR
Deadline: Next Meeting

6.18.2 Idle and inactive mode

Including cell selection and reselection (SNPN and PNI-NPN selection), HRNN (Human Readable Name) and common idle and connected mode aspects (e.g. system information, access control, etc.)
Including output of email discussion [107#40][NR/NPN] SIB1 design (Qualcomm)
Including output of email discussion [107#41][NR/NPN] CSG aspects (Nokia)

R2-1912843 Report of Email Discussion [107#41] on CSG Aspects Nokia (Rapporteur) report Rel-16 NG_RAN_PRN-Core

- QC thinks that with proposal 1A we are undoing an LTE behaviour, having impacts on power consumption. CATT thinks the situation is different in NR and then supports proposal 1A. Huawei agrees but thinks that CAG cells should be prioritized on certain frequencies. ZTE wonders if this means we should have cell specific priorities.
- Regarding 2a, Ericsson thinks we should not override dedicated priorities. Intel thinks this is needed to support the WID objectives. Nokia agrees with Ericsson. ZTE/CATT think the network might not be able to provide information for all the neighbour cells and then we should allow autonomous search, so they don't think dedicated priorities should be overridden
- Samsung thinks that if we have 4a, we don't need 3a. CATT and CMCC don't agree
- Huawei and ZTE think proximity indication is useful. Nokia does not think so, this was used in LTE to solve PCI confusion while this is not needed here. Huawei thinks this also needed for uncoordinated deployments. China Telecom supports agreement 5 as deployments will be under network control. ZTE thinks that PCI confusion might happen in NR-U and then this mechanism might be needed for NR-U as well
- Regarding autonomous search for SNPN, Ericsson thinks we should not have network selection within AS layer. Intel agrees
- Ericsson/Nokia/QC/LG see less need for PCI range/list for SNPN. Sony sees the need for power saving and for inbound mobility. Nokia thinks there is no inbound mobility. Samsung thinks this is useful for UEs that do not support SNPN and in any case this would be up to network.

Agreements:

1. no new mechanism is introduced to handle the priority of a frequency layer of a CAG cell on which the UE is camped (beyond what cellReselectionPriority provides in SIB4 and in RRCRelease).
2. the UE can optionally implement an autonomous search function of CAG cells. FFS on the relationship with dedicated priorities.
3. reserving a PCI range for CAG cells is purely a deployment issue (does not need to be reflected in the spec)
4. the PCI list of CAG cells can optionally be signalled to UEs. FFS on details of the list
5. FFS whether proximity indication in CONNECTED mode is needed
6. no preliminary access check for CAG cells in CONNECTED mode. The Allowed CAG list is provided to the gNB by the AMF.
7. no new mechanism is introduced to handle the priority of a frequency layer of an SNPN cell on which the UE is camped (beyond what cellReselectionPriority provides in SIB4 and in RRCRelease).
8. There is no autonomous search function of SNPN cells.
9. reserving a PCI range for SNPN cells is purely a deployment issue (does not need to be reflected in the spec)
10. FFS whether PCI range of SNPN cells can optionally be signalled to UEs.
11. No proximity indication in CONNECTED mode is needed for SNPN.
12. no preliminary access check for SNPN cells in CONNECTED mode.

R2-1913633 Report of email discussion [107#40][NR/NPN] SIB1 design (Qualcomm) Qualcomm Incorporated report

⇨ Come back to this on Friday

- CMCC/VDF thinks we should support emergency services for Rel-15 UEs in CAG-only cells. Nokia thinks there is an SA2 requirement only for Rel-15 UEs. Ericsson thinks we should anyway have a mechanism to prevent emergency services as well.
- Qc thinks a new Rel-16 IE similar to *cellReservedForOtherUse* should be PLMN specific
- Ericsson/Nokia/LG think that for CAG, all cells should have the same CellID and TAC

⇨ Regarding extending Rel-15 PLMN-IdentityInfoList or adding a new list, RAN2 thinks that sharing aspects could be address by any of the two approaches.

Agreements:

1. SIB1 of NPN-only cell prevents access attempts by Rel-15 UEs for normal services.
2. SIB1/MIB supports prevention of access attempts by Rel-15 UEs on a SNPN-only cell for emergency services.
3. SIB1/MIB supports prevention of access attempts by Rel-15 UEs on a CAG-only cell for emergency services (this does not mean that access attempts by Rel-15 UEs for emergency services on CAG-only cell are always not allowed. This is still FFS.The feasibility of allowing emergency services on CAG-only for Rel-15 UEs will be discussed in the email discussion on RRC aspects/SIB1 design)
4. Access attempts by Rel-15 UEs for emergency services on SNPN-only cell are not allowed.
5. In a NPN-only cell, access attempts for normal services by Rel-16 UEs without support for NPN is not allowed.
6. In a SNPN-only cell, access attempts for emergency services by Rel-16 UEs without support for SNPNs is not allowed.
7. For a PLMN+NPN cell, Rel-15 UEs should be able to access PLMNs associated with the cell for normal and/or limited service.
8. A new Rel-16 IE is needed with a role similar to role of *cellReservedForOtherUse* for Rel-15 UEs (FFS whether this will be PLMN specific)
7. SIB1 allows indication of TAC, RANAC, cellIdentity per SNPN (per PLMN ID + NID). FFS on other IEs. FFS whether Rel-15 IEs or Rel-16 IEs are used for the indication.
8. SIB1 allows indication of TAC, RANAC, cellIdentity for each CAG. FFS on other IEs. The fields are indicated per PLMN-ID. FFS whether Rel-15 IEs or Rel-16 IEs are used for the indication.

Working assumptions:

1. NPN information is outside PLMN-IdentityInfoList as a new Rel-16 IE for NPN-only cell and PLMN+NPN cell (the total number of network IDs is still 12)

2. Access attempts by Rel-15 UEs for emergency services on CAG-only cell could be allowed based on operator's preference

✉ **[107bis#63][PRN] RRC CR (Nokia)**
Continue the discussion on SIB1 design and draft running CR for TS 38.331 including agreeable ASN.1 details
Intended outcome: Initial draft CR for TS 38.331
Deadline: Next Meeting

R2-1912361 Further aspects of PNI-NPN Ericsson discussion Rel-16 NG_RAN_PRN-Core
R2-1913634 Suitable and acceptable NPN cells Qualcomm Incorporated discussion

✉ **[107bis#64][PRN] Suitable and acceptable NPN cells (Qualcomm)**
Discuss remaining issues on suitable and acceptable NPN cells
Intended outcome: List of agreeable proposals and running CR for 38.304
Deadline: Next Meeting

R2-1912360 Further aspects of SNPN Ericsson discussion Rel-16 NG_RAN_PRN-Core
R2-1912153 Cell Selection and Reselection of NPN cell CATT discussion Rel-16 NG_RAN_PRN-Core
R2-1912154 Connection and Mobility Issue for UEs in Idle and Inactive Mode CATT discussion Rel-16 NG_RAN_PRN-Core
R2-1912309 Consideration on idle and inactive mode procedures Huawei, HiSilicon, China Telecom discussion Rel-16 NG_RAN_PRN
R2-1912437 Discussio`2n on (preventing) access to NPN only cell Samsung Electronics Co., Ltd discussion Rel-16 NG_RAN_PRN-Core
R2-1912507 Clarification on HRNN reporting OPPO discussion Rel-16 NG_RAN_PRN-Core
R2-1912508 Discussion on SIB1 design for NPN OPPO discussion Rel-16 NG_RAN_PRN-Core
R2-1912656 Network and cell (re)selection in SNPN access mode Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core
R2-1912675 Further consideration on the System Information of the Private Network ZTE Corporation, Sanechips discussion Rel-16 NG_RAN_PRN-Core
R2-1912676 Considerations on the remaining Idle/Inactive state issues of the Private Network ZTE Corporation, Sanechips discussion Rel-16 NG_RAN_PRN-Core
R2-1912713 Access Control for SNPN and CAG Intel Corporation discussion Rel-16 NG_RAN_PRN-Core
R2-1912714 Suitability criteria for NPN Intel Corporation discussion Rel-16 NG_RAN_PRN-Core
R2-1912924 Left issues in idle and inactive mode for NPN CMCC discussion Rel-16 NG_RAN_PRN-Core
R2-1913005 Discussion on reselection between NPNs and public networks KDDI Corporation discussion
R2-1913052 Discussion on human-readable network name China Telecom, Huawei, HiSilicon discussion Late Not available
R2-1913058 Discussion on human-readable network name China Telecom, Huawei, HiSilicon discussion Late Not available
R2-1913060 Discussion on human-readable network name China Telecom, Huawei, HiSilicon discussion
R2-1913069 Discussion on the deployment for CAG China Telecommunications discussion Late Not available
R2-1913070 Discussion on the deployment for CAG China Telecommunications discussion
R2-1913363 Cell selection/reselection with NPN cells Sony discussion Rel-16 NG_RAN_PRN-Core
R2-1913635 Support for NPN HRNN broadcast Qualcomm Incorporated discussion
R2-1913804 Resue of CSG features for NPN cells LG Electronics France discussion NG_RAN_PRN-Core

6.18.3 Connected mode

Connected mode specific aspects including e.g. measurement report and mobility. This agenda item might be down-prioritized at RAN2#107bis
Other aspects, if any, can also be covered here

R2-1912925 Left issues in active mode for NPN CMCC discussion Rel-16 NG_RAN_PRN-Core
R2-1912310 Consideration on connected mode procedures Huawei, HiSilicon discussion Rel-16 NG_RAN_PRN
R2-1912657 RRC considerations to support SNPNs Nokia, Nokia Shanghai Bell discussion Rel-16 NG_RAN_PRN-Core

6.19 Other NR Rel-16 WIs/SIs

This agenda item is to be used for LSs and documents relating to Rel-16 NR but for which there is no existing RAN WI/SI (e.g. LSs from CT/SA requesting RAN2 action) or for which there is no allocated RAN2 time (e.g. some RAN4 led WIs with no RAN2 time but might require introduction of UE capability signalling).
Time budget: 0.5 TU

LS in – to R2

R2-1912023 Reply LS on maximum value of MDBV (R1-1909894; contact: Qualcomm) RAN1 LS in Rel-16 5GS_Ph1 To:SA2, RAN2, RAN3, CT3, CT4 Cc:SA1

⇒ **Noted**

R2-1912030 Reply LS on LS on maximum value of MDBV (R3-194553; contact: Qualcomm) RAN3 LS in Rel-16 5GS_Ph1 To:SA2, RAN1, RAN2, CT3, CT4 Cc:SA1

⇒ **Noted**

R2-1914177 Reply LS to LS on maximum value of MDBV (C4-194314; contact: Nokia) CT4 LS in Rel-16 5GS_Ph1 To:SA2 Cc:RAN1, RAN2, RAN3, CT3, SA1

⇒ **Noted**

R2-1912060 LS to RAN2 and RAN3 on False Base Station Detection (S3-193175; contact: Huawei) SA3 LS in Rel-16 FS_5GFBS To:RAN2, RAN3

- Huawei think we need t reply. There are discussion papers and draft reply

⇒ **Noted**

R2-1912061 LS on QoE Measurement Collection (S5-195659; contact: Ericsson) SA5 LS in Rel-16 QOED To:CT1, RAN2, RAN3, SA4

- SA5 think this may impact R2 specs and we need to investigate.
- Nokia wonder is this really is TEI with so many groups involved.
- LTE TEI session has treated this LS

⇒ **Noted**

LS in – cc R2

R2-1912029 Reply on radio resource management policy (R3-194550; contact: Huawei) RAN3 LS in Rel-16 eNRM To:SA5 Cc:RAN2
R2-1912031 Reply LS on Data activity reporting (R3-194572; contact: Ericsson) RAN3 LS in Rel-16 5G_SLICE_ePA To:SA5 Cc:RAN2

⇒ **Noted without presentation**

R2-1912062 Reply LS on L1 and L2 measurements (S5-195941; contact: Huawei) SA5 LS in Rel-16 5G_SLICE_ePA To:RAN2, RAN3
- Huawei think we might need to check for R2 impact

⇒ **noted**

URLLC (V2X Uu)

R2-1912025 Response to LS on Combination 2 of Uu QoS characteristics values for V2X services (R1-1909898; contact: Huawei) RAN1 LS in Rel-16 NR_L1enh_URLLC To:SA2 Cc:RAN2, RAN3

R2-1912028 Reply LS on Combinations of Uu QoS characteristics values for V2X services (R3-193258; contact: Huawei) RAN3 LS in Rel-16 NR_L1enh_URLLC To:RAN1 Cc:SA2, RAN2

⇒ **Noted without presentation**

R2-1912038 Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (R3-194795; contact: Vodafone) RAN3 LS in Rel-16 eV2XARC To:SA2, RAN2

⇒ **Noted**

R2-1912057 Reply on Combinations of Uu QoS characteristics values for V2X services (S2 -1906340; contact: Huawei) SA2 LS in Rel-16 eV2XARC, NR_L1enh_URLLC To:RAN1, RAN3 Cc:RAN2

⇒ **Noted without presentation**

Discussions

Related to R2-1908653 LS on Potential improvements for delay critical QoS Flows (S2-1906832; contact: Huawei) SA2

R2-1913724 Postponed discussions on potential improvements for delay critical QoS flows Huawei, HiSilicon discussion Rel-16 5GS_Ph1

R2-1912560 Discussion on Potential improvements for delay critical QoS Flows Ericsson Discussion

R2-1912735 Discussion on potential improvements for delay critical QoS Flows OPPO discussion Rel-16

⇒ **3 tdocs noted**

DISCSUSSION on the 3 docs above
- Huawei think the question is not replied to in P1 in Oppos tdoc
- Futurewei think if we have long delays for high reliability transmission and then there can be higher gains.
- Ericsson think the Huawei analysis is wrong.
- QC think that Q3 reply can be agreed.
- QC think that for Q1 and Q2 Huawei s reply is ok
- Ericsson think we sholdn’t enforce such feature.

R2-1913725 Draft Reply LS on potential improvements for delay critical QoS flows Huawei, HiSilicon LS out Rel-16 5GS_Ph1 To:SA2 Cc:RAN3

⇒ **Remove ”but more RAN resources can be saved under some circumstances when PER is not met”**

⇒ **With this change, approved in R2-1914201**

R2-1912561 draft reply LS on potential improvements for delay critical QoS flows Ericsson LS out To:RAN3

Related to R2-1912033 LS on full configuration during SN Modification procedure (R3-194758; contact: Huawei)

R2-1912721 Full configuration indication to SN - Feedback on RAN3 LS Intel discussion Rel-16 TEI16, NR_newRAT-Core

Related to R2-1912060 LS to RAN2 and RAN3 on False Base Station Detection (S3-193175; contact: Huawei)

R2-1912722 False base station detection – feedback on SA3 LS Intel discussion Rel-16 FS_5GFBS

R2-1913740 Discussion on potential RAN2 impact to support false base station detection Huawei, HiSilicon discussion Rel-16 FS_5GFBS

DISCSUSSION on the 2 docs above

- For 4, QC think there is significant impact to the UE, e.g. wrt power consumption. For the logged measurements we need to know better what to measure.
- Huawei indicate that with MDT the impact may be not so bad
- Apple think we can reply it is feasible and can also express some concerns e.g. power.
- Vivo wonder if we need to log all SIBs or just MIB and SIB1.
- Ericsson think this would be the SIBs that the UE anyway read in Idle and this is rarely used.
- ZTE agrees this is not frequently used.
- Oppo think the UE can only report MIB and SIB1, but think the UE would follow normal behaviour, i.e. not measure all cells.
- Nokia think this may happen but rarely, and think ANR is the closes functionality, rather than MDT. Docomo agrees, and think ANR could be sufficient. This seems like a corner case.
- Samsung like P1 from Intel.
- QC also like Intel P1 and think UE cannot report more than SIB1 and MIB.
- Intel think that we should ask for more information.
- QC think we shouldn't volunteer to collect even more SIBs.
- Huawei think we can ask whether hash of other SIBs is required.

⇒ **For LSout Include Intel P1 reply. Add that such functionality do not exist today, and it would need to be specified. Ask for more information on what need to be collected. Can ask whether hash of other SIBs is required.**

R2-1913739 [DRAFT] Reply LS to SA3 on FBS detection Huawei, HiSilicon LS out Rel-16 FS_5GFBS To:SA3 Cc:RAN3

Offline 44, LS revision in R2-1914202.

R2-1914202 [DRAFT] Reply LS to SA3 on FBS detection Huawei, HiSilicon LS out Rel-16 FS_5GFBS To:SA3 Cc:RAN3

⇒ **Approved in R2-1914224**

Related to R2-1911499 LS on Recommended Bit Rate/Query for FLUS and MTSI (S4-191031; contact: Qualcomm)

R2-1913598 Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated discussion Rel-16 E_FLUS

R2-1913599 [Draft] Reply LS on Recommended Bit Rate/Query for FLUS and MTSI Qualcomm Incorporated LS out Rel-16 E_FLUS To:SA4

6.20 NR TEI16 enhancements

Small Technical Enhancements to NR. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see RP-191602 endorsed at RAN#84. No documents should be submitted to 6.20. Please submit to 6.20.x.

Time budget: 1 TU

Tdoc Limitation: No Limitation for Operators, 6 tdocs for others. NOTE for TEI, the tdoc limitation applies to new proposals, not to open proposals since previous meeting(s)

6.20.1 RAN2 led TEI16 enhancements - Control plane related

Open proposals

Second SMTC in Idle / Inactive

R2-1913258 Introduction of a second SMTC per frequency carrier in idle/inactive Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, Samsung, Ericsson CR Rel-16 38.331 15.7.0 1218 1 B TEI16 R2-1910673

R2-1913269 Introduction of a second SMTC for inter-RAT cell reselection Orange, AT&T, Vodafone, Telecom Italia S.p.A., CMCC, Samsung, Ericsson CR Rel-16 36.331 15.7.0 4114 - B TEI16

R2-1912995 Multiple SMTC for Idle Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16

R2-1912996 CR on multiple SMTC for idle Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.7.0 1282 - F TEI16

DISCUSSION without treating any doc above
- Orange suggest to wait for Reply LS. Chair: we wait

Voice fallback

R2-1913389 Introduction of voice fallback indication Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson CR Rel-16 38.331 15.7.0 1312 - C TEI16

R2-1913390 Introduction of voice fallback indication Qualcomm Incorporated, T-Mobile USA, Verizon, China Telecom, Softbank, Ericsson CR Rel-16 36.331 15.7.0 4136 - C TEI16
- QC think interRat is quite difficult and think we could focus on EPS fallback. Ericsson would be ok to do this. Huawei are also ok with this.

R2-1913883 On voice fallback enhancement SHARP Corporation discussion Rel-16
- QC clarifies that IRAT means that we focus on NR fallback to LTE/EPC, by redirection or HO.
- QC think that for establishment cause QC are thinking to not impact NAS.
- Sharp think that this may be difficult without changing NAS.

R2-1913741 HO and redirection from NR to LTE due to EPS fallback Huawei, HiSilicon, China Unicom discussion Rel-16 TEI16
- Huawei have some differences to QC, e.g. would prefer that UE follows legacy reestablishment at HO failure.
- Huawei think that establishment cause specifc to EPS fallback should be considered.

⇒ **We limit to EPS fallback**

✉ **[107bis#46][NR TEI16] Voice fallback (Qualcomm)**
Intended outcome: Agreeable CRs 36331 38331
Deadline: Next Meeting

R2-1913391 Draft LS on RRC establishment cause value in EPS fallback Qualcomm Incorporated LS out Rel-16 TEI16 To:CT1 Late

Overheating

R2-1913689 Signalling design for overheating reporting in (NG)EN-DC scenario Huawei, Huawei Device, China Unicom, MediaTek Inc., Samsung, LG Uplus, vivo discussion Rel-16 TEI16
- Ericsson would like to add one more option a flag from MN to SN so that SN could downgrade the configuration, as releasing SCG would make the UE “loose” the 5G connection.

- Intel think Option 2 is not good.

Offline 48, agreeable solution, prefarbly agreeable CRs (Huawei)
- Huawei reports that 3 options were discussed, where one can be excluded. For the other 2 solutions, the were even support.
- Ericson prefers option 1 because then MN can coordinate this, Nokia agrees and think that in DC we don't have coord SN MN, and Nokia think the purpose is to balance. Huawei think it is ok.
- ZTE prefer option 2, bec overheating is likely related to SN, and would also like to think a bit more.
- QC think that the problem with O1 is that we are putting NR things with LTE. Ericsson think we can fix this in ASN.1
- Huawei think that If postponed then we should have email discussion, and think this is related to power saving, this session have decided to attempt to coordinate.

✉ **[107bis#47][NR TEI16] Signalling design Overheating reporting in (NG)EN-DC (Huawei)**
Intended outcome: Report w agreeable solution, even more preferred: agreeable CRs
Deadline: Next Meeting

R2-1913529 Overheating enhancements for EN-DC Ericsson discussion

R2-1913690 36.331 Draft CR for addressing overheating issue in EN-DC scenario - Option 1 Huawei, Huawei Device draftCR Rel-16 36.331 15.7.0 F TEI16

R2-1913691 38.331 Draft CR for addressing overheating issue in EN-DC sceanrio - Option 1 Huawei, Huawei Device draftCR Rel-16 38.331 15.7.0 F TEI16

R2-1913692 36.331 Draft CR for addressing overheating issue in EN-DC scenario - Option 2 Huawei, Huawei Device draftCR Rel-16 36.331 15.7.0 F TEI16

R2-1913693 37.340 Draft CR for addressing overheating issue in EN-DC scenario - Option 2 Huawei, Huawei Device draftCR Rel-16 37.340 15.7.0 F TEI16

R2-1913694 38.331 Draft CR for addressing overheating issue in EN-DC scenario - Option 2 Huawei, Huawei Device draftCR Rel-16 38.331 15.7.0 F TEI16

MPC/MCS prioritisation

R2-1912921 PRACH prioritization parameters for MPS for Rel-16 Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson CR Rel-16 38.331 15.7.0 1279 - B NR_newRAT-Core, TEI16

R2-1912922 PRACH prioritization procedure for MPS Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm, Ericsson CR Rel-16 38.321 15.7.0 0663 - B NR_newRAT-Core, TEI16

R2-1912967 PRACH prioritization parameters for MCS for Rel-16 FirstNet, Perspecta Labs, Ericsson, Qualcomm CR Rel-16 38.331 15.7.0 1280 - B NR_newRAT-Core, TEI16

R2-1912969 PRACH prioritization procedure for MCS for Rel-16 FirstNet, Perspecta Labs, Ericsson, Qualcomm CR Rel-16 38.321 15.7.0 0664 - B NR_newRAT-Core, TEI16

DISCUSSION
- Ericsson think the CRs should be merged as they may clash in the implementation.
- Samsung think the IEs should be placed under RACH config common.

⇒ **We will have these changes, but the CRs should be merged, can consider text enhancements in the updates. Updated and merged CRs for next meeting,**

Need for gaps:

R2-1913847 Report of [107#81][NR TEI16] Need-for-Gaps signalling MediaTek Inc. discussion Rel-16 TEI16

R2-1913853 CR on NeedForGap capability for each supported NR band before EN-DC configuration Nokia, Nokia Shanghai Bell draftCR Rel-16 36.331 15.7.0 C TEI16

EN-DC cell reselection (not agreed last meeting)

R2-1913233 Further consideration on EN-DC cell reselection CMCC, Huawei, vivo, ZTE, OPPO, xiaomi discussion Rel-16 R2-1912960

IDC is postponed to February:

R2-1912329 Introduction of NR IDC solution vivo draftCR Rel-16 38.331 15.7.0 F TEI16

New Proposals

R2-1912447 Support of inter-RAT HO from SA to EN-DC in Rel-16 China Telecom, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO, Mediatek, VIVO discussion Rel-16 Late

R2-1912448 Stage2 CR-Support of Inter-RAT HO between NR to EN-DC in Rel-16 China Telecom, NTT DOCOMO, Huawei, Ericsson, ZTE, OPPO, Mediatek, VIVO CR Rel-16 37.340 15.7.0 0156 - B TEI16 Late

R2-1913272 Support of releasing UL configuration Huawei, HiSilicon, CMCC, China Telecom, MediaTek Inc., Vodafone, Orange, vivo, OPPO, Spreadtrum Communications CR Rel-16 38.331 15.7.0 1168 1 F TEI16 R2-1909853

RRC segmentation DL

R2-1912835 Segmentation in DL Ericsson, DT, AT&T, Vodafone discussion Rel-16 TEI16

R2-1912836 Introduction of RRC Segmentation - Downlink Ericsson, DT, AT&T, Vodafone CR Rel-16 38.331 15.7.0 1277 - B TEI16

R2-1912833 Introduction of RRC Segmentation - Downlink Ericsson CR Rel-16 36.331 15.7.0 4108 - B TEI16

R2-1912834 Introduction of RRC Segmentation - Downlink Ericsson CR Rel-16 36.306 15.6.0 1717 - B TEI16

R2-1912837 Introduction of RRC Segmentation - Downlink Ericsson CR Rel-16 38.306 15.7.0 0174 - B TEI16

ANR Gaps

R2-1913735 DRX configuration coordination in (NG)EN-DC Huawei, HiSilicon discussion Rel-16 TEI16

R2-1912769 Consideration on DRX coordination in ANR ZTE Corporation, Sanechips, NEC discussion Rel-16 TEI16

R2-1912770 Corrections on DRX coordination in ANR ZTE Corporation, Sanechips, NEC CR Rel-16 38.331 15.7.0 1275 - F TEI16

R2-1912280 Autonomous Gap capability for CGI reporting vivo, Ericsson discussion

R2-1912281 [Draft] Reply LS on autonomous gap capability vivo LS out To:RAN4

Other

R2-1912944 Mobility-state-based cell reselection in NR for HSDN CMCC, MediaTek Inc discussion Rel-16 R2-1911253

R2-1913110 On combined RRC procedures Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-16 TEI16

R2-1913111 RRC processing delays for combined procedures Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 15.7.0 1288 - F TEI16

R2-1913172 Discussion on the flexible configuration of Maximum Data Rate Enumeration for UP Integrity ProtectionCMCC, Huawei, Hisilicon discussion Rel-16 R2-1912943

R2-1912516 Discussion on the additional UE capability filtering to limit the total number of carriers in NR Samsung discussion Rel-16 TEI16 R2-1911362

R2-1912517 Additional UE capability filtering to limit the total number of carriers in NR Samsung CR Rel-16 38.331 15.7.0 1270 - B TEI16

R2-1912518 Additional UE capability filtering to limit the total number of carriers in NR Samsung CR Rel-16 38.306 15.7.0 0170 - B TEI16

R2-1912723 Updates to reestablishment procedure ZTE Corporation, Sanechips, Intel Corporation CR Rel-16 38.331 15.7.0 1143 2 C TEI16 R2-1911276

R2-1913286 Discussion on support of NR RAN sharing CMCC discussion Rel-16 R2-1912961

R2-1913379 Maximum Data Rate Enumeration for UP Integrity Protection Apple, ZTE Corporation, Sanechips discussion Rel-16 TEI16

R2-1913380 Draft LS on Maximum Data Rate Enumeration for UP Integrity Protection Apple LS out Rel-16 TEI16 To:CT1 Cc:SA3

R2-1913782 Discussion on SFTD measurement between NR PSCell and NR neighbour cells in EN-DC Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16

R2-1912942 Further consideration on PRACH prioritization CMCC discussion Rel-16

R2-1913438 Triggering conditions for A1-A6 events in NR Ericsson discussion Rel-16 TEI16

R2-1913439 CR to 38.331 on Triggering conditions for A1 to A6 events in NR Ericsson CR Rel-16 38.331 15.7.0 1317 - B TEI16

R2-1913440 CR to 38.306 on Triggering conditions for A1 to A6 events in NR Ericsson CR Rel-16 38.306 15.7.0 0183 - B TEI16

R2-1913528 Returning multiple BC+FS in CG-Config Ericsson discussion

R2-1913527 Introducing multiple BC-FS Ericsson CR Rel-16 38.331 15.7.0 1322 - B TEI16

R2-1913695 CR on UE capability for SRS-Tx switch Huawei, HiSilicon CR Rel-16 38.306 15.7.0 0192 - F TEI16

R2-1913003 CN Type Indication for Cell Reselection from NR to LTE MediaTek Inc. discussion R2-1908941

R2-1912292 Discussion on DRB IP failure handling and data recovery OPPO discussion Rel-16

R2-1912289 Security algorithom update in RRC reestablishment message OPPO,Huawei discussion Rel-16

R2-1912291 Discussion on Cached Data Handling for INACTIVE UE OPPO discussion Rel-16 R3 proposal

To be treated in a parallel session

R2-1912203 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 36.305 15.4.0 0083 - B TEI16

⇨ Endorsed as the current baseline CR

R2-1912205 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 38.305 15.4.0 0013 - B TEI16

⇨ Endorsed as the current baseline CR

R2-1912204 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 36.355 15.5.0 0244 - B TEI16

⇨ Revised in R2-1914184

R2-1914184 Introduction of B1C signal in BDS system in A-GNSS CATT, CAICT, CMCC, China Telecom, China Unicom, Huawei, ZTE Corporation, MediaTek Inc CR Rel-16 36.355 15.5.0 0244 1 B TEI16

More time for offline checking. Will need to be updated against v15.6.0 for the February meeting.

⇨ Endorsed as the current baseline CR

Not Available or withdrawn:

R2-1912122 Bearer type negotiation CATT discussion Rel-16 TEI16 Withdrawn
R2-1912960 Further consideration on EN-DC cell reselection CMCC discussion Rel-16 Revised
R2-1912961 Discussion on support of NR RAN sharing CMCC discussion Rel-16 Revised
R2-1912943 Discussion on the flexible configuration of Maximum Data Rate Enumeration for UP Integrity ProtectionCMCC discussion Rel-16 Revised

6.20.2 RAN2 led TEI16 enhancements - User plane related

R2-1913888 L4S support in 5G Ericsson, Vodafone, Nokia, Nokia Shanghai Bell, Sprint discussion Rel-16 NR_newRAT-Core, TEI16

- LG are not familiar with L4S and wonder if the intention is to introduce flow control. Ericsson think no, and that this just reporting of congestion acc to an IETF mechanism.
- Futurewei think this is a systemwide proposal and think SA2 need to be involved.
- Google wonder why the UE need to get involved, cannot this be done by gNB between Du and CU, and google wonder if this would work for RLC UM. Ericsson think it is better to have the mechanism between UE and DU, and think it is most important that it works for RLC AM.
- Sharp think this should be discussed at RP. Recommend submit a WID.
- Apple are interested in this, but wonder how RLC layer can identify what to do, and think three are options to clarify. Ericsson think the cross layer operation can be done in the core network.
- QC also think this is an end-to-end feature and SA2 need to look at this. Huawei also think this need to be treated in SA2, and think this cannot be done in TEI. Apple agrees this need to start in SA2. LG agrees

- Chair: there seems to be interest. There are many questions, not clear that this can be resolved within the scope of TEI. Many companies think this need first to be addressed in SA2 or at RP.

  ⇒ **noted**

R2-1912844 PDCP Reordering Problems Nokia, Nokia Shanghai Bell, NTT DOCOMO INC. discussion Rel-16 TEI16

- Nokia point out that this problem wasn't in LTE, and can occur whenever a packet may be lost due to procedures.
- Samsung think this is a R3 issue, and think data loss will not happen for AM bearers. Vivo agrees. Apple agrees. QC agrees and think t-reordering will resolve this.
- LG think the problem is not solved by this solution, packets in retransmission may be lost by this proposal.

  ⇒ **Noted**

R2-1912845 Fixed LCP Restrictions Nokia, Ericsson, Fujitsu, Nokia Shanghai Bell discussion Rel-16 TEI16 R2-1802503

- QC think there are no evidence presented, and LCP is performed in a thigh timeline, and think this need further study.
- Futurewei think this may require deep packet inspection at LCP.
- Vivo are interested and think there could be simple solutions, e.g. network indication.
- Apple think this is about application awareness, but think it is difficult to discuss as not many details are provided.
- LG think LCP procedure is flexible enough.
- Fujitsu think e.g. a MAC CE control could be applied and is not complex, and think there are obvious problems, even though evidence is not shown.
- Huawei has doubts and think there are several aspects to look at. Samsung agrees.
- Chair: many concerns, not so much support.

  ⇒ **Noted**

R2-1912222 BSR trigger issue for CA duplication CATT discussion Rel-16 R2-1909123

R2-1913623 BSR operation with CA packet duplication Sequans Communications discussion Rel-16 FS_NR_IIOT R2-1911381
DISCUSSION
- LG think the network will know the situation and can schedule on both legs even if the BSR is sent only one one leg.
- Futurewei think a proper configuration may resolve this.
- ZTE think this only is an issue for CA duplication.
- Nokia think doesn't need to be resolved. Samsung agrees.
- Sequans think this is about two different carriers. CATT think the problem is only for CA duplication.
- Huawei support and think a simple soluton to trigger BSR could be done in TEI
- Chair Not so much support.

⇒ **noted**

R2-1913282 Correction on PRACH re-transmission for SRS carrier switching Huawei, HiSilicon, MediaTek CR Rel-16 38.321 15.7.0 0668 - F TEI16
=> Revised R2-1913956

R2-1913956 Correction on PRACH re-transmission for SRS carrier switching Huawei, HiSilicon, MediaTek CR Rel-16 38.321 15.7.0 0668 1 F TEI16
- LG think UE behaviour is changed, and wonder if this LTE agreement is still valid for NR. Huawei think that PRACH will indeed impact UL transmissions, so the motivation is the same for NR.
- QC agree with the intention, but have some concerns on the TP.

⇒ **There is support to do this**

✉ **[107bis#48][NR TEI16] PRACH re-transmission for SRS carrier switching (Huawei)**
Correction on PRACH re-transmission for SRS carrier switching
Intended outcome: Agreeable CR for next meeting
Deadline: Next Meeting

R2-1913196 cDRX enhancement for CA Ericsson, Qualcomm Inc., Samsung, Verizon, Deutsche Telekom discussion Rel-16 TEI16
DISCUSSION
- ZTE think it was agreed in power saving WI to not do this. CATT agrees and think this was also at the plenary.
- Lenovo see some benefits. Kyocera as well. LG as well, but think this was indeed discussed in Pow saving WI. Oppo as well. IDT support. Intel and Apple support. Xiaomi as well. Google as well.
- QC think the proposal is simple.
- Docomo think we can also have other configurations different.
- MTK think Scell dormancy was the agreement for Rel-16 and think the benefits need to be understood and think this need to be better understood.
- LG support this, but think there are many small things to consider and this cannot be done in TEI, and think the reasons for the design need to be understood.
- ZTE think this can be progress in the power saving WI. CATT agrees, and think if we do something it is important to stick to the very minimum, e.g. limited to FR1, FR2 ..
- Chair: There is significant support. The main concern from some companies is complexity. Can consider whether it is possible to agree on the proposal on the table without discussing other proposals.
- Samsung propose to discuss by email.

⇒ **There is support to do this, but concerns on the complexity, only a very simple and restricted solution may be possible.**

✉ **[107bis#49][NR TEI16] cDRX enhancement for CA (Ericsson)**
Intended outcome: Arrive at an agreeable CR
Deadline: Next Meeting

R2-1912847 MDBV Enforcement Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16
R2-1913723 Open issue of uplink MDBV enforcement Huawei, HiSilicon discussion Rel-16 TEI16
R2-1912522 PDCP security issue Samsung Research America discussion TEI16 R2-1910910
R2-1912523 CR on PDCP security issue Samsung Research America CR Rel-15 38.323 15.6.0 0032 1 F TEI16 R2-1910963
R2-1913845 Integrity verification and PDCP duplication LG Electronics Inc. discussion Rel-16 TEI16 R2-1904728
R2-1913823 Retransmission of an RLC SDU with a poll after discard procedure LG Electronics Inc. discussion Rel-16 TEI16
R2-1913226 CFRA resource handling for BFR upon TAT expiry Nokia, Nokia Shanghai Bell, Apple discussion Rel-16 TEI16
R2-1912221 MAC upgrade for SR dropping in PHY CATT discussion Rel-16 R2-1909122
R2-1913903 Enhancements to PHR in multi-beam operation Qualcomm Inc discussion Rel-16 R2-1911308
R2-1913051 Discussion on the ambiguity in calculation of RA-RNTI ZTE Corporation, Sanechips discussion Rel-16 TEI16
R2-1913082 Enhancement on RACH procedure for SI request ZTE Corporation, Sanechips CR Rel-16 38.321 15.7.0 0666 - B TEI16
R2-1913170 SR_COUNTER initialization due to RRC reconfiguration Fujitsu, LG Electronics Inc. discussion Rel-16 TEI16
R2-1912846 QoS Flow Handling Nokia, Nokia Shanghai Bell discussion Rel-16 TEI16 R2-1909119
R2-1913889 New BSR trigger for EN-DC Ericsson discussion Rel-16 NR_newRAT-Core, TEI16
R2-1913674 Enhancement on BSR format for the one LCG case Huawei, HiSilicon CR Rel-16 38.321 15.7.0 0670 - F TEI16
R2-1913902 Backoff indication in multi-beam operation Qualcomm Inc discussion Rel-16 R2-1911307
R2-1913763 Reduced PDCCH monitoring in CA LG Electronics Inc. discussion Rel-16 TEI16
R2-1913900 Cross cell group wakeup message in MR-DC Qualcomm Inc, Futurewei discussion Rel-16
R2-1912525 Unnecessary deciphering for duplicated PDUs Samsung Research America discussion TEI16 R2-1911022
R2-1912526 CR on unnecessary deciphering for duplicated PDU Samsung Research America CR Rel-15 38.323 15.6.0 0034 1 F TEI16 R2-1911052
R2-1912324 Discussion on the LCP restriction for CA duplication vivo discussion
R2-1913128 Report buffer status with one padding byte Google Inc. CR Rel-16 38.321 15.7.0 0654 1 C NR_newRAT-Core, TEI16 R2-1910358
R2-1913806 ON Duration adaptation LG Electronics Inc., LG Uplus discussion Rel-16 TEI16

LCID extension

R2-1913647 Extended MAC CE ID Qualcomm Incorporated discussion
R2-1913846 Extension of the LCID LG Electronics Inc. discussion Rel-16 TEI16

Not available or Witdrawn

R2-1913893 Cross cell group wakeup message in MR-DC Qualcomm Inc, Futurewei discussion Rel-16 Late
R2-1913895 Backoff indication in multi-beam operation Qualcomm Inc discussion Rel-16 R2-1911307 Late
R2-1913896 Enhancements to PHR in multi-beam operation Qualcomm Inc discussion Rel-16 R2-1911308 Late
R2-1913762 ON Duration adaptation LG Electronics Inc. discussion Rel-16 TEI16 Withdrawn

6.20.3 TEI16 enhancements led by other WGs

Documents submitted to this agenda item will only be treated after a decision on the TEI has been made by another group and an LS informing RAN2 of their decision has been received.

LS in

R2-1912024 LS on NR Rel-16 TEI (R1-1909895; contact: NTT DOCOMO) RAN1 LS in Rel-16 TEI16 To:RANCc:RAN2

Moved here from 6.20

⇒ **Noted**

R2-1912055 LS to RAN2 on mandatory 90 MHz UE channel bandwidth for n41 and n78 in REL-16 (R4-1910605; contact: Vodafone) RAN4 LS in Rel-16 NR_newRAT-Core To:RAN2 Cc:RAN

Moved here from 5.1

⇒ **Noted**

Misc

R2-1912328 Discussion on LS about beamSwitchTiming value of 224 and 336 vivo, Huawei, Hisilicon discussion Rel-16 TEI16

⇒ **Agreed, expect CR next meeting.**

R2-1913231 Support of multiple LTE CRS rate matching patterns Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 15.7.0 1133 1 C TEI16 R2-1909015

- Huawei think the list length should be 6. Nokia think this is just for the non-multi-TRP-case. Nokia think the rest would need to be added when there has been some more progress in eMIMO.
- Intel and Huawei agree with the intention and have detailed comments.

⇒ **postpone**

R2-1913232 Support of multiple LTE CRS rate matching patterns Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.306 15.7.0 0141 1 C TEI16 R2-1909016

⇒ **postpone**

R2-1912653 Inclusion of 90MHz UE Bandwidth Vodafone CR Rel-16 38.306 15.7.0 0171 - C NR_newRAT-Core, TEI16

- Intel think the CR looks good, but wonder if we shold really refer to 38.101. R4 may add bands. Huawei think we can modify the wording.

Offline 45, arrive at agreeable wording, revision in R2-1914203 (VDF)

R2-1914203 Inclusion of 90MHz UE Bandwidth Vodafone CR Rel-16 38.306 15.7.0 0171 1 C NR_newRAT-Core, TEI16

⇒ **agreed in principle**

R2-1913734 Discussion on adding CSI-RS inter-node message Huawei, HiSilicon, China Telecom discussion Rel-16 TEI16

- Huawei indicate that this is based on a R3 agreement. QC think we can anyway wait for R4 to specify requirements as this is useless without those.
- ZTE think we can do this, and wonder why the new field is added instead of add in the existing configuration.

⇒ **Agree to introduce this, need to improve the details**

Offline 46, Provide an agreeable RRC CR in R2-1914204 (CR1350) (Huawei).

R2-1914204 [CR on adding CSI-RS inter-node message] Huawei CR Rel-16 38.331 15.7.0 1350 - F TEI16
- Huawei indicate that there is an expected LS from R3 and companies want more time

✉ **[107bis#50][NR TEI16] Adding CSI-RS information into inter-node msg (Huawei)**
Intended outcome: Agreeable CR to next meeting
Deadline: Next Meeting

Related to RP-191588

R2-1913667 Skipping supportedBandCombinationList of n90 KDDI Corporation CR Rel-16 38.306 15.7.0 0189 - C NR_n41_LTE_41_coex
- Ericsson would like to avoid this kind of optimizations, because if the bands use exacltly the same feature set and they can then refer to same feature set.
- Intel would like to check this.
- Huawei see some gains for this proposal, and think this is in line with R4 agreement
- Nokia also agree that this is acc to R4. QC also support, but think we might need to polish the text. Samsung agrees with QC.
- Docomo don't have a strong opinion but the text need improvement.

Offline 47, agreeable CR revision in R2-1914205 (KDDI)

R2-1914205 Skipping supportedBandCombinationList of n90 KDDI Corporation CR Rel-16 38.306 15.7.0 0189 1 C NR_n41_LTE_41_coex
- Ericsson think this still introduces unfortunate coupling
- Intel agrees, and think we don't need this signalling optimization.
- Docomo agree this is an exception but think it is ok in this case.
- Chair: will revisit this at next meeting.

⇒ **Postpone**

Withdrawn

R2-1912362 Introduction of Multiple LTE-CRS-RateMatchPatterns Ericsson CR Rel-16 38.331 15.7.0 1129 1 B TEI16 R2-1908986 Withdrawn

6.21 On demand SI in connected

On demand SI reception in RRC_CONNECTED may be relevant to several Rel-16 WIs (e.g. V2X, positioning, IIoT, etc). This agenda item is for the discussion of the generic procedure for on demand SI in RRC_CONNECTED; WI specific details of the SI content should be discussed within the appropriate AI for that WI.

Tdoc Limitation: 1 tdoc

Including output of email discussion [107#42][NR/Rel-16] On demand SI in connected (Ericsson)

R2-1913316 Summary of email discussion [107#42][NR-Rel-16] On demand SI in connected Ericsson report Rel-16 TEI16

DISCUSSION
- ZTE don't agree with P1, and think we can request per SI.
- Nokia think we shold keep it simple and only have one option and therefore think per SI may be better.
- Vivo think that for Dedicated mode there is no restrictions and we can be flexible. CATT also think we can use SIB level and think this works also for positioning.
- Huawei think that in the email discussion most companies agreed on SIB level.
- MTK think we can request multiple SIBs and get multiple SIBs in one message regardless, but anyway it is difficult to see what is the benefit. Per SI should be simpler. SI is already grouped logically.
- LG think we can support per SIB, also for positioning.

- Samsung think UE can request per SIB level, no problem. Samsung think we can use the already defined delivery message.
- QC think that for positioning it is not clear that UE need to receive SIBs by unicast. ZTE think he network will deliver per SI.
- Ericsson would like to have the flexibility.
- Apple prefer per SIB.
- Oppo think we should care about overhead, so we should go per SIB.
- Intel think that for request, it doesn't matter so much.
- Huawei think that is the UE has access to CSS and can receive broadcast SIB1 the Rel015 method is ok, but Huawei would not like to transmit the whole SIB1 by unicast to the UE. ZTE think Huawei are proposing an optimization. Vivo agrees with ZTE.
- LG think that we anyway have the legacy mechanism and we can use it without optimization.
- Nokia think that for positioning SI can be delivered by LPP in connected mode and there is no need for this kind of mechanism. Samsung agrees. QC as well. Ericsson think MO LPP is very inefficient. QC think this whole mechanism doesn't work. Samsung share this view.
- Chair wonder what was agreed in the positioning session. Nokia think that SI on request was agreed but the thinking was to deliver the SI by broadcast.

P7

- Ericsson think there is a problem when a Rel-16 UE requests SI from a Rel-15 gNB. Ericsson think the RRC message will be a different one.

⇒ **The on-demand SI request message sent by the UE in RRC_CONNECTED is per SIB. A single message can request multiple SIBs.**

⇒ **<u>For SIBs that need change notification, Rel-15 approach in NR for SI change notification is re-used for on-demand SI request in Rel-16</u>**

⇒ **Upon receiving the on-demand SIB request by the UE, the network responds with an RRCReconfiguration message that includes the requested SIBs (if these are send via dedicated signalling) but no indication about which SIBs are broadcasted.**

⇒ **no mechanism (e.g., prohibit timer) to limit the UE of triggering the on-demand SI procedure too frequently while in RRC_CONNECTED is supported**

⇒ **it is up to network implementation to make sure that the size of a message containing requested SIBs does not exceed the PDCP SDU limitation in NR of 9000 bytes**

⇒ **For now we leave positioning out, it seems unclear whether the above it applicable for positioning, to be ironed out in the positioning session.**

R2-1913317 Running CR on on-demand SI procedure in RRC_CONNECTED Ericsson draftCR Rel-16 38.331 15.7.0 B TEI16
=> Revised in R2-1913945

R2-1913945 Running CR on on-demand SI procedure in RRC_CONNECTED Ericsson draftCR Rel-16 38.331 15.7.0 B TEI16

- Ericsson clarifies that this CR already implements most.

✉ **[107bis#07][NR R16] Running CR On-demand SI in RRC_CONNECTED (Ericsson)**
Intended outcome: Endorsable running CRs for both 38.300 and 38.331, capturing agreements up to now
Deadline: Next Meeting

R2-1913754 SI change indicaiton in RRC_CONNECTED LG Electronics Inc discussion Rel-16

R2-1913042 Further discussion on on-demand SI in RRC_CONNECTED Huawei, HiSilicon discussion Rel-16

R2-1913318 Remaining issues regarding on-demand SI for Positioning Ericsson discussion Rel-16 TEI16
R2-1912202 Open Issues on Broadcast Positioning Procedure CATT discussion Rel-16 NR_pos-Core
R2-1913381 SI Acquisition in Connected Mode Apple discussion Rel-16 TEI16
R2-1913090 Further consideration on On demand SI in RRC_CONNECTED ZTE Corporation, Sanechips discussion Rel-16
R2-1912394 Consideration on the issue of SI update Beijing Xiaomi Mobile Software discussion Rel-16

7 Rel-16 LTE Work Items

Documents in these agenda items will be handled in break out sessions

7.1 Additional MTC enhancements for LTE

(LTE_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-191356)
Time budget: 2.5 TU
Documents in this agenda item will be handled in a break out session
Some sub-items in 7.1 and 7.2 may be treated jointly.

7.1.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

R2-1912002 Reply LS on NAS Aspects of Mobile-terminated Early Data Transmission (C1-195111; contact: Qualcomm) CT1 LS in Rel-16 LTE_eMTC5-Core To:SA2, SA3 Cc:RAN2, RAN3, CT4

- Huawei and LG would like to wait for the response from SA3 regarding the allocation of new 5G-GUTI.

⇒ **Noted**

⇒ **RAN2 will wait for the response from SA3 to decide on whether MT-EDT is supported for 5GC.**

R2-1912010 Reply LS on quality report in Msg3 for LTE-M (R1-1909793; contact: Ericsson) RAN1 LS in Rel-16 LTE_eMTC5-Core To:RAN2 Cc:RAN4

- QC wonders whether configuration for 2-bit or more is implicit from the grant size provided for Msg3. QC assumes the configiration is implcit based on the grant size.
- Ericsson assumes that an explicit indication may still be needed.
- Intel thinks that this is up to RAN2, so there is no need to interpret what RAN1 assumption was regarding this aspect.

⇒ **Need to discuss whether an explicit indication is needed in SIB to indicate if the report is 2-bit or more**

⇒ **Noted**

R2-1912032 Reply LS on LTE-M identification in 5GC (R3-194748; contact: Qualcomm) RAN3 LS in Rel-16 5G_CIoT To:SA2, RAN, RAN2 Cc:SA3

⇒ **Noted**

R2-1912045 LS on signalling measurement thresholds for validating the TA for PUR (R4-1910176; contact: Ericsson) RAN4 LS in Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core To:RAN2 Cc:RAN1

- LG wonders if the values, would be fixed. QC does not think so.

⇒ **Noted**

R2-1912058 Reply LS on Reply LS on Mobile-terminated Early Data Transmission (S3-193059; contact: Nokia) SA3 LS in Rel-16 LTE_eMTC5-Core To:SA2, RAN2, RAN3, CT1

- QC wonders whether the LS is intended for EPS.

⇒ **RAN2 assumes that the LS is intended for EPS.**

⇒ **Noted**

R2-1912414 Running CR for 36.304 -Rel-16 eMTC Enhancements Nokia, Nokia Shanghai Bell discussion Rel-16 Late

⇒ **This will be discussed as part of the discussion in the related AI.**

[CB Offline #304] To update the wording based on the feedback from companies (Nokia) The outcome can be provided in R2-1914042

R2-1914042 Running CR for 36.304 -Rel-16 eMTC Enhancements Nokia, Nokia Shanghai Bell

⇒ **FFS if it is "may/shall" to be used in the following text "If cell selection criteria S in normal coverage is fulfilled for a cell, but SIB1 cannot be acquired in the cell UE may/shall acquire SIB1-BR and consider itself to be in enhanced coverage."**

⇒ **Noted**

✉ **[107bis#27][eMTC R16] 36.304 running CR (Nokia)**
Update 36.304 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1914046
Deadline: 2 weeks
=> Endorsed in R2-1914050

R2-1912864 Introduction of Rel-16 eMTC enhancements Intel Corporation CR Rel-16 36.300 15.7.0 1251 - B LTE_eMTC5-Core

✉ **[107bis#25][eMTC R16] 36.300 running CR (Intel)**
Update 36.300 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1914036
Deadline: 2 weeks
=> Endorsed in R2-1914036

R2-1913100 Introduction of additional enhancements for eMTC Qualcomm Incorporated draftCR Rel-16 LTE_eMTC5-Core

✉ **[107bis#26][eMTC R16] 38.300 running CR (Qualcomm)**
Update 38.300 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1914037
Deadline: 2 weeks
=> Endorsed in R2-1914037

R2-1913601 Introduction of Rel-16 eMTC enhancements Qualcomm Incorporated draftCR Rel-16 36.331 15.7.0 B LTE_eMTC5-Core R2-1911607 Late

✉ **[107bis#29][eMTC R16] 36.331 running CR (Qualcomm)**
Update 36.331 running CR with agreements from this meeting
Intended outcome: endorsed running CR in R2-1914038
Deadline: 2 weeks

=> Endorsed in R2-1914038

R2-1913602 Addressing Editor's Notes and FFSes in RRC running CR Qualcomm Incorporated discussion
Rel-16 LTE_eMTC5-Core Late

Proposal 1. No need to capture procedure to indicate absence of up-CIoT-5GS-Optimisation/ cp-CIoT-5GS-Optimisation to upper layers. Also applicable for NB-IoT CR.

⇒ **For both eMTC and NB-IoT, there is no need to capture procedure to indicate absence of up-CIoT-5GS-Optimisation/ cp-CIoT-5GS-Optimisation to upper layers.**

Proposal 2. For initiating transmission using PUR, the size of the resulting MAC PDU including the total UL data is expected to be smaller than or equal to the TBS configured for PUR.

⇒ **This will be discussed as part of the offline discussion on PUR**

Proposal 3. For initiating transmission using PUR, the interaction with NAS is up to UE implementation. It is up to UE implementation how the UE determines whether the establishment or resumption request and UL data is suitable for transmission using PUR. Capture as NOTEs in 5.3.3.1c.

⇒ **This will be discussed as part of the offline discussion on PUR**

Proposal 4. resumeID is set to the stored resumeIdentity when sending the RRCConnectionResumeRequest message via PUR.
Proposal 5. UE sending RRCConnectionResumeRequest using PUR performs the actions of restoring the PDCP state, re-establish PDCP entities etc. (i.e. steps in 5.3.3.3a for UP-EDT) before submitting the RRCConnectionResumeRequest message to lower layers for transmission.
Proposal 6. UE receiving RRCConnectionResume in response to an RRCConnectionResumeRequest sent using PUR does not perform the actions of restoring the PDCP state, re-establish PDCP entities etc. (i.e. same as steps in 5.3.3.4a for UP-EDT).

⇒ **The proposals above will be discussed as part of the offline discussion on PUR.**

Proposal 7. Confirm RAN2#106 Working Agreement and remove Editor's Note related to crs-ChEstMPDCCH-ConfigDedicated.

Proposal 8. The reference in numDRX-CyclesRelaxed field description is TS 36.213/TS 36.133.

⇒ **The reference in *numDRX-CyclesRelaxed* field description is TS 36.133.**

Proposal 9. Change the capability field ce-RRC-INACTIVE-Short-eDRX to ce-RRC-INACTIVE. Move to 'Other Parameters'. Confirm whether the capability can indicate "short eDRX upto XXs is supported". Update field description to "This field indicates whether UE operating in CE mode supports RRC_INACTIVE when connected to 5GC. Only short eDRX cycles up to XX are applicable for UEs in CE when connected to 5GC."
Proposal 10. Keep earlyData-UP-5GC-r16 in MAC-Parameters-v16xy.
Proposal 11. Capture "optionally followed by uplink data transmission(s)" in MT-EDT definition.
Proposal 12. Include total four candidate values in establishmentCause-r16 including spares.

⇒ **Four candidate values are defined for *establishmentCause-r16* including spares.**

Proposal 13. Discuss whether and how to differentiate CP/UP PUR.
Proposal 14. RAN2 to discuss and resolve: <<FFS (SIB/dedicated)>> includes pur-Enabled; FFS: whether per CE level or per CE mode configurability is needed for mpdcch-CQI-Reporting-r16.

Other email discussions for running CRs until next meeting

✉ **[107bis#28][eMTC R16] 36.321 running CR (Ericsson)**

Update 36.321 running CR with agreements
Intended outcome: endorsed running CR in R2-1914047
Deadline: 2 weeks
=> Endorsed in R2-1914047

7.1.2 Mobile-terminated (MT) early data transmission (EDT)

MT Early Data transmission for MTC and NB-IoT is treated jointly under this AI.

R2-1912606 Discussion on MT-EDT Msg4 based option Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: Do not pursue the MSG4 based solution.

Proposal 2: Send a LS to plenary and other WGs to indicate that RAN2 has not found satisfactory solution for MT-EDT and that the objective should be removed from the WIDs.

- QC do not agree with both proposals, but prefers a simple solution for Msg-4 based MT-EDT. Intel agrees with QC.
- Gemalto and Sequans support the proposals.
- Ericsson does not support the proposal and thinks this has already been postponed from Rel-15, and now it is time to conclude the discussion. ZTE agrees.
- LG does not support the proposals.
- Vivo has the same view with QC and Intel.

⇒ **Noted.**

R2-1912607 [DRAFT] LS on Mobile-terminated Early Data Transmission Huawei LS out Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core To:RAN, SA2, SA3, RAN3, CT1, CT4

R2-1913112 Remaining issues in Msg4-based MT EDT Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

Proposal 1 Legacy (i.e., non-EDT) Msg1 and Msg2 are used in MT UP-EDT solution.

⇒ **Non-EDT Msg1 and Msg2 are used in MT UP-EDT solution.**

Proposal 2 Define a new resume cause ‘MT UP-EDT’ in RRCConnectionResumeRequest to distinguish from other resume cases.

⇒ **Introduce a new resume cause for MT UP-EDT in RRCConnectionResumeRequest.**

Proposal 3 When UE is paged for MT-EDT data and NCC value was provided during previous suspend, UE shall restore context, reactivate security, resume bearers, and derive AS keys before Msg3 transmission.

⇒ **Same as in MO-EDT; MT UP-EDT can be initiated only if NCC was provided in the previous connection.**

Proposal 4 RRCConnectionResumeRequest and RRCConnectionResume or RRCConnectionRelease are used in Msg3 and Msg4 for MT UP-EDT, respectively.

⇒ **Same as in MO-EDT; RRCConnectionResumeRequest and RRCConnectionResume or RRCConnectionRelease are used in Msg3 and Msg4 for MT UP-EDT, respectively**

Proposal 5 For UP solution, DL data in Msg4 in MT UP-EDT can be segmented. It is up to the network.

⇒ **Same as in MO-EDT; DL data in Msg4 in MT UP-EDT can be segmented.**

Proposal 6 UL reply to MT EDT data in Msg4 is multiplexed with RRCConnectionResumeComplete.

- Huawei this should be a “may”.

⇒ **UL data can be multiplexed with RRCConnectionResumeComplete.**

Proposal 7 In case of UL reply, the eNB can indicate in Msg4 that the UE can move to RRC_IDLE after receiving a HARQ ACK in response to the transmission that carries the UL response.

Proposal 8 If Proposal 7 is agreed, NCC value in RRCConnectionResume is used by the UE and the message is extended with resumeID.

Proposal 9 For MT CP-EDT, UE transmits Rel-15 EDT preamble and the eNB provides an EDT UL grant in Msg2.

⇒ **For MT CP-EDT, UE transmits Rel-15 EDT preamble and the EDT UL grant is provided in Msg2.**

Proposal 10 RRCEarlyDataRequest is used in Msg3 for MT CP-EDT.

⇒ **Same as MO-EDT; RRCEarlyDataRequest is used in Msg3 for MT CP-EDT.**

⇒ **Add the MT-Data establishment cause to RRCEarlyDataRequest message for MT CP-EDT.**

Proposal 11 For MT CP-EDT, confirm the WA that no new TBS for Msg3 is introduced.

⇒ **For MT CP-EDT, confirm the WA that no new TBS for Msg3 is introduced.**

Proposal 12 For CP solution, in case of UL response is expected RRCConnectionSetup is used in Msg4. In case of no UL response, RRCEarlyDataComplete is used in Msg4.

⇒ **Same as in MO-EDT; RRCConnectionSetup or RRCEarlyDataComplete can be transmitted in Msg4 for MT CP-EDT.**

Proposal 13 If Proposal 12 is agreed, RRCConnectionSetup is extended with dedicatedInfoNAS.

⇒ **For MT CP-EDT, RRCConnectionSetup is extended to optionally include dedicatedInfoNAS.**

Proposal 14 For CP solution, in case of UL response not followed by any further transmission, the eNB can indicate in Msg4 that the UE can move to RRC_IDLE after receiving HARQ ACK in response to transmission in the UL that carries the UL response without a need for release message.

R2-1912856 Remaining issues in MT EDT for UP solution Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1912904 Some remaining issues for Msg4-based MT-EDT ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1912857 Remaining issues in Msg4-based Control Plane solution for MT EDT Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1913679 DL data delivery for Msg4 fallback case LG Electronics UK discussion Rel-16

R2-1913680 Draft LS on MT data delivery in MT EDT LG Electronics UK LS out Rel-16 NB_IOTenh2-Core, LTE_eMTC4-Core To:SA2 Cc:CT1, RAN3

R2-1912413 Further analysis of Msg4 based MT EDT Nokia, Nokia Shanghai Bell discussion Rel-16 Late

Agreements

- Non-EDT Msg1 and Msg2 are used in MT UP-EDT solution.
- Introduce a new resume cause for MT UP-EDT in *RRCConnectionResumeRequest*.
- Same as in MO-EDT; MT UP-EDT can be initiated only if NCC was provided in the previous connection.
- Same as in MO-EDT; *RRCConnectionResumeRequest* and *RRCConnectionResume* or *RRCConnectionRelease* are used in Msg3 and Msg4 for MT UP-EDT, respectively
- Same as in MO-EDT; DL data in Msg4 in MT UP-EDT can be segmented.
- UL data can be multiplexed with *RRCConnectionResumeComplete*.
- For MT CP-EDT, UE transmits Rel-15 EDT preamble and the EDT UL grant is provided in Msg2.
- Same as MO-EDT; *RRCEarlyDataRequest* is used in Msg3 for MT CP-EDT.
- Add the MT-Data establishment cause to *RRCEarlyDataRequest* message for MT CP-EDT.
- For MT CP-EDT, confirm the WA that no new TBS for Msg3 is introduced.
- Same as in MO-EDT; *RRCConnectionSetup* or *RRCEarlyDataComplete* can be transmitted in Msg4 for MT CP-EDT.
- For MT CP-EDT, *RRCConnectionSetup* is extended to optionally include *dedicatedInfoNAS*.

7.1.3 UE-group wake-up signal (WUS)

UE-group wake-up signal (WUS) for MTC is treated jointly with NB-IoT under AI 7.2.3. Do not use this AI for any item that can be discussed jointly.

7.1.4 Transmission in preconfigured resources

Transmission in preconfigured resources for MTC is treated jointly with NB-IoT under AI 7.2.4. Do not use this AI for any item that can be discussed jointly.

7.1.5 Scheduling multiple DL/UL transport blocks

Scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast
Scheduling multiple DL/UL transport blocks for MTC and NB-IoT is treated jointly under this AI.

R2-1912612 DRX timers in multiple TBs scheduling of NB-IoT Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

- Ericsson wonders what would be different for eMTC and whether there is anything missing in RAN1 agreements.

⇒ **The discussion below is for the case where HARQ bundling is not configured.**

Proposal 1: Wait for RAN1 to conclude before discussing RAN2 impacts of supporting multiple TBs scheduling with HARQ bundling in NB-IoT.

Proposal 2: In multiple TBs scheduling in NB-IoT, drx-InactivityTimer is only (re-)started when the (UL) HARQ RTT Timer expires.

- Intel wonders why there is a need for change.
- ASUSTek wonders about the single TB case.

⇒ **For NB-IoT when multiple TBs are scheduled, drx-InactivityTimer is only (re-)started when both (UL) HARQ RTT Timers expire.**

Proposal 3: In multiple TBs scheduling in NB-IoT, drx-InactivityTimer is stopped when a scheduling is received.

- Sequans would like to have a working assumption.
- Ericsson supports the proposal.

- QC wonders why we need such behaviour for the multiple TB case. Huawei explains that the behaviour similar when one considers the reception of DCI for multiple TBs.

⇒ **For NB-IoT, drx-InactivityTimer is stopped when NPDCCH indication for transmission of multiple TBs is received.**

Proposal 4: (UL) HARQ RTT timers for both HARQ processes are started in the subframe containing the last repetition of the (PUSCH transmission) PDSCH reception of the last TB.

- AsusTek wonders if it is possible to start single HARQ RTT timer.
-

⇒ **For NB-IoT, (UL) HARQ RTT timers for both HARQ processes are started in the subframe containing the last repetition of the (PUSCH transmission) PDSCH reception of the last TB.**

Proposal 5: Timer length of HARQ RTT timer is set to k+2*N+1+delta.

- DoCoMo wonders about the delta, i.e. should it be called deltaPDCCH or somethingelse?, and where delta is supposed to start.

⇒ **Working assumption: For NB-IoT, the length of HARQ RTT timer is set to k+2*N+1+delta.**

⇒ **FFS if delta is deltaPDCCH**

Proposal 6: Timer length of UL HARQ RTT timer is set to 1+delta.

- Ericsson wonders if it should be 3+delta. Huawei thinks this is the case in legacy, but this would then be for the single HARQ process. But since there are 2 TBs, one needs to consider only the switching time, i.e. 1 msec.

⇒ **Working assumption: For NB-IoT, the length of UL HARQ RTT timer is set to 1+delta**

⇒ **FFS if delta is deltaPDCCH**

R2-1913113 Scheduling enhancements for LTE-MTC and NB-IoT Ericsson discussion
NB_IOTenh3-Core, LTE_eMTC5-Core

⇒ **The discussion below is for the case where HARQ bundling is not configured.**

Proposal 1 For multi-TB scheduling, when HARQ ack bundling is not configured, HARQ RTT timer is not started until the last TB of the corresponding HARQ process has been received for both LTE-M and NB-IoT.

⇒ **For eMTC, (UL) HARQ RTT timers for all scheduled HARQ processes are started in the subframe containing the last repetition of the (PUSCH transmission) PDSCH reception of the last TB.**

Proposal 2 For multi-TB scheduling in LTE-M, the drx-InactivityTimer value is dynamically adjusted based on the number of TBs being scheduled by the DCI.

- AsusTek thinks the second solution discussed in the contribution, i.e., start the *drx-InactivityTimer* when all PDSCH transmissions have been received or all PUSCH transmissions have been sent, seems to be a better solution. Ericsson thinks it is possible, but it would be difficult to configure the timer with a value.
- Intel thinks it would still work with no change with respect to legacy. QC wonders if early termination works in such case. Intel confirms that there was an agreement so that when

early termination is configured, the UE is required to monitor. AsusTek supports the proposal.

- Ericsson wonders if it wouldn't work if the timer is dynamically adjusted.
-

Proposal 3 RAN2 to clarify the interaction and behaviour between scheduling gaps and DRX timers.

Proposal 4 Scheduling gaps for LTE-M multicast multi-TB transmissions are configured in SC-MCCH.

- QC wonders whether RAN1 had some progress on multiple TBs for multicast transnmission. Ericsson explains that there was some progress.

Proposal 5 If configurable, scheduling gaps for NB-IoT multicast multi-TB transmissions are configured in SC-MCCH.

Proposal 6 RAN2 adopts the text proposal in section 3 to update TS 36.331.

R2-1913774	Buffer status indicated by BSR in multi-TB scheduling	ASUSTeK	discussion	Rel-16 LTE_eMTC5-Core
R2-1913773	DRX timer operation in multi-TB scheduling	ASUSTeK	discussion	Rel-16 LTE_eMTC5-Core
R2-1912613	DRX timers in multiple TBs scheduling of eMTC	Huawei, HiSilicon	discussion	Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core Withdrawn

Agreements

- For NB-IoT, when multiple TBs are scheduled, *drx-InactivityTimer* is only (re-)started when both (UL) HARQ RTT Timers expire.
- For NB-IoT, *drx-InactivityTimer* is stopped when NPDCCH indication for transmission of multiple TBs is received.
- For NB-IoT, (UL) HARQ RTT timers for both HARQ processes are started in the subframe containing the last repetition of the (PUSCH transmission) PDSCH reception of the last TB.
- Working assumption: For NB-IoT, the length of HARQ RTT timer is set to k+2*N+1+delta. FFS if delta is deltaPDCCH
- Working assumption: For NB-IoT, the length of UL HARQ RTT timer is set to 1+delta FFS if delta is deltaPDCCH
- For eMTC, (UL) HARQ RTT timers for all scheduled HARQ processes are started in the subframe containing the last repetition of the (PUSCH transmission) PDSCH reception of the last TB.

7.1.6 Quality report in Msg3

R2-1913570	Remaining issues of DL quality report	Huawei, HiSilicon	discussion	Rel-16 LTE_eMTC4-Core

Proposal1: One common MAC CE is used for both the DL quality report in Msg3 and the DL quality report in connected mode

- Ericsson supports the proposal.
- QC wonders what "common MAC CE" means. Ericsson thinks same MAC CE should be used. Intel thinks this means there is no need to specify a different MAC CE for reporting in connected mode.
- Intel assumes 2 LCIDs will be used in Msg3, one for the data and one for the report. QC has a different understanding, i.e. one LCID would be enough. Ericsson explains that this

was dicussed before and the conclusion was that different LCID values would be used for Msg3.

⇒ **For 8-bit DL quality report, same MAC CE is used for reporting in Msg3 and connected mode.**

⇒ **For 8-bit DL quality report; LCID value for the quality report is transmitted in addition to the LCID value for UL-CCCH.**

Proposal2: Confirm that the codepoint/index of "10001" is used for MAC CE based quality report for eMTC.

⇒ **Codepoint/index of "10001" is used for 8-bit DL quality report for eMTC.**

Proposal3: For EDT case, the MAC CE of DL quality report has lower priority than MO data.

- Ericsson thinks the report should have higher priortiy in this case since UE can choose a larger TBS.
- Intel would like to have the same priorty for both EDT and non-EDT case.
- QC thinks it would not be good if the UE falls back to legacy due to the report. Huawei agrees.
-

⇒ **For EDT, 8-bit DL quality report has lower priority than MO data from UL-CCCH.**

- QC thinks it would be better to have higher priority for the non-EDT case.

Proposal4a: In the LCP procedure except for the EDT case, MAC CE of DL quality report has higher priority than the data not from UL-CCCH, but has lower priority than the data from UL-CCCH.

⇒ **For non-EDT, 8 bit DL quality report has higher priority than MO data not from UL-CCCH, i.e., one level above "data from any Logical Channel, except data from UL-CCCH"**

Proposal4b: In the LCP procedure list of relative priorities the MAC CE of DL quality report for the non-EDT case is inserted directly above (higher priority) data from any Logical Channel, except data from UL-CCCH, and for the EDT case just below.

Proposal5: R+F2+E or F2+E in MAC subheader is used for 2-bit DL quality report for non-EDT case.

- QC thinks it is not a good idea to use the "E" bit considering future extension. Intel agrees in principle. ZTE agrees.
-

⇒ **For non-EDT, R+F2+E MAC subheader is used for 2-bit DL quality report.**

- Ericsson suggests to have an indication in SIB to enable the 2-bit DL quality report.

⇒ **2 separate indicators are introduced in SIB to enable 8-bit and 2-bit DL quality report, i.e., FFS if it is possible to indicate 2-bit only.**

R2-1913413	Quality Report in eMTC Remaining Issues	Ericsson	discussion	Rel-16
R2-1913414	Text Proposal for MAC specification on Quality Report	Ericsson	discussion	Rel-16
R2-1913102	TP for downlink channel quality reporting in MSG3 for eMTC	Qualcomm Incorporated	discussion	Rel-16 LTE_eMTC5-Core
R2-1912859	Remaning issues in DL Quality report	Intel Corporation	discussion	Rel-16 LTE_eMTC5-Core

R2-1912906 Remaining issues for DL quality report for eMTC ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core

Agreements

- For 8-bit DL quality report, same MAC CE is used for reporting in Msg3 and connected mode.
- For 8-bit DL quality report; LCID value for the quality report is transmitted in addition to the LCID value for UL-CCCH.
- Codepoint/index of “10001” is used for 8-bit DL quality report for eMTC.
- For EDT, 8-bit DL quality report has lower priority than MO data from UL-CCCH.
- For non-EDT, 8-bit DL quality report has higher priority than MO data not from UL-CCCH, i.e., one level above “data from any Logical Channel, except data from UL-CCCH”
- For non-EDT, R+F2+E MAC subheader is used for 2-bit DL quality report.
- 2 separate indicators are introduced in SIB to enable 8-bit and 2-bit DL quality report, i.e., FFS if it is possible to indicate 2-bit only.

7.1.7 MPDCCH performance improvement using CRS

R2-1913114 MPDCCH performance improvement for LTE-M Ericsson discussion LTE_eMTC5-Core

Proposal 1 When configuration in idle mode is not broadcasted, UE shall consider the feature disabled.

- QC wonders whether this would also be valid for the connected mode.
- Huawei prefers to have separate signalling to configure the feature for UEs in idle and connected mode.
- Ericsson assumes this is either enabled in the cell, which would then apply to UEs both in idle and connected mode.
- QC thinks if is it is found out that the feature does not work well, it should be possible to turn it off on separate basis.
-

⇒ **UE shall consider the feature disabled in idle mode when configuration in idle mode is not broadcasted.**

Proposal 2 Confirm the working assumption for the broadcasted configuration to be valid for connected mode if there is no dedicated configuration.

- Ericsson thinks in RAN1 it has been agreed that if configured in idle, it is also valid for the connected mode unless it is configured explicitly.
- Huawei thinks HO should also be considered whick would mean that the corresponding SIB should be provided/acquired.
- QC wonders how many bits would be needed for the signalling so that it is possible to know whether the signalling optimization is worth.

Proposal 3 The dedicated configuration is released when UE is released/suspended and when cell is changed.

⇒ **The dedicated configuration is released when UE is released to idle mode. FFS when UE is suspended.**

Proposal 4 Add CRS-ChEstMPDCCH-Config-r16 in SystemInformationBlockType2-BR.

⇒ **This was already captured in the related running CR.**

Proposal 5 When transmitted in SIB2, CRS-ChEstMPDCCH-Config shall contain both powerOffset to be applied to IDLE and CONNECTED mode and the CRS configuration to be applied at least to IDLE mode.

Proposal 6 When transmitted in RadioResourceConfigDedicated, CRS-ChEstMPDCCH-Config shall contain only the CRS configuration to be applied only for CONNECTED mode.

R2-1913571 MPDCCH performance improvement using CRS Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core R2-1910064

Agreements

- UE shall consider the feature disabled in idle mode when configuration in idle mode is not broadcasted.
- The dedicated configuration is released when UE is released to idle mode. FFS when UE is suspended.

7.1.8 Improvements for non-BL UEs

CE mode A and B improvements for non-BL UEs among "enhancements to idle mode mobility", "UE demodulation performance requirements for 2 RX antennas and full duplex FDD", "Dual layer DL reception", "Feedback based on CSI-RS", "ETWS/CMAS in connected mode"

R2-1913115 ETWS/CMAS notification delivery in connected mode for non-BL UEs in CE Ericsson discussion LTE_eMTC5-Core

Proposal 1 It is up to the network to send the ETWS/CMAS indication(s) when UEs configured with DRX are in Active time.

Proposal 2 Non-BL UEs in RRC_CONNECTED are not required to follow any specific time occasions or cycles in order to monitor ETWS/CMAS indication.

- Huawei wonders if the intention is to say that UE continues to monitor as in legacy. Ericsson confirms.
- LG supports the proposals.

⇒ **Non-BL UE supporting ETWS/CMAS in CE mode is required to monitor the same subframes as in legacy, i.e. non-BL UEs in CE, to receive ETWS/CMAS notification when in connected mode.**

Proposal 3 Non-BL UEs in CE Mode B are not required to acquire ETWS notification.

- LG wonders if it is OK not to support the notification for UEs in CE Mode B.
- DoCoMo has concerns regarding non-BL UEs in CE Mode B not being required to acquire ETWS notification.

R2-1913103 Open issues and TP for ETWS/CMAS support by non-BL UE Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core

Proposal 1: For UE in CE introduce capability for support of ETWS/CMAS indication reception in RRC CONNECTED by UE supporting CE Mode A.

- LG thinks there is no need to introduce separate capability bit. QC thinks this would be good for testing.
- Ericsson supports both Proposals 1 and 2.

⇒ **Introduce capability for support of ETWS/CMAS indication reception in RRC CONNECTED by UE supporting CE Mode A.**

Proposal 2: For UE in CE introduce capability for support of ETWS/CMAS indication reception in RRC CONNECTED by UE supporting CE Mode B.

⇒ **Introduce capability for support of ETWS/CMAS indication reception in RRC CONNECTED by UE supporting CE Mode B.**

Proposal 3: For UE in CE introduce indication in dedicated signaling whether network supports delivery of ETWS/CMAS indication on the control channel associated with the shared data channel.

⇒ **Introduce in dedicated signalling an indication whether ETWS/CMAS notification is enabled for UE in connected mode.**

Proposal 4: Capture the proposed changes in the eMTC running CRs to TS 36.331 and TS 36.306.

R2-1912858 After the acquisition of ETWS/CMAS by non-BL UEs in connected mode Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1913572 Enhancements to idle mode mobility for non-BL UEs Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core

Proposal1: Non-BL UEs with S criterion in normal coverage fulfilled are allowed to (may) camp in coverage enhancement mode.

- QC thinks this would make it more complex for the UE since the UE would need to make sure that it has up to date system information for both normal and enhanced coverage. QC also states that it does not seem this will be beneficial from power saving standpoint. Ericsson agrees and explains that it would increase the load in the network from signalling standpoint.
- Intel thinks the network may anyway need to assume if the UE is in enhanced coverage so it should not matter. Intel supports the proposal.
- Huawei confirms that this, i.e. need to acquire both SIBs, would be more complicated for the UEs.
- Apple wonders about the power that can be saved with such behaviour, i.e., if it is up to the UE to decide in what mode to camp. QC thinks the supporting companies should show if there is any gain by such behaviour.
- Ericsson thinks it would be good to see the gain if this is beneficial.
- ZTE would like to have network control, e.g., bit in SIB to enable, if agreed.

Proposal2: Non-BL UEs can report their preference of camping on CE mode even when S criterion in normal coverage is fulfilled.

- Apple wonders how this would work.

Proposal 3: There should be no requirement for UE to operate in either NC mode or CE mode in IDLE mode after cell selection, but if the UE reports a preference for camping in CE mode then it must behave according to the indicated preference (i.e. be required to camp in CE mode).
Proposal 4: RAN2 confirms that UE can acquire both versions of SIB, after cell selection, in order to achieve the switching between NC mode and CE mode without re-acquiring the SIB in IDLE mode.

R2-1912908 Remaining issue of non-BL UE enhancement ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core

R2-1913116 S-Criterion interpretation for non-BL UEs Ericsson discussion LTE_eMTC5-Core

R2-1912867 Non-BL UE in normal and enhanced coverage Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1913101 Outstanding issues and TP for ETWS/CMAS support by non-BL UE Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core Withdrawn

Agreements

- Non-BL UE supporting ETWS/CMAS in CE mode is required to monitor the same subframes as in legacy, i.e. non-BL UEs in CE, to receive ETWS/CMAS notification when in connected mode.
- Introduce capability for support of ETWS/CMAS indication reception in RRC CONNECTED by UE supporting CE Mode A.
- Introduce capability for support of ETWS/CMAS indication reception in RRC CONNECTED by UE supporting CE Mode B.
- Introduce in dedicated signaling an indication whether ETWS/CMAS notification is enabled for UE in connected mode.

7.1.9 Stand-alone deployment

Enable the use of LTE control channel region for DL transmission (MPDCCH/PDSCH) to BL/CE UEs

R2-1912863 Non-BL UE operation in standalone deployment Intel Corporation discussion Rel-16 LTE_eMTC5-Core R2-1909551

R2-1913117 Cell Reselection improvement for LTE-M Standalone cells Ericsson discussion LTE_eMTC5-Core

7.1.10 Mobility Enhancements

Improving the DL RSRP and, RSRQ measurement accuracy, through use of RSS, relaxation of RRM measurements for serving cell for UEs using WUS for at least low mobility UEs

R2-1913573 Use of RSS for measurement improvements Huawei, HiSilicon discussion Rel-16 LTE_eMTC4-Core

R2-1913408 Use case and Signaling for RSS Ericsson discussion Rel-16

R2-1913418 RSS Signalling Configuration Ericsson discussion Rel-16

7.1.11 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of MTC with NR

7.1.12 Connection to 5GC

7.1.12.1 Support of eDRX in CM-IDLE and EDT

Support of extended DRX in CM-IDLE
Support of EDT for Data over NAS and UP solution (if concluded to be supported based on outcome of LS exchange with SA2)
Support of eDRX in CM-IDLE and EDT for MTC and NB-IoT are treated jointly under this AI.

R2-1912614 Remaining issues to support user plane optimisations for eMTC and NB-IoT connected to 5GC Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: For NB-IoT and eMTC, adopt early security activation, same as for RRC_INACTIVE, when connected to 5GC.

For NB-IoT and eMTC connected to 5GC;

⇒ **NCC is always provided during suspension.**

⇒ **adopt early security activation for resumption from RRC_IDLE.**

Proposal 2: For eMTC connected to 5GC, adopt I-RNTI as UE identity for UP CIoT 5GS Optimisation and RRC_INACTIVE.

- Ericsson thinks it would be better to use resumeID for for UP CIoT 5GS Optimisation instead. ZTE agrees and thinks that changes will be required in the specifications.
- QC thinks this does not bring any complexity to the specifications.
- Huawei thinks this would require to use the last spare bit in Msg3 which is not justified. Intel agrees and wonders if it is possible to use the last spare bit.
- LG wonders why spare bit is needed in case resumeID is used.
- QC does not see the benefit of using the spare bit for such indication.
- Ericsson explains that indication would help the eNB to identify when Msg3 is received.
- T-Mobile does not see the benefit clearly for either way.

⇒ **RAN2 intends to have the same UE identity, i.e. I-RNTI or resumeID, for UP CIoT 5GS Optimisation for both eMTC and NB-IoT.**

[CB Offline discussion #301] To decide whether I-RNTI is adopted as UE Identity for UP CIoT 5GS Optimisation and RRC_INACTIVE (LG)
The outcome can be provided in R2-1914039.

R2-1914039 Report of offline #301: Discussion on whether I-RNTI is adopted for UP CIoT 5GS LG

If I-RNTI is adopted,
Proposal 1: For NB-IOT and eMTC connected to 5GC, adopt I-RNTI as UE identity for UP CIoT 5GS Optimisation.
Proposal 2: For eMTC connected to 5GC, adopt Rel-15 critical extension version of RRCConnectionResumeRequest for UP CIoT 5GS optimisation, including the I-RNTI, shortResumeMAC-I, and resumeCause.
Proposal 3: For NB-IoT connected to 5GC, define a new critical version of RRCConnectionResumeRequest-NB message for UP CIoT 5GS optimisation, including the I-RNTI, shortResumeMAC-I, resumeCause, and cqi-NPDCCH.

If resumeID is adopted,
Proposal 4. : For NB-IOT and eMTC connected to 5GC, adopt resumeID as UE identity for UP CIoT 5GS Optimisation.
Proposal 5: For eMTC connected to 5GC, define a new Rel-16 non-critical extension version of RRCConnectionResumeRequest for UP CIoT 5GS optimisation, including the I-RNTI, shortResumeMAC-I, resumeCause and the indication (i.e., EPC or 5GC).
Proposal 6: For NB-IoT connected to 5GC, define a new critical version of RRCConnectionResumeRequest-NB message for UP CIoT 5GS optimisation, including the I-RNTI, shortResumeMAC-I, resumeCause, cqi-NPDCCH and the indication (i.e., EPC or 5GC).

- ZTE thinks RAN3 may also need to be involved for this discussion. QC thinks this was already considered and concluded that it is up to RAN2, but there may be impacts to RAN3 specifications.
- Intel wonders whether additional indication is needed if resumeID is used. Intel thinks the indication is needed. ZTE is not sure and thinks this depends on how X2 and Xn selected.
- LG suggests asking RAN3 whether the indication would be needed.
- Ericsson thinks the indication is not necessarily needed, but prefers to have the indication. Huawei thinks this would not be so efficient since it has to be done with trial and error.
- T-Mobile does not see any benefit for using the indication.
- Huawei thinks if resumeID is used flexibility to code eNB ID will be lost.
-

✉ **[107bis#65][eMTC R16] UE identifier pros and cons (LG)**
To define the problem and compose a list of pros and cons for each UE identifier
Intended outcome: report from the email discussion in R2-1914048
Deadline: Next meeting

Proposal 3: For eMTC connected to 5GC, adopt R15 introduced critical extension version of RRCConnectionResumeRequest for UP CIoT 5GS optimisation, including the I-RNTI, shortResumeMAC-I, and resumeCause.

Proposal 4: For NB-IoT connected to 5GC, adopt I-RNTI as UE identity for UP CIoT 5GS Optimisation.

Proposal 5: For NB-IoT connected to 5GC, create a critical version of RRCConnectionResumeRequest-NB message for UP CIoT 5GS optimisation, including the I-RNTI, shortResumeMAC-I, resumeCause (same causes as agreed for RRCConnectionRequest-NB in 5GC), and cqi-NPDCCH.

Proposal 6: For NB-IoT and eMTC, full configuration in RRCConnectionResume(-NB) is supported when connected to 5GC.

⇒ **For NB-IoT and eMTC connected to 5GC, full configuration in RRCConnectionResume(-NB) is supported.**

Proposal 7: For NB-IoT and eMTC connected to 5GC, introduce a new IE up-CIOT-5GS-OptimisationConfig-r16 in RRCConnectionRelease including the full I-RNTI and nextHopChainingCount for UP CIoT 5GS optimisation.

Proposal 8: The EPS UP-EDT procedure is reused, the changes described in section 2.1.1 apply for UP-EDT when connected to 5GC.

⇒ **For NB-IoT and eMTC connected to 5GC, the EPS UP-EDT procedure is used.**

⇒ **Send a LS to RAN3 to inform about the agreements related to 5GC.**

[CB Offline discussion #302] To provide the draft LS in R2-1914040 (Qualcomm).

R2-1914040 [Draft] LS on RAN2 agreements for 5GC CIoT Qualcomm

- Intel suggests removing the FFSs.

⇒ **Remove the resolved FFSs.**

[CB Offline discussion #305] To provide an updated version of the draft LS based on the comments above. (Qualcomm)
The outcome can be provided in R2-1914044

R2-1914044 [Draft] LS on RAN2 agreements for 5GC CIoT Qualcomm

✓ The LS is approved in R2-1914045

Proposal 9: Security should not be deactivated and SRB1 should not be suspended at EDT fallback for UP-EDT when connected to 5GC.

⇒ **For NB-IoT and eMTC connected to 5GC, security is not deactivated and SRB1 is not suspended at EDT fallback for UP-EDT**

R2-1912854 UE identity for CIoT/5GC UP Optimization and RRC indication to upper layers Qualcomm India Pvt Ltd discussion Rel-16 LTE_eMTC5-Core

R2-1912903 User plane solutions for connecting to 5GC ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1913118 Remaining issues for UP solution and 5GC Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

Agreements

- For NB-IoT and eMTC connected to 5GC;
  NCC is always provided during suspension.
  adopt early security activation for resumption from RRC_IDLE.
- RAN2 intends to have the same UE identity, i.e. I-RNTI or *resumeID*, for UP CIoT 5GS Optimisation for both eMTC and NB-IoT.
- For NB-IoT and eMTC connected to 5GC, full configuration in *RRCConnectionResume(-NB)* is supported.
- For NB-IoT and eMTC connected to 5GC, the EPS UP-EDT procedure is used.
- For NB-IoT and eMTC connected to 5GC, security is not deactivated and SRB1 is not suspended at EDT fallback for UP-EDT

7.1.12.2 Support of RRC_INACTIVE and eDRX in CM-CONNECTED

Support of RRC_INACTIVE and extended DRX in CM-CONNECTED with RRC_INACTIVE (support of sleep cycles up to the NAS and SMS retransmission timers)
Support of RRC_INACTIVE and eDRX in CM-CONNECTED for MTC and NB-IoT are treated jointly under this AI.

R2-1912617 Discussion on support of RRC_INACTIVE for eMTC connected to 5GC Huawei, HiSilicon
discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: The Rel-15 suspension/ resumption procedure to/from RRC_INACTIVE applies to eMTC UE connected to 5GC.

Proposal 1a: Reuse the R15 critical extension version of RRCConnectionResumeRequest for eMTC in RRC_INACTIVE.

Proposal 1b: Reuse rrc-InactiveConfig-r15 in RRCConnectionRelease message to trigger the transition to RRC_INACTIVE for eMTC UEs connected to 5GC.

Proposal 1c: Reuse I-RNTI as UE identity for eMTC in RRC_INACTIVE.

Proposal 1d: Reuse the UE Inactive AS Context as the UE context for eMTC UEs in RRC_INACTIVE.

Proposal 1e: Reuse the same security principle as eLTE to resume the connection for eMTC UEs in RRC_INACTIVE.

For eMTC when connected to 5GC;

⇒ **The Rel-15 suspension/ resumption procedure to/from RRC_INACTIVE applies.**

Proposal 2: eMTC UEs in RRC_INACTIVE monitor RAN initiated paging and CN initiated paging via I-RNTI and 5G-S-TMSI respectively.

⇒ **eMTC UEs in RRC_INACTIVE monitor RAN initiated paging and CN initiated paging via I-RNTI and 5G-S-TMSI respectively.**

Proposal 2a: If configured with idle mode eDRX, eMTC UEs in RRC_INACTIVE are only required to monitor CN initiated paging during the PTW.

- QC thinks there should be only one set of DRX configuration parameters that UE should follow.

Proposal 2b: Upon reception of CN paging in RRC_INACTIVE, the eMTC UE moves to RRC_IDLE not suspended state.

⇒ **Upon reception of CN paging in RRC_INACTIVE, eMTC UE moves to RRC_IDLE without suspension.**

Proposal 2c: No PTW is introduced for RAN paging in RRC_INACTIVE.

Proposal 2d: eMTC UEs in RRC_INACTIVE are only required to monitor RAN initiated paging according to the RAN paging cycle provided in rrc-InactiveConfig.

Proposal 2e: For eMTC, the ran-PagingCycle is extended with values rf512 and rf1024.

⇒ **For eMTC, *ran-PagingCycle* is extended with values rf512 and rf1024.**

Proposal 2f: Rel-15 WUS and Rel-16 Group WUS are not supported for eMTC UEs in RRC_INACTIVE.

Proposal 3: The RNA configuration and RNA update procedure in Rel-15 RRC_INACTIVE apply to eMTC.

Proposal 3a: The resume cause 'rna-Update' is applicable to eMTC UEs connected to 5GC that support RRC_INACTIVE.

⇒ **The RNA configuration and RNA update procedure in Rel-15 RRC_INACTIVE apply to eMTC.**

⇒ **The resume cause 'ran-Update' is applicable to eMTC UEs connected to 5GC that support RRC_INACTIVE.**

Proposal 4: Cell reselection from RRC_INACTIVE to NR RRC_IDLE and E-UTRA/EPC RRC_IDLE is supported for eMTC UEs. For the case of reselection to EPC, the UE enters RRC_IDLE not suspended state.

Proposal5: The same measurements rules apply in RRC_IDLE and RRC_INACTIVE for eMTC UEs connected to 5GC.

Proposal 5a: Relaxed monitoring is supported in RRC_INACTIVE for eMTC UEs.

Proposal 5b: Ranking is used in RRC_INACTIVE for eMTC UEs in coverage enhancement.

Proposal 6: Introduce a new capability ce-InactiveState to indicate support of RRC_INACTIVE with short eDRX cycles for eMTC UEs.

Proposal 7: Introduce an indication in SIB2-BR to indicate that the eNB supports RRC_INACTIVE.

Proposal 8: If a UE in RRC_INACTIVE moves to an eNB that does not support RRC_INACTIVE, the UE enters RRC_IDLE not suspended state.

Proposal 9: EDT is not supported in RRC_INACTIVE in Rel-16.

[CB Offline discussion #303] To provide a list of proposals that seem to be agreeable in this meeting (Huawei). The outcome can be provided in R2-1914041.

R2-1914041 Summary of Offline discussion #303: RRC_INACTIVE for eMTC UEs connected to 5GC
Huawei

Proposal 1: IDLE mode cell selection/reselection criteria and measurement rules also apply in RRC_INACTIVE state for eMTC UEs connected to 5GC.

⇒ **IDLE mode cell selection/reselection criteria and measurement rules also apply in RRC_INACTIVE state for eMTC UEs connected to 5GC.**

Proposal 2: Neigbhouring cell relaxed monitoring is also applicable in RRC_INACTIVE state for eMTC UEs connected to 5GC.

⇒ **Neighbouring cell relaxed monitoring is also applicable in RRC_INACTIVE state for eMTC UEs connected to 5GC.**

Proposal 3: Introduce an indication in SIB2-BR to indicate that the eNB supports RRC_INACTIVE.

⇒ **Indication in SIB2-BR to indicate that the eNB supports RRC_INACTIVE can be implicit.**

Proposal 4: If a UE in RRC_INACTIVE moves to an eNB that does not support RRC_INACTIVE, the UE enters RRC_IDLE not suspended state.

⇒ **If a UE in RRC_INACTIVE moves to an eNB that does not support RRC_INACTIVE, the UE enters RRC_IDLE, i.e. not suspended state.**

Proposal 5: if UE supports RRC_INACTIVE, it also supports short extended DRX operation in RRC_INACTIVE state.

⇒ **No additional capability is needed to indicate support for short extended DRX operation in RRC_INACTIVE state.**

Proposal 6: EDT is not supported in RRC_INACTIVE in Rel-16.

- LG thinks this would be useful and it can be done in Rel-16 since the impact would be small.
- QC, Huawei, and Ericsson think it may be useful but there is no time to specify in Rel-16.
- ZTE thinks it would not require much work to specify it in this release.
- Intel thinks there is a security issue that needs to be checked with SA3.

⇒ **EDT is not supported in RRC_INACTIVE in Rel-16.**

The following proposals might be agreeable:

Proposal 7: No PTW is introduced for RAN paging in RRC_INACTIVE.

⇒ **No consensus, this is FFS for the next meeting.**

Proposal 8: Rel-15 WUS and Rel-16 Group WUS are not supported for eMTC UEs in RRC_INACTIVE.

⇒ **No consensus, this is FFS for the next meeting.**

The following need further discussions:

FFS: If configured with idle mode eDRX, eMTC UEs in RRC_INACTIVE monitor CN initiated paging only during the PTW.

FFS: UEs in RRC_INACTIVE monitor RAN initiated paging according to the RAN paging cycle provided in rrc-InactiveConfig.

FFS: The paging DRX cycle “T” (to monitor both the RAN paging and CN paging) is set to that value of short extended DRX cycle while UE is in RRC_INACTIVE (instead of selecting the shortest of the configured ones).

R2-1912850 Access stratum changes to support short eDRX for eMTC connected 5GC in RRC_INACTIVE state Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core R2-1910468

R2-1912861 Remaining issues in RRC inactive state Intel Corporation discussion Rel-16 LTE_eMTC5-Core

R2-1912902 Support of eDRX in CM-CONNECTED with RRC_INACTIVE for 5GC ZTE Corporation, Sanechips discussion LTE_eMTC5-Core, NB_IOTenh3-Core

Agreements

- For eMTC when connected to 5GC;
  The Rel-15 suspension/ resumption procedure to/from RRC_INACTIVE applies.
- eMTC UEs in RRC_INACTIVE monitor RAN initiated paging and CN initiated paging via I-RNTI and 5G-S-TMSI respectively.
- Upon reception of CN paging in RRC_INACTIVE, eMTC UE moves to RRC_IDLE without suspension.
- For eMTC, *ran-PagingCycle* is extended with values rf512 and rf1024.
- The RNA configuration and RNA update procedure in Rel-15 RRC_INACTIVE apply to eMTC.

- The resume cause '*ran-Update*' is applicable to eMTC UEs connected to 5GC that support RRC_INACTIVE.
- IDLE mode cell selection/reselection criteria and measurement rules also apply in RRC_INACTIVE state for eMTC UEs connected to 5GC.
- Neighbouring cell relaxed monitoring is also applicable in RRC_INACTIVE state for eMTC UEs connected to 5GC.
- Indication in SIB2-BR to indicate that the eNB supports RRC_INACTIVE can be implicit.
- If a UE in RRC_INACTIVE moves to an eNB that does not support RRC_INACTIVE, the UE enters RRC_IDLE, i.e. not suspended state.
- No additional capability is needed to indicate support for short extended DRX operation in RRC_INACTIVE state.
- EDT is not supported in RRC_INACTIVE in Rel-16.

7.1.12.3 Other

MTC specific aspects

7.1.13 Other

R2-1912229 CE Mode Threshold Adjustments for non-BL and BL UE NTT DOCOMO INC. discussion Rel-16

R2-1913757 RRC release after EDT for User Plane CIoT EPS optimization Ericsson discussion Rel-15 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1910897

R2-1913758 RRC release after EDT for User Plane CIoT EPS optimization Ericsson draftCR Rel-15 36.321 15.7.0 B LTE_eMTC5-Core, NB_IOTenh3-Core Late

R2-1913832 RRC release for User Plane EDT III discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1911132

7.2 Additional enhancements for NB-IoT

(NB_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192313)
Time budget: 2.5 TU
Documents in this agenda item will be handled in a break out session
Some sub-items in 7.1 and 7.2 may be treated jointly.

7.2.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

R2-1912004 LS on short MAC-I and ngKSI for 5G-CIoT (C1-195199; contact: Vodafone) CT1 LS in Rel-16 5G_CIoT To:SA3 Cc:RAN2

- Intel wonder if this is also EDT or only the normal connection establishment? Huawei thinks the CPSR is independent of whether EDT or not so assume it does apply to both cases.
- Intel also wonder if it is only for NB-IoT or also LTE-M, because the LS only talks about NB-IoT. LG thinks it is for both.

⇒ **noted**

R2-1912044 Reply to LS on DL channel quality report for configured carrier in RRC connected mode (R4-1910110; contact: Qualcomm) RAN4 LS in Rel-16 NB_IOTenh3-Core To:RAN2 Cc:RAN1

- Huawei wonder if this means that the measurement can be done only during the NPDCCH scheduling the UL. QC have a similar question but understand that UE continues doing the measurement for every NPDCCH because it is unknown whether the grant will be received.

⇒ **noted**

R2-1912054 LS on evaluation of S criteria on non-anchor carrier (R4-1910575; contact: Huawei) RAN4 LS in Rel-16 NB_IOTenh3-Core To:RAN2

⇒ **noted**

R2-1912056 LS on Rel-16 NB-IoT enhancements (RP-192338; contact: Futurewei) RAN LS in Rel-16 NB_IOTenh3 To:SA2, CT1 Cc:RAN2, SA, CT
- Huawei present the LS.

⇒ **Noted**

Agreements summary

R2-1913426 RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC Document Rapporteur (BlackBerry) other Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core
- Huawei present the document

⇒ **noted**

✉ **[107bis#11][NB-IoT eMTC R16] RAN2 agreements (Blackberry)**
Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC
Intended outcome: Endorsed report in R2-1914092
Deadline: 1 week
=> Endorsed in R2-1914102.

Running CRs

R2-1912598 Introduction of additional enhancements for NB-IoT in TS 36.331 Huawei draftCR Rel-16 36.331 15.7.0 B NB_IOTenh3-Core R2-1911592
- Huawei point out that for CQI we need to decide how to name this and how to do the capability, because the proposal in eMTC is using a different name compared to Rel-14 NB-IoT.

⇒ **Can discuss as part of the offline on alignment.**

✉ **[107bis#20][NB-IoT R16] 36.331 running CR (Huawei)**
Update 36.331 running CR with agreements from this meeting
Intended outcome: Endorsed running CR in R2-1914101
Deadline: 2 weeks
=> Endorsed in R2-1914101

Offline discussion #703 (Qualcomm) For alignment of eMTC and NB-IoT 36.331 CR.

R2-1914095 Report of Offline discussion #703 (Qualcomm) For alignment of eMTC and NB-IoT 36.331 CR. report Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

⇒ **Can take into account when updating the running CRs**

R2-1912599 Introduction of additional enhancements for NB-IoT Huawei draftCR Rel-16 36.300 15.7.0 B NB_IOTenh3-Core R2-1911591 Late
- Huawei think for paging enhancements it is not clear whether to capture here or in 38.300. QC think that the split is currently that if the change is for ng-eNB then the change is in 36.300 but if it is NR specific then it is 38.300, but we should in general put our changes in 36.300 unless there is a good reason.
- Ericsson wonder whether we should use “(ng-)eNB” in all places or make a single definition somewhere. Huawei think when it is eNB communicating with the CN then we should use “ng”. QC think we should use everywhere it is needed, then it is clear and we don’t miss anything as we will check case by case.

✉ **[107bis#21][NB-IoT R16] 36.300 running CR (Huawei)**
Update 36.300 running CR with agreements from this meeting
Intended outcome: Endorsed running CR in R2-1914094
Deadline: 2 weeks
=> Endorsed in R2-1914094

Offline discussion #702 (Intel) For alignment of eMTC and NB-IoT 36.300 CR.

- After offline Intel reports misalignments have been identified and will align in the next versions of the running CRs

R2-1913095 Introduction of additional enhancements for NB-IoT Qualcomm Incorporated discussion Rel-16 38.300 NB_IOTenh3-Core
- QC would like to clarify whether the existing wording on number of slices can be re-used or if it needs to be updated according to the earlier agreements that the maximum number of slices needed to be supported is 8.
- Huawei thinks that the current wording means that the UE may support more than 8 but for NB-IoT this is a maximum.
- Intel think we should align eMTC and NB-IoT running CRs for the next meeting.

⇒ **Can update the text to indicate the maximum slices supported is 8 for NB-IoT and eMTC.**

- QC think in NB-IoT we don't support SDAP so wonder if we should add a note that there is only 1 PDU session per DRB?

⇒ **Can update to add a note that there is only 1 PDU session per DRB**

✉ **[107bis#22][NB-IoT R16] 38.300 running CR (Qualcomm)**
Update 38.300 running CR with agreements from this meeting
Intended outcome: Endorsed running CR in R2-1914093
Deadline: 2 weeks
=> Endorsed in R2-1914093

✉ **[107bis#23][NB-IoT R16] Running CR on 36.321 (Ericsson)**
Running CR on 36.321 with agreements so far
Intended outcome: Endorsed running CR in R2-1914099
Deadline: 2 weeks
=> Endorsed in R2-1914099

✉ **[107bis#24][NB-IoT R16] Running CR on 36.304 (Nokia)**
Running CR on 36.304 with agreements so far
Intended outcome: Endorsed running CR in R2-1914100
Deadline: Next meeting

7.2.2 Mobile-terminated (MT) early data transmission (EDT)

Mobile-terminated Early Data transmission for NB-IoT is treated jointly with MTC under AI 7.1.2. Do not use this AI for any item that can be discussed jointly.

7.2.3 UE-group wake-up signal (WUS)

UE group wake Up signal for MTC and NB-IoT is treated jointly under this Agenda Item.
Including output of email discussion [107#57][NB-IoT/eMTC R16] Configuration details of UE-ID and paging probability based WUS groups (ZTE)

R2-1913831 Report of email discussion [107#57][NB-IoT eMTC R16] WUS configuration ZTE Corporation, Sanechips report Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core Late
- Intel thinks some questions weren't clear so their answer may not be appropriate in all cases.
- Intel and Nokia think there are 3 parts to the discussion. QC thinks we have a lot depending on RAN1 still. QC thinks Rel-15 parameters can be re-used if provided and this is already agreed.

The following proposals can be applied to both NB-IoT and eMTC:
Proposal 1: A new optional R16 WUS configuration, e.g., WUS-Config-NB-r16, can be defined in SIB message.
- QC wonder if this includes all parameters including those in Rel-15 or only new parameters.

Proposal 2: RAN2 needs to discuss whether it should be possible for the eNB to configure only Rel-16 WUS.

- Intel wonders what the motivation for configuring only Rel-16 is. ZTE also wonders.
- QC thinks it depends on the UE population, maybe Rel-15 WUS configuration is redundant. Ericsson agrees with QC, it should be up to the network what to configure. Huawei also agree.
- ZTE thinks it should anyway be possible for NW to configure one or the other or both. Intel agree, the question is whether we have to repeat all the configuration in the Rel-16 IE.
- Nokia thinks we need to clarify what happens if legacy WUS is not configured in TDM case.

Proposal 4: RAN2 needs to discuss whether a location information of R16 WUS resource, e.g., overlapping with legacy WUS resource or being adjacent to the legacy WUS resource need to be defined.

- Huawei thinks the indication is needed if only 1 resource is configured. ZTE thinks even for 2 resources we need the indication. Intel thinks this would be known by the UE based on configuration IE used.
- QC thinks for NB-IoT if there are 2 R16 resources and 1 R15 resource then we need to indicate which R16 resource is in the same time location as the R15 resource, and RAN1 are looking at this. Also in case of only 1 and 1 we need to say whether the same time resource is shared.

Proposal 5: All the parameters, maximum duration, time offset for different gap types, numPOs and transmit power for WUS sequence need to be configurable in at least one R16 WUS resource.

Proposal 5a: If both R15 and R16 WUS are configured, it's allowed to omit these parameters in R16 WUS configuration and the parameters in R15 WUS configuration can be reused for R16 WUS configuration.

- QC thinks that in case the Rel-15 WUS is configured then these values have to be used for Rel-16 also.

Proposal 3: For NB-IoT, RAN2 can take this as working assumption for further discussion: A R16 WUS resource list, e.g., with up to 2 entries is needed in the R16 WUS configuration.

Proposal 6: It should be allowed to configure WUS groups per WUS resource with maximum 8 WUS groups for a WUS resource.

Proposal 7: RAN2 needs to discuss whether WUS groups for each WUS resource can be configured per gap type.

Proposal 8: It's no need to define WUS group ID for a WUS group in RAN2 signalling.

- ZTE indicates the intention of p6 is whether for each WUS resource, whether we need to allow configuration of UE-ID based only, paging probability based only, or both?
- QC thinks we need to agree whether one WUS resource can be used for both UE-ID and service based or not. QC thinks the paging carrier has to be first determined based on UE-ID in any case.
- ZTE thinks even the UE not using service probability based grouping will have a service probability assigned, e.g. default.

Proposal 9: RAN2 needs to discuss whether Rel-16 WUS groups need to be supported on all paging carriers or subset of paging carriers.

Proposal 11: For UE_ID based WUS grouping, it's enough to only configure number of WUS groups.

Proposal 12: RAN2 needs to discuss whether same WUS group can be used for both service and UE ID based schemes, or there should be two separate sets of WUS groups at the same time, e.g., X (>=0) number of UE based groups and Y (>=0) number of paging probability based groups.

Proposal 13: Two-level WUS configuration in which grouping is firstly based on paging probability, and then UE-ID, can be supported.

Proposal 14: An explicit indication is needed for indicating common WUS type, e.g., legacy R15 WUS sequence or new R16 dedicated WUS sequence.

Proposal 15: RAN2 needs to further discuss whether an indication is needed for enabling UE to detect the common WUS. And if yes, RAN2 can further discuss the following options:

Option a): an explicit indication

Option b): an implicit indication when more than one UE groups is configured

Option c): an implicit indication when common WUS type is configured.

Proposal 16: Network capability indication about supporting R16 WUS grouping is not introduced.

The following proposals can be applied to NB-IoT only:
Proposal 3: For NB-IoT, RAN2 can take this as working assumption for further discussion: A R16 WUS resource list, e.g., with up to 2 entries is needed in the R16 WUS configuration.
Proposal 9a: For NB-IoT, for the carriers supporting Rel-16 WUS, the WUS configuration should be the same (except for the maximum duration which is already carrier specific in Rel-15).
Proposal 10: For NB-IoT, an indication is needed for enabling alternation between WUS resources (WUS resource hopping).
Proposal 10a: For NB-IoT, RAN2 needs to further discuss whether this indication is configured per cell.

The following proposals can be applied to eMTC only:
Proposal 9b: For eMTC, for the carriers supporting Rel-16 WUS, the WUS configuration should be the same.
Proposal 17: For eMTC, RAN2 can take this as working assumption for further discussion: A R16 WUS resource list, e.g., with up to 4 entries is needed in the R16 WUS configuration.
Proposal 18: For eMTC, the frequency-multiplexed pattern would be needed for WUS resource configuration.

Agreements:

- Rel-16 WUS can be configured without Rel-15 WUS
- If both R15 and R16 WUS are configured, then maximum duration, time offset for different gap types, and transmit power for WUS sequence need to be configured with the same values for both R15 and R16.
  - FFS: numPOs
- The time locations of R16 WUS resources need to be known by the UE. Signalling details can be discussed as part of stage 3 CR.

- FFS: A WUS group cannot be mapped to both UEs using UE-ID based only and UEs using UE-ID + paging probability based grouping.

Offline discussion #704 (Qualcomm) WUS group configuration and mapping. To produce report including clear list of FFS/open issues and agreeable proposals in R2-1914096

R2-1914096 – Report from offline #704 Qualcomm Incorporated discussion Rel-16 NB_IOTenh3-Core
- Nokia thinks that during the offline the tables were agreed upon so may be better to capture those.

Proposal 1: If both Release 15 WUS and Release 16 WUS are configured then values configured for the following parameters in Release 15 WUS also apply to Release 16 WUS: MaxDurationFactor, numPOs, FrequencyLocation (eMTC only), timeOffsetDRX, timeOffset-eDRX-short, timeOffset-eDRX-Long, numDRX-CyclesRelaxed
Proposal 2: If only Release 16 WUS is configured then values for the following parameters shall be configured: MaxDurationFactor, numPOs, FrequencyLocation (eMTC only), timeOffsetDRX, timeOffset-eDRX-short, timeOffset-eDRX-Long, numDRX-CyclesRelaxed
- Intel wonders what the use-case is for using Rel-16 WUS without Rel-15. QC indicates Rel-16 is more useful and it is possible that there will be more UEs supporting Rel-16. Nokia and Ericsson think that it should be possible.

Proposal 3: FFS: Number of WUS resources can be configured individually for each gap type (DRX, eDRX short, eDRX long)
Proposal 3: The same number of WUS resources can be configured for all gap types (DRX, eDRX short, eDRX long)
Proposal 4: Number of WUS groups can be configured separately for each R16 WUS resource.
Proposal 5: Number of WUS groups can be the same for all R16 WUS resources.
Proposal 6: UE WUS group hopping between WUS resources is configured the same for all R16 WUS resources.

Proposal 7: A single enable/disable of 'common WUS group' applies to gap types configured with 2 or more WUS resources.
Proposal 8: FFS: If 'common WUS group' is not enabled in the cell then how are the UEs notified of SI change.
Proposal 9: FFS: When 'common WUS group' is enabled then is there need to explicitly signal which is the 'common WUS group'.

⇒ **Can check and come back next meeting on the above 3.**

Proposal 10: When R15 WUS is configured then all R16 WUS resources are adjacent to R15 WUS in the time domain and in the frequency domain (for eMTC)

Proposal 11: When only R16 WUS resources are configured, location in time provided for the first R16 resource for each gap type (i.e. timeOffset-DRX, timeOffset-eDRX-short, timeoffset-eDRX-Long).

Proposal 12: When only R16 WUS resources are configured, frequency location provided for the first R16 resource (i.e. FrequencyLocation).

- ZTE think that the above proposals are the current understanding of how RAN1 agreements will impact RAN2 specification.
- ZTE thinks we need an FFS whether we need a parameter to indicate the location in these 3 cases.

Proposal 13: When one or more R16 WUS resources configured, the same WUS Paging probability mapping applies to each gap type (i.e. timeoffset-DRX, timeoffset-eDRX-short, timeoffset-eDRX-long).

Proposal 14: When one or more R16 WUS resources are configured, the WUS Paging probability mapping provided separately for each gap type (i.e. timeoffset-DRX, timeoffset-eDRX-short, timeoffset-eDRX-long).

- Sony are not sure we discussed the paging probability vs. gap type as per p13, 14. QC thinks we need to design the mapping between probability and resources. Sony thinks the probability is mapped to groups, and the groups are configured to resources.

Proposal 15: RAN2 assumes one or more UEs may not be configured at NAS with paging probability.

Proposal 16: If R16 WUS is configured, at least one WUS group will be assigned to UEs that are not configured with paging probability.

- Fraunhofer wonders if it could be the common one. QC thinks no.

Proposal 17: FFS Mapping of paging probabilities to WUS group.

Proposal 18: R16 WUS can be supported on all or subset of the paging carriers/paging narrowbands.

Agreements:

- If both Release 15 WUS and Release 16 WUS are configured then values configured for parameters in Release 15 WUS also apply to Release 16 WUS
- If only Release 16 WUS is configured then values for the following parameters shall be configured: MaxDurationFactor, numPOs, FrequencyLocation (eMTC only), timeOffsetDRX, timeOffset-eDRX-short, timeOffset-eDRX-Long, numDRX-CyclesRelaxed
- FFS: A different number of WUS resources can be configured for each gap type (DRX, eDRX short, eDRX long).
    - FFS: When one or more R16 WUS resources are configured, the WUS Paging probability mapping to WUS group can be provided separately for each gap type (i.e. timeoffset-DRX, timeoffset-eDRX-short, timeoffset-eDRX-long).
- Same or different number of WUS groups can be configured for each R16 WUS resource.
- UE WUS group hopping between WUS resources is configured per cell.
- FFS how to configure the following agreed cases:
    - When R15 WUS is configured then all R16 WUS resources are adjacent to R15 WUS in the time domain (for eMTC and NB-IoT) and in the frequency domain (for eMTC only)
    - When only R16 WUS resources are configured, frequency location provided for the first R16 resource (i.e. FrequencyLocation). (for eMTC only)
    - When only R16 WUS resources are configured, location in time provided for the first R16 resource for each gap type (i.e. timeOffset-DRX, timeOffset-eDRX-short, timeoffset-eDRX-Long). (for eMTC and NB-IoT)
- RAN2 assumes one or more UEs may not be configured at NAS with paging probability.
- If R16 WUS is configured, at least one WUS group will be assigned to UEs that are not configured with paging probability.
- FFS Mapping of paging probabilities to WUS group
- R16 WUS can be supported on all or subset of the paging carriers/paging narrowbands.

R2-1912907 Other remaining issues of UE grouping for WUS ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1908870

R2-1913096 WUS grouping design overview and UE distribution Qualcomm Incorporated discussion Rel-16 NB_IOTenh3-Core

R2-1913776 Group WUS Ericsson discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

R2-1912916 Paging probability information based UE grouping Lenovo, Motorola Mobility discussion Rel-16

R2-1912917 Consideration on WUS configuration Lenovo, Motorola Mobility discussion Rel-16

R2-1913362 On supporting UE-group wake-up signal for MTC/NB-IoT Sony discussion Rel-16 NB_IOTenh3-Core R2-1909910

Late/withdrawn

R2-1912410 GWUS Configuration and Resource mapping for UE-Group Information Nokia, Nokia Shanghai Bell discussion Rel-16 Late

7.2.4 Transmission in preconfigured resources

Including support for transmission in preconfigured resources in idle and/or connected mode based on SC-FDMA waveform for UEs with a valid timing advance.

Transmission in preconfigured resources for MTC and NB-IoT is treated jointly under this Agenda Item.

Including output of email discussion [107#58][NB-IoT/eMTC R16] RRC messages for D-PUR transmission and response (Huawei)

R2-1913931 Report of email discussion [107#58][R16 NB-IoT/eMTC] RRC messages for D-PUR transmission and response Huawei report Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

- QC hopes to resolve some of the FFSs. Chair agrees.
- QC think that in general we should try to re-use existing messages unless there is a problem in doing that. Huawei think that re-using existing messages doesn't mean we should not modify them if necessary.

For the CP solution:

Proposal 1. For the CP solution, in the uplink RRC message of D-PUR transmission:

- *D-PUR update request can be included*
- *RAI, BSR, L2/L3 expectation indication and downlink channel quality report are not included*
- *FFS S-TMSI and establishment cause*

- QC wonders what the first bullet means in practise. QC thinks it is better to do only in RRC connected. Gemalto agrees. LG agrees. Sequans thinks there would then need to be a way to trigger UE to go to RRC_CONNECTED. QC thinks the RRC Connection Establishment can be sent using PUR, so no need to include a new indication. Ericsson think it could be useful in some cases.
- LG thinks BSR should be included optionally.
- Gemalto wonders if we should have an optional indication that L2/3 ACK is expected. Sony agrees and think the second bullet should be split. Huawei think a majority in the email discussion did not think this is needed. Nokia think this could be an option as part of the request but we don't need per packet indication. QC agree with Nokia.
- Ericsson point out that all of the options AS RAI, BSR, power headroom, data volume are all indicative of more data and different companies have different preference. QC don't think any of them are useful and in the majority of cases the traffic pattern is already known and that is how the PUR is configured in the first place. QC thinks NW knows whether UE is using non-EDT or EDT based on the preambles so the BSR or RAI etc. isn't needed.
- ZTE, Nokia think even RAI should be per configuration and not per-packet so no need to include that.
- LG think BSR is legacy behaviour if there is space so no need to restrict it.

Proposal 2. For the CP solution, whether to define new uplink RRC message of D-PUR transmission is FFS.

Proposal 3. For the CP solution, extendedWaitTime can be included in the downlink RRC response message.

Proposal 4. For the CP solution, whether to define new downlink RRC response message of D-PUR transmission is FFS.

Proposal 5. For the CP solution, MAC CE for TA update can be sent without downlink RRC response message.

Proposal 6. For the CP solution, in case the UE moves to RRC connection, a new RNTI can be provided. FFS how, i.e. in RRCConnectionSetup message or MAC level along with the RRC message.

- QC thinks RRC or MAC could be used and it should be possible to update the PUR-RNTI to C-CRNTI when moving to RRC_CONNECTED. Intel thinks the PUR-RNTI conversion to CRNTI is only possible if multiple UEs don't share the PUR-RNTI, therefore there needs to be a possibility to update or maintain.
- LG prefers MAC.
- ZTE prefers RRC.
-

For the UP solution:

Proposal 7. For the UP solution, in the uplink RRC message of D-PUR transmission:

- *D-PUR update request can be included*
- *RAI, BSR, L2/L3 expectation indication and downlink channel quality report are not included*
- *FFS Resume ID and establishment cause*

Proposal 8. For the UP solution, whether to define new uplink RRC message of D-PUR transmission is FFS.

Proposal 9. For the UP solution, extendedWaitTime can be included in the downlink RRC response message.

Proposal 10. For the UP solution, RRC connection release message is reused as the downlink RRC response message of D-PUR transmission.

Proposal 11. For the UP solution, in case the UE moves to RRC connection, a new RNTI can be provided. FFS how, i.e. in RRCConnectionSetup/RRCConnectionResume message or MAC level along with the RRC message.

Agreements (for CP and UP solutions unless otherwise stated):

- For PUR transmission and associated response, no new RRC messages are introduced and the existing RRC messages are re-used (S-TMSI and establishment cause for CP, and Resume ID and establishment cause for UP, are mandatory IEs).
    - Existing establishment causes are re-used.
- PUR update request is performed only in RRC_CONNECTED (i.e. not included with PUR transmission). This replaces the previous agreement for UP regarding piggyback of PUR request with the PUR transmission.
- L2/L3 expectation indication and downlink channel quality report are not included with PUR transmission.
- For CP solution AS RAI, BSR are not included with PUR transmission
- FFS for UP solution whether AS RAI, BSR can be included with PUR transmission.
- For the CP solution, MAC CE for TA update can be sent without downlink RRC response message. (For UP RRC response message is always required).
- In case the UE moves to RRC-CONNECTED, a new C-RNTI can be provided in RRC. If absent the UE maintains the PUR-RNTI as C-RNTI.

R2-1913600 Remaining aspects from [106#61] D-PUR Request, (re)configuration and release mechanism Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1. PUR is indicated as enabled in the cell using a flag in SIB2.

Proposal 2. Upon detecting that SIB indication of PUR support is turned off in the cell, UE shall release all PUR configurations.

- Huawei thinks the PUR request can be enabled/disabled by dedicated signalling, and see these proposals to be related to release of multiple UEs which were provided with the configuration.
- LG supports proposals 1 and 2 to have a similar approach as EDT.
- Intel thinks p1 would be ok. P2 would be OK if it does not trigger paging for SI-change.
- Sequans wonder whether it is important enough to require UEs to read SI before every PUR transmission. Huawei agrees with Sequans.
- QC thinks the UE anyway needs to check SIBs to see if access is allowed.
- Nokia thinks the update via paging should be avoided. QC thinks if it is rare then paging should be OK.
- Huawei think it is unrealistic to expect eNB to know 3 hours in advance to update the SIBs timely. Ericsson thinks it can be done only temporarily for UEs which are waking at that time.

Proposal 3. PUR configuration can be provided without PUR Configuration Request from the UE.

Proposal 4. For UP, introduce optional radio access capability to indicate UE is capable of performing UL transmissions using PUR. FFS for CP.

- Huawei thinks it should be the same for CP

Proposal 5. When UE initiates RACH/EDT, whether it has PUR configuration(s) is not explicitly notified to the network.

- ZTE indicate that this means when UE performs cell reselection there will be resources wasted on the old cell. Huawei indicates there is anyway a timer based mechanism to release so this is temporary

Proposal 6. PUR (re)configuration is not supported in RRCEarlyDataComplete. When PUR (re)configuration is provided in RRC Connection release, no additional explicit success/failure indication is introduced, i.e., existing methods are sufficient for reliable confirmation.

Proposal 7. No further UE behaviour is specified in case successful PUR reconfiguration is not confirmed (i.e., the PUR configuration that the UE considers valid depends on whether UE received the reconfiguration). It is upto the network implementation how to handle this scenario.

Proposal 8. NW releases PUR only upon successful confirmation that UE received the release message.

-

Proposal 9. PUR request includes indication whether L2/L3 ACK is required (or L1 ACK is sufficient). NW makes final decision on configuration.

- ZTE thinks UE can't know whether it needs the L2/3 ACK, only NW knows. QC thinks UE knows better than NW. Ericsson wonders if this is for CP case only because for UP it is always used. For p9 LG thinks if this is sent by the UE then some interface is needed between AS and NAS, support p10 and NW can know this based on communication pattern rather than UE indication.
- Gemalto supports p9 and it depends on the application UE is using and whether it is critical/not critical information.
- Ericsson thinks all UEs need to support L2/3 ACK, so the indication is that UE can live with L1 ACK only, so NW can always send the L2/3 ACK if it wants.

Proposal 10. Discuss whether PUR (re)configuration includes flag indicating whether DL L2/L3 ACK is used for UL data.

- Intel thinks that after L1 ACK the UE goes immediately to Idle so nothing is needed in the configuration. Ericsson agree with Intel.

⇒ **Not agreed**

Proposal 11. RRC Connection Resume Request for EDT is extended to include PUR configuration request. PUR configuration request is not supported in RRCEarlyDataRequest.

⇒ **Already covered in previous discussion/agreements.**

Proposal 12. UE can request PUR release by including number of PUR grant occasions requested = 0 in PUR configuration request.

Agreements:

- Working assumption: PUR is indicated as enabled in the cell using a flag in SIB2. Upon detecting that SIB indication of PUR support is turned off in the cell, UE shall release all PUR configurations. Existing SIB update mechanism is used to update the indication.
- PUR configuration can be provided without PUR Configuration Request from the UE, therefore optional radio access capabilities (separate for UP and CP) to indicate UE is capable of performing UL transmissions using PUR are introduced.
- When UE initiates RACH/EDT, whether it has PUR configuration(s) is not explicitly notified to the network.
- PUR (re)configuration is not supported in RRCEarlyDataComplete.
- In case PUR (re)configuration is provided in RRC Connection release, no additional explicit success/failure indication is introduced, i.e., existing methods are sufficient.
- No further UE behaviour is specified in case successful PUR reconfiguration is not confirmed using the existing methods (i.e., the PUR configuration that the UE considers valid depends on whether UE received the reconfiguration). It is up to the network implementation how to handle this scenario.
- NW releases PUR only upon successful confirmation that UE received the release message using the existing methods.
- PUR request includes optional indication that L1 ACK is sufficient. NW has the final decision whether to

use L1 ACK or not.
- No new RRC message for PUR release request is needed (i.e. PUR configuration request is used for requesting PUR release).

FFS:
- whether any of the following is a precondition for sending PUR request: UE is stationary/quasi-stationary; UL data size is limited to maximum supported TB size.
- whether Requested Time Offset can be included in the PUR request.
- which of the following is included in PUR (re)configurations: Time Offset; UE-specific RNTI; D-PUR config identity/index; timer for D-PUR response; PUR backoff indicator/prohibit timer; TBS size.

Offline discussion #706 (Qualcomm) – To make further progress on PUR. Primary focus is on the FFSs already captured. Try to find other proposals agreeable this week and highlight open points that need to be resolved.

R2-1914098 Summary of offline #706: FFSes on PUR. Qualcomm Incorporated report Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1. "UE is stationary/quasi-stationary" is not a precondition before sending PUR configuration request.
- ZTE thinks that if there is no restriction it may cause invalid configuration if TA is invalid.

Proposal 2. "UL data size is limited to maximum supported TBS based on the UE category/capability" is a precondition before sending PUR configuration request.
- LG thinks for UP solution the data size doesn't need to be limited. QC and Ericsson think this is about request only.

Proposal 3. More than one simultaneous D-PUR configurations are not supported (i.e., UE cannot be configured with more than one PUR configurations.)

Proposal 4. Time offset of the PUR allocations is provided in PUR configuration.
- QC suggests discussing together with the FFS on request.

Proposal 5. UE-specific RNTI for PUR is provided in PUR configuration.
- Sequans wonders about shared RNTI. QC indicate that from UE point of view this is UE specific.

Proposal 6. PUR config identity/index is not provided in PUR configuration.

Proposal 7. Information about timer for PUR response is provided in PUR configuration. Detail FFS.
- Ericsson thinks this is something RAN1 is looking at in another context. Nokia thinks this is a just timer for response.

Proposal 8. Information on TBS size is provided in PUR configuration. Exact details also depend on RAN1 agreements.

Proposal 9. For CP, similar to EDT, "the size of the resulting MAC PDU including the total UL data is expected to be smaller than or equal to the TBS configured for PUR" is a precondition before initiating UL transmission using PUR. FFS for UP.
- Ericsson thinks it is not clear for all the cases, such as for fallback.

Proposal 10. For UP, refer to PUR messages as "RRCConnectionResumeRequest for PUR" and "RRCConnectionResumeRequest for EDT or PUR" etc. as applicable in the running CRs.

Proposal 11. PUR TA timer is configurable, should be at least larger than the PUR period, in hour(s) level, "disabled" or infinity is possible. Exact values can be concluded as part of running CR discussion.
- Nokia wonders if we really need to say it is larger than PUR period. QC thinks if it is shorter then PUR is better not to be configured at all.

Proposal 12. Configurable value of m = {2, 3, 4, 8}. Not configured means release by "m" skip mechanism is disabled.
- Nokia wonders how NW detects the missed transmission.
- Intel thinks 1 can be misdetection so should be excluded.

Proposal 13. UE shall increase 'm' when (1) PUR occasion is not used while UE is in RRC_IDLE and (2) PUR occasion is used in RRC_IDLE but no ACK is received.
- ZTE thinks there may bbbe a mismatch between UE and NW

Proposal 14. Network shall increase 'm' when no ACK is sent by the network.

Proposal 15. 'm' is not increased (neither by UE nor eNB) while UE is in a dedicated RRC connection.

Proposal 16. Value of 'm' is reset to zero after successful communication between UE and eNB (both in RRC_IDLE or RRC_CONNECTED).

Proposal 17. 'm' is not increased (neither by UE nor eNB) while barring timer is running.

Agreements:
- "UE is stationary/quasi-stationary" is not a precondition before sending PUR configuration request.
- "UL data size is limited to maximum supported TBS based on the UE category/capability" is a precondition before sending PUR configuration request.
- UE cannot be configured with more than one PUR configuration
  - Therefore, PUR config identity/index is not needed in PUR configuration
- Information on TBS size is provided in PUR configuration.
  - Exact details also depend on RAN1 agreements.
- For CP, similar to EDT, "the size of the resulting MAC PDU including the total UL data is expected to be smaller than or equal to the TBS configured for PUR" is a precondition before initiating UL transmission using PUR. FFS for UP.
  - Sending RRC Connection request without the CP data is not excluded due to this
- For UP, refer to PUR messages as "RRCConnectionResumeRequest for PUR" and "RRCConnectionResumeRequest for EDT or PUR" etc. in the specifications.
- PUR TA timer is configurable up to hour(s) level, disabled/infinity is possible.
  - Exact values FFS.
- Configurable value of m. Not configured means release by "m" skip mechanism is disabled.
  - Exact values FFS.
  - Further details on "m" operation are FFS:
    - *UE shall increase 'm' when (1) PUR occasion is not used while UE is in RRC_IDLE and (2) PUR occasion is used in RRC_IDLE but no ACK is received.*
    - *Network shall increase 'm' when no ACK is sent by the network.*
    - *'m' is not increased (neither by UE nor eNB) while UE is in a dedicated RRC connection.*
    - *Value of 'm' is reset to zero after successful communication between UE and eNB (both in RRC_IDLE or RRC_CONNECTED).*
    - *'m' is not increased (neither by UE nor eNB) while barring timer is running.*

✉ **[107bis#90][NB-IoT eMTC R16] Further details on "m" operation for PUR (Qualcomm)**
To progress the FFSs on "m" operation
Intended outcome: Report
Deadline: Next Meeting

R2-1912608	Discussion on RAN1 agreements on D-PUR	Huawei, HiSilicon	discussion	Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core
R2-1912609	FFSes on D-PUR	Huawei, HiSilicon	discussion	Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core
R2-1913121	PUR data transmission - remaining open issues	Ericsson	discussion	NB_IOTenh3-Core, LTE_eMTC5-Core
R2-1913122	PUR configuration - remaining open issues	Ericsson	discussion	NB_IOTenh3-Core, LTE_eMTC5-Core
R2-1912610	Handling of D-PUR configuration for CP solution	Huawei, HiSilicon	discussion	Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1910174
R2-1912611	[Draft] LS on handling of D-PUR configuration for the CP solution	Huawei	LS out	Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1910175 To:RAN3
R2-1912862	Additional issues in D-PUR in RRC_IDLE	Intel Corporation	discussion	Rel-16 LTE_eMTC5-Core
R2-1912894	DRX considerations for preconfigured resources	Sequans Communications	discussion	Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1910237

R2-1912896 Remaining issues for D-PUR in IDLE ZTE Corporation, Sanechips discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core
R2-1913071 Further consideration on D-PUR aspect III discussion Rel-16
R2-1913119 PUR periodicity and UE multiplexing Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core R2-1910437
R2-1913120 PUR with DCI scheduling Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core R2-1910438
R2-1913597 Pre-configured UL Resources Design Considerations Sierra Wireless, S.A., Sony Mobile Communications, Gemalto N.V. discussion Rel-16 R2-1910896
R2-1913681 FFS issues on D-PUR LG Electronics UK discussion Rel-16
R2-1913682 Discussion on D-PUR request and TA validity check LG Electronics UK discussion Rel-16
R2-1913683 Paging response usign D-PUR LG Electronics UK discussion Rel-16
R2-1913684 Support for S-PUR LG Electronics UK discussion Rel-16 R2-1911065
R2-1913775 Remaining issues of D-PUR TA timer ASUSTeK discussion Rel-16 NB_IOTenh3-Core
R2-1913932 Clarification on PUR release upon missing ‘m’ consecutive Gemalto N.V. discussion Rel-16
R2-1913933 Transmission in preconfigured resources Gemalto N.V. discussion R2-1908990

Late/withdrawn

R2-1912411 Remaining Issues for D-PUR Signalling Procedure Nokia, Nokia Shanghai Bell discussion Rel-16 Late
R2-1912412 D-PUR for Control Plane Solution Nokia, Nokia Shanghai Bell discussion Rel-16 Late
R2-1913349 TA update after PUR transmission via MAC CE Sequans Communications discussion Rel-16 Late

7.2.5 Scheduling multiple DL/UL transport blocks

Including scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast
Scheduling multiple DL/UL transport blocks for NB-IoT is treated jointly with MTC under AI 7.1.5. Do not use this AI for any item that can be discussed jointly.

7.2.6 Network management tool enhancement

Including SON support for ANR, Random access performance and RLF report
ANR

R2-1912895 Remaining FFSs for ANR report in NB-IoT ZTE Corporation, Sanechips discussion Rel-16 NB_IOTenh3-Core

Proposal 1: In order to avoid too much power consumption for ANR measurement for NB-IoT UE, it suggests RAN2 to discuss whether to introduce an ANR measurement duration or allow neighbour cell relaxed monitoring criteria and Ssearch criteria to be still applied during ANR measurement.

- Huawei agrees with observation 1. For example UE is currently only required to measure 2 carriers, not 8 so the capability should be considered. UE should not need special measurement capability for ANR. However don’t understand how this proposal can help. ZTE just considered the time it takes. Gemalto, Sequans, Ericsson agrees with Huawei.
- QC wonder what long term means. We agreed to use the RAN4 requirements and this specifies the time to detect and measure.

Proposal 2: ANR reporting can be applicable for connection to 5GC. The CGI-info in the ANR reporting for connection to 5GC may have two-level PLMN list and need to additionally include RAN-AreaCode information.

- QC thinks ANR is CN independent, so could apply to 5GC.
- Huawei thinks we don’t support RRC_INACTIVE in NB-IoT so we don’t need RANAC.
- Huawei also proposed to support for 5GC, but we need to specify what information to record based on the CN type.

- Ericsson think this was not part of the WI scope so should focus on completing current scope first and may come back to this later. Nokia agree – the CGI reading alone is not sufficient and we would require additional work. ZTE think there are other impacts from 5CG support which are not in the WID.

Proposal 3: It's suggested to include timeSpent information with a large value range (e.g. INTEGER (0..172800) with unit of minutes) in ANR report to indicates the elapsed time since the generation of ANR record. And the UE can set a timer with the maximum value of timeSpent information for discarding the ANR record.

- Huawei wonders how useful it is. ZTE thinks the ANR measurement may be reported after quite a long time and NW may have already performed some optimisations.
- QC thinks it is simpler to indicate whether the measurement happened soon after configuration or just before report. Nokia think we already agreed that UE should do the measurement when it is configured, so the information seems not to be beneficial for the NW. Sequans think we can do the measurement as QC said, but having e.g. granularity of minutes is not preferable.
- Ericsson thinks a timestamp could be useful.

Proposal 4: In order to avoid unnecessary signaling overhead and UE power consumption, UE doesn't need to send empty ANR report.

- Ericsson think the empty report we agreed in the last meeting is useful. Huawei agree, and it is not really empty it is an indication that no good cell was found.

Agreements
- UE is not required to measure more than 2 carriers
- FFS whether an indication of when the UE performed the ANR measurement is needed

R2-1913419 Remaining Issues for ANR measurements Ericsson discussion Rel-16

Proposal 1 If UE is configured with ANR measurement and PSM has been negotiated with CN, the UE shall locally delay entering the PSM dormant state until the ANR measurements are completed.

- QC thinks eNB doesn't know about PSM support. Also UE may be in PSM for several days so wonder if it is useful to report after such a long time. Intel agrees with QC but wonder if UE has enough time to do the measurement during the reachable timer. Sequans agree with QC.
- Nokia think if UE is configured for PSM then it shouldn't be forced to do the measurement first. Apple agree with Nokia, it should be up to UE when to do the measurement especially if PSM is used.
- Gemalto thinks the eNB would configure multiple UEs so it is not such an important thing to disturb PSM.
- Huawei thinks UE should do the measurement either immediately or not at all when PSM is used.
- Ericsson think that many of the UEs will have PSM, so should be able to prioritise ANR measurement over PSM. At least should be able to store measurements already performed.

Proposal 2 RAN2 to agree on the text proposal below for the addition of PSM in the Note

Proposal 3 Configure an ANR reporting response time to provide the result within certain duration. The configured value is in several hours (48h, 72h, 96h, 120h)

- Gemalto think UE won't go to connected just for reporting. This is just a discard timer.
- Huawei thinks a fixed value is fine for the discard timer, it is not clear how to configure this. Nokia agrees.
- Lenovo supports having the value configurable.

R2-1912603 Discussion on SON ANR remaining open issues Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

RACH/RLF

R2-1912604 Discussion on SON RACH and RLF remaining open issues Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

7.2.7 Improved multi-carrier operation

Including support of Msg3 quality reporting for non-anchor access.

Including signalling to indicate on a non-anchor carrier for paging a set of subframes which will contain NRS even when no paging NPDCCH is transmitted.

Msg3

R2-1912601 Discussion on DL channel Quality remaining open issues Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

Proposal 1*: Update the notes in sections 5.3.3.3, 5.3.3.3a, 5.3.3.3b and 5.3.7.4 according to RAN4 agreements and remove the Editor's note.*

Proposal 2: *The codepoint/index of "10001" is used for MAC CE DL quality report command.*

Proposal 3: *Design the MAC CE DL Channel quality report with 4 reserved bits and one 4 bit field CQI-NPDCCH-NB.*

Proposal 4: *The coding of CQI-NPDDCH-NB follows the same definition as in RRC and is described in a table in MAC.*

- QC suggests a reference could be added to the table in RRC. Huawei thinks the type is enumerated in RRC, but it could be OK.

Proposal 5: *The UE starts the DL channel quality measurement upon reception of the MAC CE DL channel quality report command.*

- QC understands the MAC CE is received to trigger reporting and that is when the measurements start, then at some point the UE will receive a grant + UE measures on the NPDCCH containing the grant and reports this. Huawei agrees and indicates that the proposal is not entirely accurate.

Proposal 6*: For NB-IoT, the new MAC CE DL channel quality report has the next priority after MAC CE for BSR*

Agreements:

- Update the notes in sections 5.3.3.3, 5.3.3.3a, 5.3.3.3b and 5.3.7.4 according to RAN4 agreements and remove the Editor's note.
- The codepoint/index of "10001" is used for MAC CE DL quality report trigger.
- Design the MAC CE DL Channel quality report with 4 reserved bits and one 4 bit field CQI-NPDCCH-NB.
- The coding of CQI-NPDDCH-NB follows the same definition as in RRC, and MAC spec refers to the table in RRC.
- The UE starts to perform DL channel quality measurements upon reception of the MAC CE DL quality report trigger.
- The reporting of DL channel quality measurements occurs when the UE receives a grant. The measurement procedure is defined in RAN4.
- For NB-IoT, the new MAC CE DL channel quality report has the next priority above "data from any Logical Channel, except data from UL-CCCH"

R2-1912905 Remaining issues of quality report for non-anchor access ZTE Corporation, Sanechips discussion Rel-16 NB_IOTenh3-Core]

- Proposal 2 covered in the Huawei paper.

Proposal 1: For non-anchor carrier quality report in idle mode, the RRC-MAC interactions for RRC Msg3 update can be left to UE implementation, which is same as that of anchor carrier.

- Huawei think MAC spec should define the Msg3 buffer is updated, this is not exactly like the RRC report. Ericsson agrees.

Proposal 3: It's no need to specify whether to consider the size of quality report in the BSR, which can be left to UE implementation.

- Huawei and QC think the BSR is clearly defined in the specification so not up to UE implementation, and no issue.

RRM

R2-1912602 Discussion on RRM measurements on non-anchor carrier Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

Proposal 1: Introduce support for idle measurements on non-anchor paging carrier in Rel-16.

Proposal 2: Introduce an indication in SIB2 to enable idle mode measurements on non-anchor paging carriers.

- ZTE thinks it could be implicitly enabled based on NRS configuration on the non-anchor paging carriers. QC think implicit configuration is fine. Nokia agree.
- Ericsson think the separate indication could be useful.

Proposal 3: Support of idle mode RRM measurements on non-anchor paging carriers is optional at the UE without capability reporting.

Proposal 4: Wait for RAN4 to decide whether parameter nrs-PowerOffsetNonAnchor-r14 should be extended to provide a finer granularity.

Proposal 5: There is no need to capture any additional condition related to positioning measurements.

- Ericsson think there might be some impact in 36.305 so would like to double-check.

Proposal 6: When the UE performs NRSRP measurements on a non-anchor carrier, it translates the NRSRP measurements on a non-anchor paging carrier to the equivalent NRSRP measurements of the anchor carrier using the parameter nrs-PowerOffsetNonAnchor.

Proposal 7: introduce a new Srxlev formula in the S criterion for when the UE performs NRSRP measurements on a non-anchor carrier:

Srxlev = (Qrxlevmeas - nrs-PowerOffsetNonAnchor) – (Qrxlevmin + Qrxlevminoffset) – Pcompensation - Qoffsettemp

Proposal 8: Introduce a new S criterion for when the UE performs RRM measurements on a non-anchor carrier that only checks Srxlev > 0.

- Huawei clarifies this means that RSRQ is not checked for suitability based on the non-anchor carrier. QC wonders how we would then check if the cell quality is deteriorating.

Proposal 9: The above rules for performing idle mode measurements on non-anchor carrier are captured in TS 36.304.

R2-1913097 Non-anchor carrier measurements for RRM Qualcomm Incorporated discussion Rel-16 NB_IOTenh3-Core

- P1-4, 7 covered in Huawei paper

Proposal 5: While relaxed monitoring criterion is not meet, UE performs NRSRP measurement at least on anchor carrier.

Proposal 6: While relaxed monitoring criterion is meet, UE may perform NRSRP measurements on non-anchor carrier only.

Proposal 8: While UE performs measurements on non-anchor carrier, it may occasionally perform search/measurement on anchor carrier for the purpose of frequency synchronization.

Agreements

- Introduce support for idle mode serving cell measurements on non-anchor paging carrier in Rel-16.
- Idle mode serving cell measurements on non-anchor paging carriers is implicitly enabled based on presence of the NRS configuration.
- Support of idle mode RRM measurements on non-anchor paging carriers is optional at the UE without capability reporting.
- The UE may use only NRSRP measurements on a non-anchor carrier while the neighbour cell relaxed monitoring criterion is met, otherwise UE uses NRSRP measurement on anchor carrier
- When the UE performs NRSRP measurements on a non-anchor carrier, it translates the NRSRP measurements on a non-anchor paging carrier to the equivalent NRSRP measurements of the anchor carrier using the parameter nrs-PowerOffsetNonAnchor
    - Update Qrxlevmeas in the table in 36.304 to capture this
- When the UE is only performing NRSRP measurements on a non-anchor carrier, the Squal criteria is not applicable.

R2-1913409 NRS Signalling Configuration Ericsson discussion Rel-16

R2-1913417 S-Criterion for Non anchor Carrier based NRS measurements Ericsson discussion Rel-16

7.2.8 Inter-RAT cell selection

Including power efficient NB-IoT mechanism which would assist idle mode inter-RAT cell selection for NB-IoT to and from LTE, LTE-MTC and GERAN

Late/withdrawn

R2-1913626 On Inter-RAT assistance information for NB-IoT and LTE(-eMTC) Sequans Communications discussion Rel-16 NB_IOTenh3-Core R2-1911386 Late

7.2.9 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of NB-IoT with NR

7.2.10 Connection to 5GC

7.2.10.1 Indication of supported CIoT features and other common aspects

Additional information in SIB to indicate supported CIoT features; indication of CIoT features supported by the UE in RRC, and other common aspects for NB-IoT and MTC including UAB, Support of restriction of use of Enhanced Coverage and Delivery of Expected UE Behaviour information to the RAN.

Indication of supported CIoT features and other common aspects for MTC and NB-IoT are treated jointly under this AI.

PDCP Type

R2-1913123 PDCP type when connecting LTE-M and NB-IoT to 5GC Ericsson discussion NB_IOTenh3-Core, LTE_eMTC5-Core

- QC think that for eLTE NR PDCP makes sense due to the QoS requirement, but this is not a requirement for eMTC or NB-IoT. SA3 is discussing integrity protection but for now we don't need to consider that. At least for NB-IoT there is no advantage of using NR PDCP. Huawei agrees, and think that NR PDCP would have to be modified to support NB-IoT – by not supporting it we simplify both PDCP and the related configuration. LG agrees that for NB-IoT it is not needed but for eMTC it could be reconfigured by eNB so makes sense to use the same as for eLTE. ZTE agrees.
- Ericsson think that NR PDCP would be better for future compatibility.
- Intel wonder if NR PDCP would be needed for integrity protection. QC think that if integrity protection is introduced by SA3 it will apply to both NR and LTE PDCP, so this is not a motivation to introduce NR PDCP for NB-IoT.
- Ericsson thinks that LTE PDCP would require changes to support integrity protection anyway.

R2-1912619 PDCP for NB-IoT and eMTC connected to 5GC Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

- QC wonders whether the same capability would be shared between EPC and 5GC or whether we should have a separate capability bit.

Agreements:

- Use NR PDCP for LTE-M devices connected to 5GC.
- NR PDCP support is not specified for NB-IoT devices connected to 5GC.
- NB-IoT UE supports a maximum of two DRBs when connected to 5GC.
    - FFS whether this is indicated by a new capability or the existing UE capability, multipleDRB-r13.

R2-1912852 PDCP type to be used for NB-IoT and eMTC connected to 5GC Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1910473

AS RAI

R2-1912849 Access Stratum Release Assistance Indicator for eMTC and NB-IoT connected to 5GC Qualcomm India Pvt Ltd discussion Rel-16 LTE_eMTC5-Core

- LG and ZTE wonders if the legacy BSR=0 can be used. Huawei think this currently would not support. QC think it would require additional bits and so would not be possible so RRC would be the logical way.
- Ericsson agree the legacy BSR is not enough, but it may not be necessary to use RRC.
- QC think that if TBS is not large enough then MAC cannot be used in Msg3.
- Huawei prefer MAC so that we avoid impacting many RRC messages. Ericsson agree.
- QC wonder if we use the same LCID to indicate 2 different values then would we need a codepoint for whether CQI is reported. Huawei think we already have a codepoint which indicates no measurement.
- Huawei think also there is only 1 spare bit in Msg3 for non-EDT case. ZTE think this is for UP solution only and in which case the UE would send this when establishing a connection. Huawei think this is needed for EDT case.
- QC think whatever we agree there should be a single method for all the cases. Ericsson think we just need to introduce and no need to discuss which cases it is supported. Intel think we need to. QC think there is no new procedures needed from CN point of view. Nokia think there is no need to indicate at both NAS and AS, so it is perhaps not needed for the CP case. Huawei think that this is correct but can send only the AS indication if it is applicable. ZTE also don't want 2 indications with possibly conflicting meaning.
- Intel wonders what the RAI is used for.

Proposal 1. Introduce an optional 1bit Release Assistance Indicator (RAI) in RRC messages.

Proposal 2. Absence of the RAI field indicates 'no information', value "0" indicates 'no further UL & DL higher layer PDUs' and value "1" indicates "No further UL, 1 more DL higher layer PDUs expected".

Proposal 3. RRC RAI is applicable for both UP and CP optimization solutions.

Proposal 4. Introduce optional Release Assistance Indicator (RAI) in critical extension of RRCEarlyDataRequest message, RRCConnectionSetupComplete message, ULInformationTransfer, RRCConnectionResumeRequest for UP-EDT, RRCConnectionResumeComplete-r15 message for eMTC/NB-IoT UEs connecting to 5GC.

Proposal 5. Introduce optional Release Assistance Indicator (RAI) in a 'standalone' RRC message, e.g. new RRC message or non-critical extension of UEAssistanceInformation message.

Agreements:
- Introduce a MAC mechanism with 2 bits for RAI

R2-1912616 Access Stratum Release Assistance Indicator for eMTC and NB-IoT connected to 5GC Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

UAC

R2-1912618 Unified access control for NB-IoT and eMTC connected to 5GC Huawei, HiSilicon discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core

Proposal 1: For NB-IoT, up to 64 access categories are defined for support of UAC, same as for eLTE.

Proposal 2: For NB-IoT, barring time and barring factor mechanism in UAC is not used for barring access category and barring bitmap is used for each access category.

Proposal 3: For NB-IoT UAC, adopt a 10 bit bitmap bitmap corresponding to access classes 0-9 (i.e. IMSI mod 10) to allow granular barring within each access identity.

- QC think there is no access class 0-9 in 5GC and we don't need 10 bits, we can just base on access identity and category. LG prefer to re-use the eLTE method.
- Huawei think the proposal is to use 10 bits based on IMSI, not necessarily that access classes are used.
- Huawei thinks that we either need a barring factor and barring time or a bitmap to dstribute UEs.
- Ericsson think this proposal is only for distributing UEs, otherwise we need to bar all UEs or none. IT has no impact on SA or other requirements. We need ssome method for distributing UEs.
- DoCoMo agrees wwith the intention, to distribute UEs and have some granular control of barring. All or none would not be acceptable. Fraunhofer agrees with DoCoMo.
- ZTE thinks the category disributes UEs. Huawei thinks 90% of UEs will be category 1 in NB-IoT.
- QC thinks that the AS doesn't know the UE identity when initiating access.

Proposal 4: For NB-IoT, uac-BarringForAccessIdentity using a 7 bit map barring corresponding to access identities 1, 2, 11 to 15 is re-used.

Proposal 5: For NB-IoT, the parameter uac-AC1-SelectAssistInfo is used to signal whether Access Category 1 applies to the UE.

Proposal 6: For NB-IoT, do not use UAC-BarringInfoSetList, but instead signal uac-BarringBitmap and uac-BarringForAccessIdentity per access category.

- QC thinks that access category and identity are independent. Huawei agree but think this is how to signal in eLTE also. QC thinks NR and eLTE are not implemented correctly and we should not copy/paste the mistake.

Proposal 7 : For NB-IoT, per-PLMN barring is signalled using a simple list of barring parameters for each PLMN.

Proposal 8: For NB-IoT, UAC parameters are provided in SIB14-NB.

- LG thinks a new SIB may be introduced. Huawei thinks this depends on whether we have a bitmap in which case the SBI14 should be used, or a factor in which case it does not need to be.

Proposal 9: For NB-IoT, introduce a separate bit in MIB-NB, ab-Enabled-5GC, to indicate whether UAC is enabled in SIB14-NB.

Proposal 10: For eMTC, SIB25 follows the generic system information update mechanism and there is no need for specific indication.

Proposal 11: Access barring per RSRP is supported for eMTC and NB-IoT.

Proposal 12: For eMTC, ab-PerNRSRP is introduced in SIB25.

Proposal 13: For NB-IoT, the existing ab-PerNRSRP in SIB14-NB can apply to UAC.

Proposal 14: For NB-IoT and eMTC UEs in RRC_CONNECTED, the UE perfoms access barring check based on the UAC parameters acquired prior to entering RRC_CONNECTED.

- Huawei clarifies that until now the barring is only checked prior to entering connected mode and the proposal relates to the UAC requirement to check barring while UE is already in connected.
- Ericsson wonder if we assume the information is broadcast even when not enabled, and whether it meets the intention if the parameters can't be changed in RRC_Connected.

Proposal 15: For eMTC UEs in RRC_INACTIVE, the UE is required to use a valid version of SIB25 to perform access barring check.

Agreements

- For NB-IoT, up to 64 access categories are defined for support of UAC, same as for eLTE.
- For NB-IoT, will support either barring factor as in eLTE or 10 bit bitmap bitmap as in NB-IoT to distribute UEs. FFS which method.
- For NB-IoT, uac-BarringForAccessIdentity using a 7 bit map barring corresponding to access identities 1, 2, 11 to 15 is re-used.
- For NB-IoT, the parameter uac-AC1-SelectAssistInfo is used to signal whether Access Category 1 applies to the UE.
- FFS: For NB-IoT, do not use UAC-BarringInfoSetList.
- FFS: For NB-IoT, uac-BarringBitmap and uac-BarringForAccessIdentity per access category as in eLTE
- Access barring per RSRP is supported for eMTC and NB-IoT.

✉ **[107bis#89][NB-IoT R16] Open issues on UAC in NB-IoT (Huawei)**
Open issues on UAC in NB-IoT
Intended outcome: Report
Deadline: Next Meeting

R2-1912853 UAC information change indication in 5GC Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1910467

R2-1912855 Unified access control for NB-IoT connected to 5GC Qualcomm India Pvt Ltd discussion Rel-16 NB_IOTenh3-Core

Cell reselection

R2-1913364 Mobility enhancements for Connectivity to 5GC for MTC and NB-IoT Sony discussion Rel-16 NB_IOTenh3-Core

R2-1912851 Idle Mode cell reselection based on CN type supported Qualcomm Incorporated discussion Rel-16 LTE_eMTC5-Core, NB_IOTenh3-Core R2-1910469

General

R2-1912860 Remaning issues on the support of 5GCN connectivity Intel Corporation discussion Rel-16 LTE_eMTC5-Core

7.2.10.2 Other

Including support of Inter-UE QoS for data over NAS (resource prioritization between different NB-IoT UEs), signalling to support 5GC in NB-IoT, e.g. RRC establishment, SIBs, and other NB-IoT specific aspects

R2-1912615 Support of RRC connection Re-establishment for the Control plane for NB-IoT connected to 5GC Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

7.2.11 UE specific DRX

Specify support of UE specific DRX and consider expanding the current DRX range

R2-1912600 Introduction of UE specific DRX for NB-IoT Huawei, HiSilicon discussion Rel-16 NB_IOTenh3-Core

Proposal 1: Remove restrictions on using UE specific DRX for NB-IoT UEs in TS36.300, TS36.304 and TS36.331.
Proposal 2: It is up to SA2/CT1/RAN3 to decide whether and how to extend the value range of UE specific DRX cycle.

R2-1913098 Support for UE specific DRX in NB-IoT Qualcomm Incorporated discussion Rel-16 NB_IOTenh3-Core

Proposal 1: At NAS level UE should receive indication whether core network accepted or rejected UE specific DRX.

Proposal 2: For NB-IoT define set of UE specific DRX values same as those defined for NB-IoT cell specific DRX values.
Proposal 3: For NB-IoT define solution to avoid PO overlap due to increased number of repetitions required in extended coverage.

- Sequans wonder if this issue is applicable to both EPS and 5GC. QC confirms.

Proposal 4: For NB-IoT introduce UE specific DRX only for 5GC from Release 16.
Proposal 5: Send LS to SA2/CT1 to highlight the identified issues and request feedback. A draft LS is provided in [5].

Discussion on above 2 papers:

- Sequans agrees with QC that there is a backwards compatibility issue, and there may be additional power consumption at the UE if we just remove the restriction because UEs might have different understanding of paging carrier, paging frame.
- HW thinks it is important to support for EPC, not only 5GC – this is indicated in the LS from RAN. HW think the backwards compatibility issue can be addressed, but the issues raised are NAS level and the relevant groups have already received the LS.
- CMCC support Huawei and think EPS and 5GC should support this. Ericsson agree.
- QC thinks there is significant work for other groups and we should send an LS to make sure the work is triggered, and we can't make the RAN2 changes without that. Huawei thinks there has already been an LS from RAN and contributions in other groups.
- Intel wonders whether we can solve the backwards compatibility issue at RAN without changing NAS.
- Huawei thinks we can only address the RAN part, while other parts will be discussed in the relevant groups. Sequans wonders whether there is more impact in RAN2 than just removal of the restrictions as proposed by Huawei.

⇒ **Will wait for progress from SA2/CT1**

R2-1913099 Draft LS on UE specific DRX in NB-IoT Qualcomm Incorporated LS out Rel-16 NB_IOTenh3-Core To:SA2, CT1

Late/withdrawn

R2-1913627 NB-IoT UE Specific DRX Support Sequans Communications discussion Rel-16 NB_IOTenh3-Core Late

7.2.12 Other

Others

7.3 Even further mobility enhancement in E-UTRAN

(LTE_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: RP-190921)
Tdoc Limitation: see 6.9 above.

7.3.1 Organizational

Including incoming LSs, running CR proposals and rapporteur inputs (if any)

R2-1912034 LS on enhanced Make-Before-Break data forwarding (R3-194768; contact: Ericsson) RAN3 LS in Rel-16 LTE_feMob, NR_Mob_enh To:RAN2

ACTION: RAN3 respectfully asks RAN2 to consider RAN3 agreement on early data forwarding for enhanced Make-Before-Break handover, and to give feedback on the per DRB enhanced Make-Before-Break option. RAN3 also kindly asks RAN2 to study the possible solutions enabling the source node to provide the DL and UL COUNT values, known by the UE, to the target node.

- Nokia thinks we should cover UL/DL COUNT in the LS reply to RAN3. MediaTek agrees.

- Samsung thinks we could have an email disucssion for te RAN3 LS to better consider UL/DL COUNT for the reply
- Ericsson thinks the issue is about HFN to be used for encryption at the UE side.
- Nokia indicates that RAN3 discussion assumed UE knows the HFN and assumed RAN2 would make the decision. RAN3 would appreciate response.

⇨ **What to reply to RAN3 on COUNT to be included in offline discussion 109. (Might require email discussion to resolve the RAN2 aspects.)**

R2-1913207 Further consideration on reply LSs from RAN1 and RAN4 discussion Huawei, HiSilicon,China Telecom Rel-16 LTE_feMob-Core

(moved from 7.3.2.3)

Output of email discussion [107#76][LTE/feMOB] Running Stage-2 CR for LTE mobility (China Telecom)

R2-1912417 Running 36.300 CR for LTE_feMob 36.300 15.7.0 LTE_feMob-Core China Telecom Corporation Ltd. draftCR Rel-15

⇨ Endorsed

R2-1912778 Stage 2 TP for DAPS based RUDI NR_Mob_enh-Core Intel Corporation draftCR Rel-16 38.300 15.7.0

(moved from 7.3.2.2.1)

✉ **[107bis#10][LTE MobE] Updated Stage-2 running CR LTE mobility (China Telecom)**
Update running CR based on this meeting's agreements.
Intended outcome: Endorsed running CR
Deadline: 1 week

=> Endorsed in R2-1914007.

Output of email discussion [107#77][LTE/feMOB] Running RRC CR for LTE mobility (Ericsson)

R2-1913400 Running CR for Introduction of Even futher Mobility enhancement in E-UTRAN Ericsson India Private Limited draftCR Rel-16 36.331 15.7.0 LTE_feMob-Core

⇨ To be continued in the email discussion

✉ **[107bis#14][LTE MobE] Updated RRC running CR for LTE mobility (Ericsson)**
Update running CR based on this meeting's agreements.
Intended outcome: Endorsed running CR
Deadline: Next meeting

7.3.2 Reduction in user data interruption (RUDI) during handover for dual active protocol stack (DAPS)

RUDI handovers using DAPS for LTE and NR are treated jointly in under this AI.
No documents should be submitted to 7.3.2. Please submit to 7.3.2.x.

7.3.2.1 User plane aspects of RUDI HO

No documents should be submitted to 7.3.2.1. Please submit to 7.3.2.1.x.

7.3.2.1.1 PDCP/RLC aspects of RUDI HO

Companies should provide their views to the email discussion and contributions submitted to this agenda items should focus on aspects that were not covered by the email. Including outcome of email discussion [107#44][LTE and NR /feMOB] Discussion on PDCP details for RUDI HO (MediaTek/Huawei). Including PDCP/RLC aspects not covered by the email discussion.

Outcome of email discussion [107#44][LTE and NR /feMOB] Discussion on PDCP details for RUDI HO (MediaTek/Huawei).

R2-1912966 Report of email discussion: [107#44][LTE and NR /feMOB] Discussion on PDCP details for RUDI HO Mediatek Inc., Huawei, discussion

(moved from 7.3.2.2.1)

Agreements

1 Confirm that the agreements made in RAN2#107 meeting for LTE RUDI handover with DAPS are applicable to NR RUDI handover.

Security handling:

2 During RUDI HO with DAPS, the end-marker packet to differentiate the security keys is not needed.

3 For DRBs, UE derives the security keys for the target cell and configures the lower layer associated to the target cell to apply the security keys/algorithms upon reception of HO command, while maintaining the security keys/configuration of the source cell. FFS whether the same process can be applied to SRBs.

4 For DRBs, UE releases the security keys/configuration of the source cell along with the release of source protocol.

5 For DL and UL data transfer, UE uses the security keys and algorithms of the source cell and the target cell in parallel from HO successful completion to source cell release.

Discussion

Proposal 5

- vivo thinks this can be either after RACH success of PDCP signalling from network. Intel thinks this doesn't matter.

Agreements

ROHC handling:

6 If drb-ContinueROHC is not configured, UE has two separate ROHC instances, one for the source cell and the other for the target cell.

- UE uses one ROHC compressor instance for UL data transfer;
- UE uses two ROHC decompressor instances for DL data transfer.

7 UE is allowed to transmit the ROHC feedback through the source cell UL if there is DL data on-going from the source cell.

8 The potential ROHC failure issues in DL and UL (if they are valid) are addressed by UE/network implementation without spec impact.

9 *drb-ContinueROHC* is not supported for DAPS in Rel-16.

Discussion

Proposal 6:

- LGE wonders if one decompressor could be used for UL if DL uses two. MediaTek thinks only one PDCP is active for UL due to UL switching.

Proposal 7:

- LGE thinks we should discuss this after we decide whether to separate RoHC entities.
- Samsung wonders how this works with proposal 6.

Proposal 8:

- Huawei thinks only IR packets could be used to avoid any issues so we would need to specify something. LGE agrees. Intel thinks we never specified which RoHC packets are used but using IR makes sense. Doin't need to specify anything.
- vivo thinks there is no RoHC decompression failure. OPPO thinks it can happen but agrees with the proposal.

Proposal 10 Stick to current modelling of reordering in LTE and NR that reordering is performed before header decompression.

Proposal 11 For both LTE and NR, the current PDCP reordering function can be reused to reorder the PDCP PDUs received from the source cell and the target cell when DAPS is configured during HO.

Proposal 12 In NR, one common PDCP reordering is used to realize in-order delivery for header decompression and in-order delivery of PDCP SDUs to upper layer. FFS which part of operation is left to UE implementation.

Agreements for NR and LTE

Reordering:

10 Stick to current process of reordering and RoHC in LTE and NR.

11 For both LTE and NR, the current PDCP reordering function can be reused to reorder the PDCP PDUs received from the source cell and the target cell when DAPS is configured during HO.

Agreements for NR

Reordering:

12 One common PDCP reordering is used to realize in-order delivery for header decompression and in-order delivery of PDCP SDUs to upper layer. FFS which part of operation is left to UE implementation.

Discussion

- NEC thinks “current modelling” is misleading. vivo thinks there is no header decompression before reordering. Nokia wonders if we are supporting RoHC for bearer with reordering, which was not supported before. MediaTek thinks this is about RoHC and reordering only.
- Intel thinks duplication detection is done differently in NR and LTE.

Agreements for NR

UL new data transmission switching:

13 The indication to switch the UL new data transmission and will be specified in MAC.

14 After UL new data transmission switching, data available for transmission/the PDCP data volume is indicated to the MAC entity associated to the target eNB/gNB. UE starts retransmission of packets from the earliest unacknowedged SDU of source cell.

FFS how this is done in specification.

FFS if something different is needed for LTE than NR

15 After UL new data transmission switching, the size of the PDCP control PDUs containing the ROHC feedback to the source cell is indicated to the MAC entity associated to the source eNB/gNB as data available for transmission/the PDCP data volume.

Discusssion

P13

- LGE thinks we should specify the indication because PDCP entity has several tasks to perform at the UL switching. vivo agrees and how this is done should be discussed together with the running CRs.

P14:

- LGE thinks we should just follow current specification with this. vivo agrees that selective retransmission is not currently supported.
- Nokia wonders why we HARQ retransmit to source if we retransmit in target anyway.
- Nokia wonders if PDCP re-establishes Tx part but not Rx part. Currently that is not supported.
- Ericsson thinks all unacknowledged PDCP SDUs should be retransmitted.
- ZTE wonders how this affects BSR – could UE send BSR=0 in Msg3? Nokia thinks UE reports at least RRCComplete from RLC buffer and for UL grant of RRC message could include padding BSR.

Agreements

Single PDCP entity supporting DAPS:
16 The single PDCP entity for DAPS is modelled to have separate security/ROHC functions in the specification.
17 At the UE side for DRB, the normal PDCP entity is changed to the single PDCP entity supporting DAPS upon reception of HO command; the single PDCP entity supporting DAPS is changed to normal PDCP entity upon release of the source cell.
18 The change between the normal PDCP entity and the single PDCP entity supporting DAPS need to be captured in both RRC and PDCP. FFS on how to capture.

Working assumption
19 DAPS configuration per DRB is agreed as working assumption as long as the specification impact is small.

Discussion
Proposal 19
- LGE thinks some DRBs might not need DAPS HO. Huawei thinks current configuration is per UE. Intel thinks the specification impact is smaller from per UE handling. Ericsson thinks RAN3 considers most procedures per DRB but this is not essential.
- Nokia thinks this depends on QoS requirement of DRB. Also RLC modes are per DRB.
- Samsung thinks all UM and AM DRBs should be considered jointly.
- vivo thinks MAC needs to differentiate PDCP entities with per DRB.
- CATT thinks defining all actions per DRB create complexity. Nokia thinks many actions are already per DRB.

Agreements
Impact on network and LS to RAN3:
20 Send LS to RAN3 to inform them of RAN2 agreements on PDCP agreements.

Discussion
- Ericsson thinks we don't need to send LS on data forwarding but would be good to inform of the working assumption. Samsung reminds we should treat RAN3 LS as well before responding.

Agreements
Support of UDC
Proposal 21 FFS whether and what will specify UDC for RUDI HO. Papers proposing to support UDC during RUDI HO should provide details for the support.

CBF: Offline discussion 109 (Huawei): Draft LS to RAN3 on RAN2 agreements. Also discuss what we will call this feature (RUDI, DAPS or something else?). (Draft LS in R2-1913992 and offline discussion outcome on feature naming in R2-1913994)

R2-1913992 Draft LS on RAN2 agreements on LTE/NR mobility enhancements Huawei LS out Rel-16 LTE_feMob-Core, NR_Mob_enh-Core To:RAN3
Proposal 2: As there is no consensus, RAN2 don't send reply LS to RAN3 on COUNT.
- Huawei clarifies that COUNT value is not needed due to RAN3 progressing already.
- Nokia thinks we shouldn't assume what RAN3 did or didn't. Should respond to questions.
- Intel thinks we didn't discuss the details of this issue.
- Qualcomm thinks we could just reply we haven't concluded.

✉ **[107bis#15][NR LTE MobE] LS to RAN3 on RAN2 agreements (Huawei)**

Capture RAN2 agreements affecting RAN3 and discuss whether or what to include on COUNT as per RAN3 request earlier.
Intended outcome: Approved LS to RAN3
Deadline: 2 weeks

=> Email summary endorsed in R2-1914024
=> LSout approved in R2-1914025

R2-1913994 Result of offline discussion 109 on RAN2 agreements for interruption reduction feature name Huawei discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

Agreements
1 RAN2 adopts DAPS HO as the feature name used in all running CRs and LSs.

R2-1913726 Draft CR for 36.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. draftCR Rel-16 36.323 15.4.0 LTE_feMob-Core

R2-1913727 Draft CR for 38.323 on supporting DAPS handover Huawei, HiSilicon, Mediatek Inc. draftCR Rel-16 38.323 15.6.0 LTE_feMob-Core

✉ **[107bis#55][NR LTE MobE] Running LTE and NR PDCP CRs NR mobility (Huawei)**
Update running CR based on this meeting's agreements (not including conditional PSCell aspects).
Intended outcome: Running CRs for next meeting.
Deadline: Next Meeting

R2-1913728 Draft LS on UL data forwarding and COUNT initialization Huawei, HiSilicon, Mediatek Inc. LS out Rel-16 LTE_feMob-Core To:RAN3

Bearer handling:

R2-1912968 Bearer handling for RUDI during HO with DAPS Mediatek Inc., Intel Corporation, Qualcomm Incorporated,Charter Communications, Apple discussion R2-1909180

Agreements for LTE and NR
1 For each DRB configured with DAPS, upon reception of handover command with DAPS, UE establishes a RLC entity, MAC entity and an associated DTCH logical channel for the target cell. UE keeps the RLC bearer configuration for the source cell.
2 For DRBs, upon reception of handover command with DAPS, UE reconfigures the PDCP entity for DAPS instead of performing PDCP re-establishment.
3 Upon reception of handover command with DAPS, UE associates the RLC entities with the security configurations and the ROHC profiles of PDCP configured by the source cell and the target cell respectively.
4 Upon release of the source cell, UE releases the physical channel configuration; reset MAC of the source cell and release the source MAC configuration; release all RLC entities and logical channels associated to the source cell.

Discussion
Proposal 1:
- Intel thinks we should also create target MAC entity.

Proposal 2
- LGE wonders if this is only for DRB. Mtek clarifies that's correct understanding, SRBs are not considered.
- CATT wonders what this means: Do we have two versions of PDCP? Mtek clarifies this is not the case and is mainly about UE modelling.
- Futurewei wonders how we handle dual functions within single PDCP.

Proposal 4:

- vivo thinks UE could autonomosly release the source link. Huawei thinks we first need to agree whether there is a source cell indication of release. Nokia thinks this is only UE behaviour.
- Samsung thinks we should first discuss release of source configuration.

Proposal 5:
- vivo asks why we don't reset MAC: Intel clarifies this is similar to inter-RAT HO. No need to reset if the MAC is gone.

R2-1913795 PDCP/RLC Re-establishment in DAPS Handover ETRI discussion Rel-16 NR_Mob_enh-Core

R2-1913203 Considerations on user plane for DAPS Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

Data forwarding

R2-1913157 On early data forwarding and per-DRB eMBB Handover Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_feMob-Core

R2-1913800 On the need of earlier packet forwarding LG Electronics France discussion NR_Mob_enh-Core

(moved from 6.9.2)

R2-1912783 DL data forwarding in DAPS based RUDI HO Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core

(moved from 7.3.2.3)

R2-1913796 Data Forwarding Options and Interruption Time ETRI discussion Rel-16 NR_Mob_enh-Core R2-1909233

R2-1912354 Data forwarding in RUDI HO Ericsson discussion Rel-16 NR_Mob_enh-Core

PDCP impacts

R2-1913053 DL PDCP handling for RLC AM NEC discussion Rel-16 LTE_feMob-Core

R2-1912415 Source PS Release of PDCP DAPS during RUDI Handover Nokia, Nokia Shanghai Bell discussion Rel-16 Late

R2-1913841 Discussion on PDCP impacts for eMOB/feMOB LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

R2-1912345 Discussion on the selective PDCP retransmission at UL PDCP PDU switching vivo discussion Rel-16 LTE_feMob-Core

R2-1912348 Issue on the potential duplicated PDCP packets at the network side vivo discussion Rel-16 LTE_feMob-Core

R2-1912912 Discussion on details of PDCP for DAPS China Telecommunications discussion

R2-1912130 Remaining PDCP issues for DAPS CATT discussion Rel-16 LTE_feMob-Core

Handling of RoHC

R2-1912346 Discussion on the ROHC failure issue vivo discussion Rel-16 LTE_feMob-Core

R2-1912355 ROHC handling in RUDI HO Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-1913206 Problems of ROHC handling for DAPS Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core

R2-1912347 Clarificaiton on the reordering after ROHC decompression for NR PDCP vivo discussion Rel-16 LTE_feMob-Core

RLC impacts (including RLC UM support)

R2-1912357 Handover interruption reduction for UM bearers Ericsson discussion Rel-16 NR_Mob_enh-Core

Working assumption
1 RLC UM with PDCP SN number continuity is supported for DAPS. We do not attempt to make RLC UM lossless by introducing RLC AM mechanisms.

⇨ Proponents should bring CRs for this to next meeting

Discussion
Proposal 1:
- vivo wonders what the impact of RLC UM is to UE. Ericsson thinks it's mainly related to PDCP status report. LGE agrees.
- OPPO thinks this is not needed. MediaTek agrees.
- Intel would like to see the changes first. Introducing RLC retransmissions would be not desirable as we already have AM mode.
- LGE thinks we only need PDCP retransmissions for RLC UM. Qualcomm agrees.
- ZTE thinks any PDCP implications could be independent of DAPS.
- Nokia thinks we don't need UM to be lossless. NEC agrees. Ericsson agrees.

R2-1913054	DL PDCP handling for RLC UM	NEC	discussion	Rel-16	LTE_feMob-Core
R2-1913227	PDCP handling and RLC UM support for RUDI HO	Nokia, Nokia Shanghai Bell	discussion	Rel-16	LTE_feMob-Core
R2-1913843	Dicussion on RUDI HO for UM DRB	LG Electronics Inc.	discussion	Rel-16	NR_Mob_enh-Core
R2-1913882	On RLC UM for RUDI HO	SHARP Corporation	discussion	Rel-16	NR_Mob_enh-Core
	(moved from 6.9.2)				
R2-1912970	RLC Impacts analysis with DAPS during HO	Mediatek Inc.	discussion		

7.3.2.1.2 MAC and UL transmission aspects of RUDI HO

Including output of email discussion [107#78][LTE] MAC aspects for LTE mobility (vivo). Companies should provide their views to the email discussion and contributions submitted to this agenda items should focus on aspects that were not covered by the email. Including MAC aspects not covered by the email discussion, e.g. whether LTE design can also apply for NR (where not already covered by email discussion). Including discussion on the requirement of UE RF capability for UL and whether 1Tx is also considered and how (e.g. explicit UL TDM pattern)?
Including discussion on whether the outcome of 107#78 also applies for NR.

Outcome of email discussion [107#78][LTE] MAC aspects for LTE mobility (vivo):

R2-1912336	Summary of EmailDis-78 on MAC aspects for mobility enhancement	vivo (rapporteur)	discussion	Rel-16	LTE_feMob-Core

Discussion
- Futurewei wonders if all proposals can apply for both LTE and NR. vivo thinks all proposals can apply for both.

Proposal 2
- Intel thinks this is only needed due to previous agreement.

Proposal 3
- Nokia agrees and thinks this proposal covers also P1 and P2. CATT agrees. Huawei agrees.
- OPPO thinks the current agreement was not crystal-clear and the clarification is needed. Intel thinks UL grant in RAR only applies for RRCComplete, not for UP data.
- CATT thinks UE behavour can be define without trying it to reception of UL grant. Only point in time is needed. Futurewei thinks we need to specify the switching point clearly. MediaTek agrees and should try to have as short UL interruption as possible.
- Intel thinks we should allow faster UE implementation.

Proposal 5/6
- Futurewei thinks these are for LTE only because of reordering. MediaTek thinks this is a network issue mostly. Nokia thinks this is confusing. Wonders what the benefit is and would liek to turn these off.
- Futurewei thinks these are not applicable for NR.

Proposal 8:

- CATT thinks we can discuss this when we create the CRs.

Agreements for LTE and NR
1 UE switches the UL PDCP data transmission upon successful RACH procedure (Msg2 for CFRA or Msg4 for CBRA).
2 The UE keeps the UL HARQ (re)transmission of the source link after UL data transmission switching to the target eNB.
3 When an uplink grant indicating the HARQ new transmission is received in the source link after UL data switching, the UE is expected to perform the corresponding UL transmission accordingly.
4 During Rel-16 RUDI handover, the UE only supports two links (i.e. the source MCG link and the target MCG link).

Agreements for LTE
1 RACHless applicability can be discused after procedure has progressed more.

Agreements for NR
2 FFS if Msg.B for 2-step RACH works the same.

⇨ **RLC is discussed separately.**

R2-1912337 Summary of EmailDis-78 on Text Proposal for 38321 of mobility discussion Rel-16 LTE_feMob-Core vivo (rapporteur)

R2-1912338 Summary of EmailDis-78 on Text Proposal for 36321 of mobility discussion Rel-16 LTE_feMob-Core vivo (rapporteur)

⇨ *Not discussed (not fully valid after discusion)*

✉ **[107bis#56][NR LTE MobE] Updated MAC running CR NR/LTE mobility (vivo)**
Update running CR based on this meeting's agreements (not including conditional PSCell aspects).
Intended outcome: Running CRs for next meeting.
Deadline: Next Meeting

UL switching:

R2-1913156 Remaining Details on UL User Data Transmission Switching in eMBB Nokia, Nokia Shanghai Bell discussion Rel-16 LTE_feMob-Core

R2-1912356 Uplink handling in RUDI HO Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-1912505 Further details on dual active protocol stack OPPO discussion Rel-16 LTE_feMob-Core

R2-1912403 UL switching time for DAPS HO OPPO discussion Rel-16 LTE_feMob-Core

UL TDM pattern:

R2-1912838 UL TDM aspects of enhanced MBB HO using Dual Active Protocol Stack Qualcomm Inc, Charter communications, Intel Corp, MediaTek Inc, Apple Inc, Google Inc discussion Rel-16 LTE_feMob-Core R2-1909848

Proposal 1. RAN2 agrees to support both Dual Rx/Dual Tx and Dual Rx/Single Tx RF chain UEs as baseline to support simultaneous reception and transmission with both source and target eNBs during HO execution to meet the requirement of reduced HO interruption time close to 0ms.

Proposal 2. RAN2 agree to adopt UL TDM pattern for DAPS based enhanced MBB HO to enable co-ordinated UL UE's transmission to both source and target eNBs.

Proposal 3. Introduce UE capabilities for UL TDM requirement for various use cases.

Proposal 4. RAN2 agrees to configure UL TDM pattern configuration to DAPS HO UE in HO command message sent from source eNB to UE. FFS about need to specify timeline for TDM activation based on UL TDM pattern decision.

Proposal 5. UE releases UL TDM pattern when target eNB indicates release of source cell stack and target eNB scheduling restrictions for UE will be released.

Proposal 6. RAN2 agrees to send an LS to RAN1 and CC: RAN4 about what is UL TDM pattern to be used for DAPS LTE HO.

Proposal 7. Based on network configuration request, if UE is capable of measuring DL timing delta between source and target eNBs then UE will measure and send timing delta information as part of UE measurement reporting. Network uses this timing delta information to determine UL TDM pattern to avoid collisions.

Discussion
- ZTE thinks TDM pattern is fine if it's optional and procedures work also without it. Ericsson thinks this is only for LTE and NR doesn't need TDM pattern. Nokia agrees and thinks RAN1 has no time for LTE WIDs.
- Intel wonders how this works single UL and FR2-FR2 HOs if we don't have TDM pattern.
- Huawei asks if TDM pattern only applies for intra-frequency HO. For async RAN1/4 had no conclusion.
- ZTE thinks we need a solution where TDM pattern is not provided. CATT agrees this is an optimization. Intel thinks this is needed for async intra-frequency and FR2-FR2.
- Ericsson thinks we could just let network coordinate UL scheduling.
- Samsung thinks we shouldn't have TDM pattern.
- MediaTek thinks we should have network coordination.
- Apple thinks we should support FR2 enhancements. Ericsson thinks even dual Rx is not supported in FR2.
- OPPO asks if there are RAN3 impacts and whether we need to handle the collisions if coordination is not done. ZTE thinks there are no RAN3 impacts and we need to specify the collisions.
- Qualcomm thinks TDM pattern is specified for LTE already. Ericsson thinks that's only for EN-DC, not LTE-LTE, and requires RAN1 work.

Agreements for NR
1 We do not support TDM pattern.
2 We leave it up to network implementation how to coordinate UL scheduling.
3 For single UL transmission, we will not specify rules how UE handles which link to transmit if UL should be sent to both source and target.

Coffee break discussion: Discuss what we can adopt for LTE for TDM pattern (QC).
- Qualcomm indicates that optional TDM pattern is not an issue for LTE network
- Vivo thinks CBRA it is difficult to coordinate UL even if it would work for CFRA.

CBF: Offline discussion 106 (Qualcomm): LS draft to RAN1 on TDM pattern feasibility for LTE. indicate RAN2 couldn't conclude and would like to understand the RAN1 feasibility. (R2-1913991)

R2-1913991 [Draft] LS on uplink TDM pattern feasibility for LTE DAPS Qualcomm Incorporated LS out Rel-16 LTE_feMob-Core To:RAN1 Cc:RAN4
- Qualcomm thinks we need to ask RAN1 to specify this if feasible.
- Nokia thinks RAN2 didn't conclude but shouldn't ask RAN1 to specify. Ericsson agrees leave it up to RAN1 whether to specify.
- Futurewei thinks we should communicate RAN2 agreements.

⇨ **Use "respectfully" instead of "kindly"**
⇨ **With these changes, the LS is approved unseen in R2-1913996**

R2-1912359 TDM pattern for single uplink in RUDI HO Ericsson discussion Rel-16 NR_Mob_enh-Core
(moved from 7.3.2.3)

R2-1912848 [Draft] LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO Qualcomm India Pvt Ltd LS out Rel-16 LTE_feMob-Core To:RAN1 Cc:RAN4

7.3.2.2 Control plane aspects of RUDI HO

No documents should be submitted to 7.3.2.2. Please submit to 7.3.2.2.x.

7.3.2.2.1 RRC procedures during RUDI HO

Companies should provide their views to the email discussion and contributions submitted to this agenda items should focus on aspects that were not covered by the email.
Including outcome of email discussion [107#29][NR/Mob-enh] CP for DAPS (Vivo)
Including discussion on RRC procedures, SRB handling and RLM procedures not covered by the email discussion e.g. whether NR design can also apply for LTE (where not already covered by email discussion).
Including discussion on whether the outcome of 107#29 also applies for LTE.

Outcome of email discussion [107#29][NR/Mob-enh] CP for DAPS (Vivo)

R2-1912349 Summary of Email Discussion on CP for DAPS vivo (rapporteur) discussion Rel-16 LTE_feMob-Core

Agreements
1 T304 is reused to determine the DAPS handover failure.
2 When the DAPS handover fails, the UE report the DAPS handover failure via the source link without triggering RRC connection re-establishment if the source link is still available (i.e. RLF is not declared).
3 When the DAPS handover fails, the UE resumes the DRB data transmission via the source link if the source link is still available.
4 Before the successful completion of the RACH to the target cell, the UE keeps the source link failure detection.
5 Before the successful completion of the RACH to the target cell, when the source link fails, the UE releases the source link (but not source RRC configuration which may be used for re-establishment) and stops any data transmission or reception via the source link.
6 After the successful completion of the RACH to the target cell and before the release of the source link, the UE does not keep the source link failure detection of the source link.
8 As the legacy handover, the UE continues the RACH to the target cell before the DAPS handover failure is claimed, even though the target MAC entity indicates the random access problem.
9 After the successful completion of RACH to the target cell, the target link RLM is the same as the legacy UE
10 After the target cell RACH completion and before the release of the source cell, when the target link fails, the UE triggers RRC connection re-establishment.
11 If both the handover/target link failure and the source link failure occur, the UE triggers RRC connection re-establishment.
12 The UE has only one RRC state/entity.

Discussion

Proposal 2:
- Nokia thinks this wil only increase complexity as the later proposals show. vivo thinks very clear majority thought this should be supported. Ericsson thinks most re-establishment attempts are for target cell instead of source cell so this might increase failures. LGE thinks that since source cell is available it's good to use it.
- Qualcomm thinks this might happen more often with RUDI HO. ZTE thinks this is still HO and the goal is to move to target cell and not to stay in source. Hence, this could make the performance worse.
- Huawei thinks P2 is needed. Samsung thinks this helps to reduce HOFs in network.
- Ericsson thinks this is intra-fquency and not inter-fequency.
- Nokia wonders what's the criteria for "available" to source cell?
- Ericsson thinks there could be some RAN3 impacts.

Proposal 3
- LGE wonders what "resume" means here as source still continues data transmission. vivo clarifies this applies for per-DRB configuration case when not all DRBs stopped source link.

Proposal 5:
- CATT wonders why UE releases the source link. vivo thinks UE keeps RLM to source cell while T304 is running. CATT thinks UE just needs to stop tx/rx but not release source configuration. Futurewei agrees.

Proposal 6:
- LGE thinks RLC retransmission failure could be handled differently.
- Nokia wonders how source performance is ensured of source RLM stops?
- OPPO thinks UE should continue RLM while sending data to source cell.

General CP details

R2-1912776 Control plane consideration for dual active protocol stack (DAPS) based RUDI HO Intel Corporation, Qualcomm Inc, Charter Communications,Mediatek Inc, Apple discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core R2-1910383

R2-1912777 Control plane signaling flow for DAPS based RUDI HO Intel Corporation discussion Rel-16 LTE_feMob-Core, NR_Mob_enh-Core R2-1909572

R2-1912131 Further Considerations on CP of DAPS-RUDI CATT discussion Rel-16 LTE_feMob-Core

R2-1912350 Discussion on the signaling procedures of the RUDI HO vivo discussion Rel-16 LTE_feMob-Core

R2-1912358 Control plane handling in RUDI HO Ericsson discussion Rel-16 NR_Mob_enh-Core

R2-1913205 Considerations on control plane for DAPS Huawei, HiSilicon,China Telecom discussion Rel-16 LTE_feMob-Core

R2-1913798 Source Cell Release in DAPS Handover ETRI discussion Rel-16 NR_Mob_enh-Core

R2-1912294 Lossless Make-Before-Break (MBB) HO support for Low latency, high reliability services Qualcomm Incorporated discussion
(moved from 6.9.2)

R2-1912296 DAPS HO support for simultaneous Tx not feasible scenarios Qualcomm Incorporated discussion
(moved from 6.9.2)

R2-1912299 Supporting per DRB MBB HO configuration Qualcomm Incorporated discussion
(moved from 6.9.2)

R2-1912300 Support Tx sharing during DAPS HO Qualcomm Incorporated discussion
(moved from 6.9.2)

R2-1913799 Control plane management during/after DAPS HO LG Electronics France discussion NR_Mob_enh-Core
(moved from 6.9.2)

R2-1913842 When to apply the target network configurations LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core
(moved from 7.3.2.3)

Source cell RLM during RUDI HO

R2-1913840 Handling of RLF for eMOB LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core

R2-1912504 Discussion on RLM for LTE mobility enhancement OPPO discussion Rel-16 LTE_feMob-Core

R2-1913929 Source RLM handling for RUDI HO with DAPS SHARP Corporation discussion Rel-16 LTE_feMob-Core R2-1911421

R2-1912295 Source connection handling during Make-Before-Break (MBB) HO Qualcomm Incorporated discussion
(moved from 6.9.2)

R2-1913797 Bye Message for RUDI Handover ETRI discussion Rel-16 NR_Mob_enh-Core
R2-1913865 RLM Handling of Enhanced MBB HO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core R2-1911114
(moved from 6.9.2)

7.3.2.2.2 UE capabilities for RUDI HO

Companies should provide their views to the email discussion and contributions submitted to this agenda items should focus on aspects that were not covered by the email.
Including output of email discussion [107#79][LTE/feMOB] Capability coordination for RUDI HO (QC)
Including discussion on which UE capabilities are defined for RUDI HO (for both LTE and NR).
Including discussion on whether the outcome of 107#79 also applies for NR.

Outcome of email discussion [107#79][LTE/feMOB] Capability coordination for RUDI HO (QC)

R2-1912821 Email discussion report for [107#79] [LTE/feMOB] Capability coordination for RUDI HO Qualcomm India Pvt Ltd discussion Rel-16 LTE_feMob-Core

Proposal 1+2:
- Qualcomm wnwats to ensure both source and target coordination. ZTE thinks UE doesn't know if something is coordinated.
- Ericsson thinks we don't yet know what needs to be coordinated.
- Samsung thinks we never specify UE behaviour for exceeding capabilities Intel and LGE agree.

Proposal 7:
- Ericsson wonders why we would release some and deactivate some SCells. QC thinks network wants to ensure UE capabilities are not exceeded.

Proposal 8:
- Qualcomm thinks source can't send modified configuration to target cell. ZTE thinks it's sufficient to send current configuration to target and let target cell handle it.
- Nokia thinks we sohuld clarify whether source can reconfigure UE during the DAPS or not. Scheduling restrictions could be sufficient. ZTE wonders if target could also reconfigure source configuration. Qualcomm thinks this could be done. Nokia thinks target can just schedule minimum RRC configuration but does not modify source configuration.
- Huawei thinks this is just network implementation: Source can change UE config before sendin HO command. Ericsson would like to avoid frequent reconfigurations to source. Some rules for e.g. dropping SCells would be fine.
- LGE wonders if target cell comprehends source cell configuration or vice versa.
- ZTE thinks we could also send two reconfigurations in the same MAC PDU (one from source, one from target).

Agreements for both NR and LTE
1 If capability coordination is used, source and target cell configurations ensure UE capabilities are not exceeded (like now).
2 If UE capabilities are exceeded, UE behaviour is unspecified.
3 FFS if we specify behaviour for specific capabilities (e.g. UL tx power) or fallback to legacy handover (given that UE doesn't know whether network uses capability coordination). Will diucss these based on company contributions.
4 DAPS HO supports having RRC message(s) containing configuration from source cell and target cell. FFS whether this is done with 1 or 2 RRC messages.

Proposals on UE capability structure:

R2-1912782 Capability design for DAPS based RUDI HO Intel Corporation discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core
Proposal 1: UE capability is indicated per CA band combination and per synchronized and asynchronized case.
Proposal 2: For intra-freq case, introduce UE capability to indicate whether there is limitation on time difference and power limitation.

Proposal 3: If RAN1/4 cannot finish analysis of capability requirement more than 2 CCs, in Rel-16, only source PCell and target PCell are supported during DAPS handover, i.e. source SCell(s) are released, and the target PCell(s) can only add SCell after DAPS handover.
Proposal 4: RAN2 to discuss the following 2 options to support DAPS:
- *Option A: extend existing CA band combination structure to support DAPS*
- *Option B: create new structure to support only 2 CCs to support DAPS.*

✉ **[107bis#53][NR LTE MobE] UE capability structure DAPS/RUDI HO (Intel)**
Determine the capability signalling structure on DAPS/RUDI.
Intended outcome: TP on UE capability structure.
Deadline: Next Meeting

CBF: Offline discussion 110 (Intel): Draft LS to RAN1/4 on UE capabilities on RUDI HO (R2-1913993)

R2-1913993 [Draft] LS for DAPS Handover UE capabilities Intel Corporation LS out Rel-16 LTE_feMob-Core To:RAN1, RAN4
- Nokia wonders if we should say something about L2 buffers.Intel thinks this is not necessary.
- Samsung prefers email discussion

⇨ **Use "bandwidth class" for LTE/NR in assumption 2**

✉ **[107bis#09][NR LTE MobE] LS to RAN1/4 on UE capabilities (Intel)**
Send LS to RAN1/4 on UE capabilities for DAPS/RUDI based on R2-1913993.
Intended outcome: Approved LS to RAN1/4
Deadline: 1 week
=> Approved in R2-1913999.

R2-1913016 UE capabilities for RUDI handover Nokia, Nokia Shanghai Bell discussion Rel-16 NR_Mob_enh-Core, LTE_feMob-Core R2-1909312
R2-1912822 UE capability sharing aspects for DAPS based enhanced MBB HO Qualcomm Inc, Charter communications, Intel Corp, Appl Inc, Google Inc discussion Rel-16 LTE_feMob-Core R2-1909875
R2-1913204 Considerations on UE capability coordination Huawei, HiSilicon discussion Rel-16 LTE_feMob-Core
R2-1912129 Further Considerations on Capability Coordination for DAPS-RUDI CATT discussion Rel-16 LTE_feMob-Core
R2-1912506 Further considerations on capability coordination OPPO discussion Rel-16 LTE_feMob-Core
R2-1913055 Capability coordination for DAPS based handover NEC discussion Rel-16 LTE_feMob-Core
R2-1913486 Discussion on capability coordination for RUDI HO ZTE Corporation, Sanechips discussion Rel-16 LTE_feMob-Core
R2-1913592 Capability coordination for DAPS, required UE capability details and signalling Samsung Telecommunications discussion Rel-16 LTE_feMob-Core Late

UE behaviour if UE capabilities are exceeded during RUDI HO:

R2-1913056 Behaviours when handover configuration exceeds UE capabilities NEC discussion Rel-16 LTE_feMob-Core
R2-1913864 Handling Excess of UE Capability in DAPS HO LG Electronics Inc. discussion Rel-16 NR_Mob_enh-Core
(moved from 6.9.2)

LS to RAN1/4 on UE capabilities:

R2-1912839 [Draft] LS for DAPS Handover UE capabilities Qualcomm India Pvt Ltd LS out Rel-16 LTE_feMob-Core To:RAN1, RAN4

7.3.2.3 Other aspects of RUDI HO

Including any other open aspects of RUDI HO not covered by the other agenda items (for both LTE and NR).

Support of LTE Rel-14-like MBB HO for NR:

R2-1912473 On Supporting Make-Before-Break in NR Samsung discussion NR_Mob_enh-Core
(moved from 6.9.2)

R2-1912479 Introducing Make-Before-Break in NR Samsung draftCR Rel-15 38.331 15.7.0 NR_Mob_enh-Core
(moved from 6.9.2)

R2-1913910 Specification Impacts to specify Single Stack solution for NR Samsung Electronics Polska discussion
(moved from 6.9.2)

R2-1913911 Single stack eMOB solution for 1Rx NR Ues Samsung Electronics Polska discussion
(moved from 6.9.2)

7.3.3 Conditional Handover

Contributions on conditional handover for LTE and NR are treated jointly in under 6.9.3. Do not use this AI for any item that can be discussed jointly.

7.4 Further performance enhancement for LTE in high speed scenario

(LTE_high_speed_enh2-Core; leading WG: RAN4; REL-16; started: Jun 18; target; Sep 19; WID: RP-181482)
Time budget: 0.3 TU. Including output of email discussion [107#43][LTE/High speed] UE capabilities for enhanced high speed scenario (DOCOMO)

Outcome of email discussion [107#43][LTE/High speed] UE capabilities for enhanced high speed scenario (DOCOMO):

R2-1913059 Introduction of RRC parameters and UE capabilities for enhanced high speed scenario NTT DOCOMO INC. CR Rel-16 36.331 15.7.0 4095 2 B LTE_high_speed-Core R2-1911471

⇨**Agreed in principle.**

R2-1913066 Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16 CMCC, Huawei, HiSilicon, NTTDOCOMO, INC. CR Rel-16 36.306 15.6.0 1712 2 B LTE_high_speed_enh2-Core R2-1909772

⇨**Agreed in principle.**

⇨**WID is complete from RAN2 viewpoint.**

7.5 Other LTE Rel-16 WIs

This agenda item is to be used for LSs and documents relating to Rel-16 LTE but for which there is no existing RAN WI/SI (e.g. LSs from CT/SA requesting RAN2 action) or for which there is no allocated RAN2 time.

Enhancements for Rel-15 QMC functionality that were left out of Rel-15 but requested by SA4:

R2-1912638 Discussion on incoming LS for QoE measurement collection in LTE Ericsson discussion TEI16

R2-1912763 Discussion on potential impacts due to management of QMC Huawei, HiSilicon discussion Rel-16 TEI16
(moved from 7.6)

(Discussed jointly)

- Ericsson clarifies we should do what SA5 asked. Huawei thinks RAN2 did what was asked and nothing else is needed, and new information from SA5 requires more work.
- Nokia agrees with Huawei that Rel-15 has no errors. If we do what SA5 asks, the container is no longer transparent. The SA5 requirements are not necessarily correct. RRC reconfigurations already allow control of UEs.
- Ericsson thinks it's not clear how to turn off the QMC measurements without interrupting the measurements. Thinks we should at least explain to SA5 how RRC works with what they request.
- Huawei thinks this is also a RAN3 matter and needs to be coordinated with RAN3 and SA5. It's a new feature and not TEI. Nokia agrees we don't have time for this. The proposed work has also UE impacts.

Offline discussion 102 (Ericsson): Clarify what could be discussed in email discussion: What are the potential questions to be answered. Outcome of offline discussion can be provided in R2-1913990

R2-1913990 Result of offline discussion 102 on scope of QMC email discussion Ericsson discussion TEI16

- Not available.
- Ericsson reports no comments were received during offline so far. Would like to send LS. Huawei wonders what the content of the LS would be. Ericsson thinks this can be checked in email discussion.
- Nokia would like more time to check.

⇨ **Postponed**

R2-1912639 Corrections of QoE measurement collection Ericsson CR Rel-15 36.331 15.7.0 4105 - C TEI16

R2-1912640 Draft reply LS on QoE Measurement Collection Ericsson LS out To:SA5 Cc:CT1, RAN3, SA4

R2-1912764 Draft reply LS on QoE Measurement Collection Huawei LS out Rel-16 TEI16 To:SA5 Cc:CT1, RAN3, SA4

(moved from 7.6)

7.6 LTE TEI16 enhancements

Small Technical Enhancements to LTE. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see RP-191602 endorsed at RAN#84.

Time budget: 0.5 TU

Non-3GPP paging for LTE connected to 5GC:

R2-1912759 Discussion on paging issue for LTE-5GC Huawei, HiSilicon discussion Rel-15 LTE_5GCN_connect-Core, TEI16

(moved from 4.5)

- Ericsson supports the intent but wonders if Rel-16 UEs still obey the legacy indication (i.e. at paging message level instead of UE record level). Nokia agrees this should be ensured and is not sure the CR is correct. Intel also wonders hwo the backward-compatibility is solved: Are both flags broadcast? Huawei clarifies different IEs are used for different releases. CN knows the UE release and would send the corresponding paging. Nokia thinks the UE release is not always available at CN so both flags could be sent. Ericsson thinks paging assistance information includes the release of the UE
- Ericsson supports the proposal but thinks technical details need work.

- Qualcomm wonders how this change affects eMTC and NB-IoT. Huawei clarifies NB-IoT has a different paging message. Nokia wonders if eMTC devices connect to Wifi as this only concerns non-3GPP interworking. Intel is still not sure if this can work since eMTC uses the same paging message and there coule be backward compatibility problems.

⇨ **We will add a new non-3GPP access type flag to paging message for Rel-16. FFS whether this will be applicable to eMTC (will need to specify something for how to handle the non-3GPP flag for eMTC). FFS how to resolve backward compatibility, including eMTC.**

✉ **[107bis#51][LTE R16] Handling of non-3GPP paging for Rel-16 UEs (Huawei)**
Discuss how to handle the paging for non-3GPP access using the Rel-15 or Rel-16 flag, including how this works for eMTC.
Intended outcome: Report and CR for next meeting, implementing the changes to specification(s).
Deadline: Next Meeting

R2-1912760 Correction on paging for LTE-5GC - B LTE_5GCN_connect-Core, TEI16 Huawei, HiSilicon CR Rel-15 36.331 15.7.0 4106

(moved from 4.5)

⇨ **Postponed (to be discussed as part of the email discusion)**

Outcome of email discussion 107#50 (Introduction of wideband PRG size):

R2-1913716 Introduction of wideband PRG size 15.6.0 B TEI16 Huawei, HiSilicon draftCR Rel-16 36.306

R2-1913717 Introduction of wideband PRG size 15.7.0 B TEI16 Huawei, HiSilicon draftCR Rel-16 36.331

Both CRs covered together, following apply to both CRs:

⇨**Endorsed as email discussion outcome. To be submitted as (Rel-16) CRs next time with following changes:**

- **Add CR number to next version of CRs**
- **Add cross-reference of CRs to impact**
- **Ensure all change marks are correct**
- **Correct date**
- **Check cover page**
- **Remove revision history (only used in draft CRs)**

CMAS/ETWS enhancements, e.g. using WUS, for devices configured with eDRX (NOTE that this topic has some commonality with Rel-16 eMTC discussion on ETWS/CMAS in connected mode for non-BL UEs; WUS is currently only supported by eMTC/NB-IoT UEs):

R2-1913382 CMAS/ETWS Reception at UE Configured with eDRX Apple discussion Rel-16 TEI16

Proposal 1: Suggest RAN2 to improve the CMAS/ETWS reception scheme of UE configured with eDRX to meet the latency requirement.

Proposal 2: Introduce a simultaneous DRX and eDRX based paging monitoring scheme at UE side.

- *DRX based paging scheme with WUS for CMAS/ETWS indication and reception*
- *Normal eDRX based paging scheme for normal paging message*

Proposal 3: Consider possible enhancement to allow UE wake up less frequently by introducing dedicated WUS sequence for ETWS/CMAS.

- *DRX scheme with dedicated WUS for ETWS/CMAS indication and reception*
- *Normal eDRX based paging scheme for normal paging reception*

Discussion

- Nokia wonders if there is a requirement for small devices to meet regulatory requirements (e.g. CMAS) so that this is a valid use case. Apple clarifies that CMAS requirement is critical to all devices. Nokia is not so sure these are normative or just operator preferences. Apple thinks a watch is still considered a phone.

- Qualcomm thinks the form factor limits certain functionalities. CMAS reception might drain the battery. eDRX already doesn't fulfill all requirements.
- Ericsson wonders if the requirements of CMAS and ETWS have the same requirements and sees this as problematic. The problem is in battery consumption in general not just specific to this case.
- Intel thinks the problem is real but not sure if this is the right solution. This might also affect other WGs.
- Qualcomm agrees and thinks this cannot be done in TEI16.

⇨ **Noted (no support).**

UDC enhancements:

R2-1913718 Discussion on UDC reconfiguration for RRC connection reestablishment case Huawei, HiSilicon discussion Rel-16 TEI16

Proposal 1: E-UTRAN can configure uplinkDataCompression via the first RRCConnectionReconfiguration message after successful completion of the RRC connection re-establishment procedure.

Proposal 2: A new UE capability is introduced to indicate whether the UE can be reconfigured with UDC via the first reconfiguration message after RRC connection re-establishment procedure.

Discussion

- CATT supports the enhancements bit is not sure capability is needed. Thinks all Rel-16 UEs supporting UDC could support this.
- Huawei thinks capability bit was seen necessary last time.
- Samsung thinks this is just about overhead. This is already possible via handover. Huawei thinks HO increases overhead.
- Qualcomm supports and thinks no need for capability. LGE also supports. Samsung also thinks capability is not needed.
- Nokia sees this as beneficial. Thinks clarification to capability is needed even if we do not introduce new capability bits. Intel thinks capability bit depends.

⇨ **Agree to introduce this enhancement as TEI16. CRs can be submitted to next meeting.**

CB: Offline discussion 103 (Huawei): Whether this feature can be mandatory in Rel-16 UEs supporting UDC. Result of offline discussion can be provided in R2-1913988.

R2-1913988 Result of offline discussion 103 on UDC reconfiguration for RRC connection reestablishment case, Huawei discussion TEI16

- Huawer reports 5 companies participated and all think this can be mandatory
- Chair wonders if this requires capability bit. Nokia explains Rel-15 bit can be used.

⇨ **The UDC enhancement will be mandatory for Rel-16 UEs supporting UDC.**

R2-1913719 UDC reconfiguration for RRC connection re-establishment case Huawei, HiSilicon draftCR Rel-16 36.306 15.6.0 C TEI16

R2-1913720 UDC reconfiguration for RRC connection re-establishment case Huawei, HiSilicon draftCR Rel-16 36.331 15.7.0 C TEI16

⇨**Postponed (to be handled in the next meeting as per above)**

UAV enhancements:

R2-1912446 Correction on H1 and H2 events Samsung Electronics Co., Ltd CR Rel-16 36.331 15.7.0 4103 - F TEI16

- Qualcomm wonders if the second change if correct. First change already implies it. Samsung thinks the first change is about inclusion of measId and second is about removal of measId.
- Qualcomm is not sure this CR is needed and whether it modifies anything.

⇨**Agree to adopt the first change (with rewording). Discuss the second change offline.**
⇨**Change to Cat.C**

CB: Offline discussion 104 (Samsung): Updated CR on Correction on H1 and H2 events can be provided in R2-1913989.

R2-1913989 Correction on H1 and H2 events Samsung Electronics Co., Ltd CR Rel-16 36.331 15.7.0 4103 1 F TEI16
- Samsung explains that also magic sentence was added to cover page.
- Samsung explains some parts were removed from the second change because they were not needed (leaving condition already implies that).
- ⇨ **Add italics to eventH2 in the next submitted version**
- ⇨ **Agreed in principle.**

MDT enhancements:

R2-1912761 Discussion on UE behaviours on location info for logged MDT Huawei, HiSilicon discussion Rel-16 TEI16

Observation 1: The UE should collect its location info for logged MDT in idle state.
Observation 2: We observe that some Ues will trigger a state transition from idle state to connected state if the UE wants to get location info for logged MDT.
Observation 3: For observation 2, if lots of Ues are doing it, it may lead to additional signallings, additional network resources, and also more UE power consumption.
Proposal 1: It is proposed RAN2 to discuss the solutions to solve the issue, and one possible solution is that the network sends a flag to Ues, and the flag is to control whether the UE is allowed to perform state trnasition in order to request location info for logged MDT.

Discussion
- Nokia wonders what the observed issues are in real networks. Huawei clarifies that there are different kinds of UEs and some consume more power than others.
- Ericsson thinks this is a bad UE implementation issue and very late. Specification already supports this. Nokia agrees. Qualcomm also agrees that UE doesn't need to be CONNECTED to use GNSS.
- Qualcomm and Intel think UEs in the field will not implement this solution anyway. Better to solve the UE implementation in the first place. No new solutions are needed.

⇨ **Noted.**

R2-1912762 Correction on location info collection for logged MDT Huawei, HiSilicon CR Rel-16 36.331 15.7.0 4107 - F TEI16
⇨**Not pursued.**

R2-1912416 Broadcast of Barometric Pressure Assistance Data Polaris Wireless, FirstNet, Intel, AT&T, NextNav discussion TEI16, LCS_LTE_acc_enh-Core

R2-1912737 Addition of broadcast of barometric pressure assistance data Polaris Wireless, FirstNet, Intel, AT&T, NextNav CR Rel-16 36.331 15.7.0 4026 1 C LCS_LTE_acc_enh-Core, TEI16R2-1908847
To be updated for the February meeting (when there will be a new version of the spec)
⇨ Endorsed as a baseline CR

R2-1912738 Addition of broadcast of barometric pressure assistance data Polaris Wireless, FirstNet, Intel, AT&T, NextNav CR Rel-16 36.355 15.5.0 0242 1 C LCS_LTE_acc_enh-Core, TEI16R2-1908848
To be updated for the February meeting (when there will be a new version of the spec)

⇨ Endorsed as a baseline CR

R2-1912421 Sensor Provide Location Information Element Correction Polaris Wirelessdiscussion TEI16

R2-1912422 Sensor Provide Location Information Elements Correction Polaris WirelessCR Rel-16 36.355 15.5.0 0245 - F TEI16

Qualcomm think some fine-tuning of the field description is needed, and there needs to be a UE capability and a request for providing it.
Nokia wonder why we would not provide the compensated measurements rather than the adjustments. Polaris clarify there is an external requirement to include the uncompensated measurements in some areas. Nokia were thinking of providing both. Polaris consider that it makes no real difference whether you provide the adjustment or the compensated value, but this solution aligns with LPPe.
Qualcomm think the adjustment is a smaller value, and this way the server gets both pieces of information. Ericsson agree.
⇨ To be revised. Offline discussion 403 (Polaris); revision in R2-1914074.

R2-1914074 Sensor Provide Location Information Elements Correction Polaris WirelessCR Rel-16 36.355 15.5.0 0245 1 F TEI16

Nokia think “compensated measurement” would be better than “accurate measurement”.
Qualcomm suggest removing “correction” from the title.
⇨ Endorsed with these changes (to be seen at the February meeting).

R2-1913849 Broadcast of TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 36.331 15.7.0 4134 - C TEI16, LCS_LTE_acc_enh-Core

Qualcomm wonder why there is only one SIB type for UE-based and UE-assisted. NextNav think it is OK only to use one, as with sensors. Qualcomm point out this would mean the same ciphering for both. Ericsson think it would be reasonable to have separate posSIBs.
Ericsson have some concern that the number of posSIBs is growing.
Intel think if the contents of the UE-based and UE-assisted SIBs are the same, the distinction does not matter.
Qualcomm are concerned that the UE supporting only UE-assisted should not receive the AD for UE-based. NextNav agree perhaps a second SIB should be created.
⇨ To be revised. Offline discussion 404 (NextNav); revision in R2-1914075.

R2-1914075 Broadcast of TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 36.331 15.7.0 4134 1 C TEI16, LCS_LTE_acc_enh-Core
⇨ Endorsed

R2-1913850 Broadcast of TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 36.355 15.5.0 0246 - C TEI16, LCS_LTE_acc_enh-Core

⇨ To be revised. Offline discussion 404, revision in R2-1914076.

R2-1914076 Broadcast of TBS assistance data NextNav, AT&T, FirstNet, Polaris Wireless CR Rel-16 36.355 15.5.0 0246 1 C TEI16, LCS_LTE_acc_enh-Core
⇨ Endorsed

7.7 Support of Indian Navigation Satellite System (NavIC)

(LCS_NAVIC; leading WG: RAN2; REL-16; started: Sept 19; target; March-20; WID: RP-192350)
Time budget: 0.5 TU

R2-1912306 Support for Indian Navigation Satellite System (NavIC) Reliance Jio discussion Rel-16 Late

R2-1913937 CR of TS 36.305 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.305 15.4.0 0084 - B LCS_NAVIC
⇨ Endorsed as a baseline CR

R2-1913938 CR of TS 36.355 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.355 15.5.0 0247 - B LCS_NAVIC
⇨ Revised in R2-1914071

R2-1914071 CR of TS 36.355 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.355 15.5.0 0247 1 B LCS_NAVIC
Some interest in offline checking. Can be revised with any changes for November meeting.
⇨ Endorsed as a baseline CR

R2-1913939 CR of TS 36.331 for introducing NavIC in LTE Reliance Jio, MediaTek Inc., Huawei, CEWiT, Saankhya Labs CR Rel-16 36.331 15.7.0 4137 - B LCS_NAVIC

Nokia wonder if the IDC aspects should be addressed as part of this WI or separately.
CATT are concerned about the SI impacts and would like more time to check.
Nokia think the IDC changes should be checked with IDC experts.
For offline checking in the areas of concern. Can be revised with any changes for November meeting.
⇨ Endorsed as a baseline CR

7.8 Breakout session reports

CB (start after lunch)

7.8.1 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility

R2-1914131 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility Vice Chairman (Nokia) report

⇒ **approved**

CBF: Offline 105 (Intel): Capturing agreements in running CR. Running CR can be provided in **R2-1913995**
- Intel think this cannot be endorsed now.

⇒ **Treat by email only (below)**

✉ **[107bis#08][NR] Updated Stage-2 running CR for NR mobility (Intel)**
Update running CR based on this meeting's agreements (not including conditional PSCell aspects).
Intended outcome: Endorsed running CR
Deadline: 2 weeks

⇒ **Email discussion is agreed**
=> Endorsed in R2-1913995

7.8.2 Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS

R2-1914132 Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS report — Vice Chairman (ZTE)

⇒ **approved**

7.8.3 Report from eMTC breakout session

R2-1914133 Report eMTC breakout session — Session chair (Ericsson) report

⇒ **approved**

7.8.4 Report from NR-U, Power Savings, NTN and 2-step RACH sessions

R2-1914134 Session minutes for NR-U, Power Savings, NTN and 2-step RACH report — Session chair (InterDigital)

⇒ **approved**

Session chair proposes to not do the following email discussions, and propose instead to just invite the authors to contribute to next meeting

✉ **[107bis#xx][NR/Power Saving] Running for 38.304 (Vivo)**
Scope: Capture agreements up to RAN2#107bis
Discuss modelling aspects if needed
Intended outcome: Running CR
Deadline: Thursday 07/11/2019

✉ **[107bis#xx][NR/Power Saving] Running for 37.340 (Oppo)**
Intended outcome: Running CR
Deadline: Thursday 07/11/2019

⇒ **2 Email discussions above are canceled**

7.8.5 Report from session on Rel-15 and 16 LTE and NR positioning

R2-1914135 Report from session on Rel-15 and 16 LTE and NR positioning report — Session chair (MediaTek)

⇒ **approved**

7.8.6 Report from SON/MDT session

R2-1914136 Report from SON/MDT session — Session chair (CMCC) report

⇒ **R2-1914090**

R2-1914090 Report from SON/MDT session — Session chair (CMCC) report

⇒ **approved**

7.8.7 Report from NB-IoT breakout session

R2-1914137 Report NB-IoT breakout session Session chair (Huawei) report
⇒ **approved**

7.8.8 Report from session on LTE V2X and NR V2X

R2-1914138 Report from session on LTE V2X and NR V2X Session chair (Samsung) report
⇒ **approved**

Closing of the meeting (17:00)

The meeting was closed by the chairman at 17:15 on Friday, 18th of October.

Annex A: List of participants

RAN2#107bis participants list is at:
https://portal.3gpp.org/Home.aspx#/participantslist?MtgId=32834

Total number of participants: 307 (registered 382)

Annex B: List of Tdocs

The list of tdocs from RAN2#107bis is attached to this report.
Total of 2229 tdoc numbers were allocated of which 2162 tdocs were made available.

Annex C: Incoming liaison statements

TDoc	Title	Source	Status	Rel	Related WIs	To	Cc	Original LS

R2-1912002	Reply LS on NAS Aspects of Mobile-terminated Early Data Transmission (C1-195111; contact: Qualcomm)	CT1	noted	Rel-16	LTE_eMTC5-Core	SA2, SA3	RAN2, RAN3, CT4	C1-195111
R2-1912003	LS on sending CAG ID during resume procedure (C1-195157; contact: Samsung)	CT1	noted	Rel-16	Vertical_LAN	SA2	RAN2	C1-195157
R2-1912004	LS on short MAC-I and ngKSI for 5G-CIoT (C1-195199; contact: Vodafone)	CT1	noted	Rel-16	5G_CIoT	SA3	RAN2	C1-195199
R2-1912005	LS on encoding of UE radio capabilities (C3-193147; contact: Qualcomm)	CT3	noted	Rel-16	RACS-RAN-Core	RAN2	CT4, SA2	C3-193147
R2-1912006	Liaison response on Ethernet header compression (liaison-response-3GPP-RAN2-Ethernet-header-compression-0719-v01; contact: Ericsson, Nokia)	GSMA	noted		NR_IIOT	RAN2		liaison-response-3GPP-RAN2-Ethernet-header-compression-0719-v0
R2-1912007	LS on O-RAN Alliance & 3GPP Coordination on O-RAN Alliance Outputs (ORAN_3GPP_Liaison_Statement_final; contact: AT&T, CMCC)	O-RAN Alliance	noted	Rel-16		SA, CT, RAN, SA1, SA2, SA3, SA5, SA6, RAN1, RAN2, RAN3	3GPP PCG	ORAN_3GPP_Liaison_Statement_final
R2-1912008	Reply LS on PDCCH monitoring for NR-DC (R1-1909550; contact: Samsung)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2	RAN3	R1-1909550
R2-1912009	LS Reply on overall procedure for 2-step RACH (R1-1909554; contact: ZTE)	RAN1	noted	Rel-16	NR_2step_RACH	RAN1	RAN2	R1-1909554
R2-1912010	Reply LS on quality report in Msg3 for LTE-M (R1-1909793; contact: Ericsson)	RAN1	noted	Rel-16	LTE_eMTC5-Core	RAN2	RAN4	R1-1909793
R2-1912011	LS on DL/UL Reference Signals and Measurements for NR Positioning (R1-1909796; contact: Intel)	RAN1	noted	Rel-16	NR_pos	RAN2	RAN3, RAN4	R1-1909796
R2-1912012	Reply LS on SFTD measurement (R1-1909819; contact: Huawei)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2, RAN4		R1-1909819
R2-1912013	Reply LS on MAC CE design for SCell BFR (R1-1909833; contact: Apple)	RAN1	noted	Rel-16	NR_eMIMO-Core	RAN2		R1-1909833
R2-1912014	Reply LS on Tx DC location (R1-1909849; contact: Huawei)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN4	RAN2	R1-1909849
R2-1912015	Reply LS on transmission of short message with multiple beams (R1-1909852; contact: Qualcomm)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2		R1-1909852
R2-1912016	Reply LS on RAN1/4 feature lists R1-1909856; contact: NTT DOCOMO)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2	RAN4	R1-1909856
R2-1912017	LS on mapping between LTE V2X PPPP and NR V2X priority (R1-1909876; contact: Qualcomm)	RAN1	noted	Rel-16	5G_V2X_NRSL	SA2	RAN2	R1-1909876
R2-1912018	Reply LS on Sidelink HARQ Feedback for Groupcast (R1-1909879; contact: LGE)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2, SA2		R1-1909879
R2-1912019	LS on DL HARQ timing for FDD Scell for LTE TDD-FDD CA with TDD Pcell, applied to FDD Pcell, for Dual Uplink EN-DC (R1-1909880; contact: Vodafone)	RAN1	noted	Rel-16	LTE_NR_DC_CA_enh-Core	RAN2	RAN	R1-1909880
R2-1912020	LS on SFN sync (R1-1909882;	RAN1	noted	Rel-15	NR_newRAT-	RAN,		R1-1909882

	contact: Nokia)				Core	RAN2		
R2-1912021	Reply LS to RAN 2 on CSI reporting in C-DRX (R1-1909889; contact: Qualcomm)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2		R1-1909889
R2-1912022	Reply LS on NR fast SCell activation (R1-1909893; contact: Qualcomm)	RAN1	noted	Rel-16	LTE_NR_DC_CA_enh-Core	RAN2, RAN4		R1-1909893
R2-1912023	Reply LS on maximum value of MDBV (R1-1909894; contact: Qualcomm)	RAN1	noted	Rel-16	5GS_Ph1	SA2, RAN2, RAN3, CT3, CT4	SA1	R1-1909894
R2-1912024	LS on NR Rel-16 TEI (R1-1909895; contact: NTT DOCOMO)	RAN1	noted	Rel-16	TEI16	RAN	RAN2	R1-1909895
R2-1912025	Response to LS on Combination 2 of Uu QoS characteristics values for V2X services (R1-1909898; contact: Huawei)	RAN1	noted	Rel-16	NR_L1enh_URLLC	SA2	RAN2, RAN3	R1-1909898
R2-1912026	Reply LS on supported BW for initial BWP (R1-1909900; contact: Nokia)	RAN1	noted	Rel-15	NR_newRAT-Core	RAN2, RAN4		R1-1909900
R2-1912027	Reply LS on propagation delay compensation for reference time information delivery (R1-1909906; contact: Nokia)	RAN1	noted	Rel-16	NR_IIOT-Core	RAN2, RAN4, RAN5		R1-1909906
R2-1912028	Reply LS on Combinations of Uu QoS characteristics values for V2X services (R3-193258; contact: Huawei)	RAN3	noted	Rel-16	NR_L1enh_URLLC	RAN1	SA2, RAN2	R3-193258
R2-1912029	Reply on radio resource management policy (R3-194550; contact: Huawei)	RAN3	noted	Rel-16	eNRM	SA5	RAN2	R3-194550
R2-1912030	Reply LS on LS on maximum value of MDBV (R3-194553; contact: Qualcomm)	RAN3	noted	Rel-16	5GS_Ph1	SA2, RAN1, RAN2, CT3, CT4	SA1	R3-194553
R2-1912031	Reply LS on Data activity reporting (R3-194572; contact: Ericsson)	RAN3	noted	Rel-16	5G_SLICE_ePA	SA5	RAN2	R3-194572
R2-1912032	Reply LS on LTE-M identification in 5GC (R3-194748; contact: Qualcomm)	RAN3	noted	Rel-16	5G_CIoT	SA2, RAN, RAN2	SA3	R3-194748
R2-1912033	LS on full configuration during SN Modification procedure (R3-194758; contact: Huawei)	RAN3	noted	Rel-15	NR_newRAT-Core	RAN2		R3-194758
R2-1912034	LS on enhanced Make-Before-Break data forwarding (R3-194768; contact: Ericsson)	RAN3	noted	Rel-16	LTE_feMob, NR_Mob_enh	RAN2		R3-194768
R2-1912035	Reply LS on RAN sharing and Emergency services with Non-Public Networks (R3-194785; contact: Qualcomm)	RAN3	noted	Rel-16	Vertical_LAN	SA2, RAN2	SA1	R3-194785
R2-1912036	LS on clarifications on Private Networks (R3-194786; contact: Nokia)	RAN3	noted	Rel-16	NG_RAN_PRN	SA2	RAN2	R3-194786
R2-1912037	LS on the IAB-indication to core network (R3-194787; contact: Qualcomm)	RAN3	noted	Rel-16	NR_IAB	SA2, RAN2	SA3, SA5	R3-194787
R2-1912038	Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (R3-194795; contact: Vodafone)	RAN3	noted	Rel-16	eV2XARC	SA2, RAN2		R3-194795
R2-1912039	Reply LS on measurement gap for SRS-RSRP or CLI-RSSI measurements (R4-1908777; contact: LGE)	RAN4	noted	Rel-16	NR_CLI_RIM-Core	RAN2	RAN1	R4-1908777
R2-1912040	Reply LS on RAN1/4 feature lists (R4-1909845; contact: Intel)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2	RAN1	R4-1909845
R2-1912041	Reply LS on simultaneous	RAN4	noted	Rel-16	NR_Mob_enh-	RAN1,		R4-1909992

	RX/TX for NR (R4-1909992; contact: Ericsson)				Core	RAN2		
R2-1912042	Reply LS on maximum allowed SCell activation delay for Rel16 CA (R4-1909995; contact: Nokia)	RAN4	noted	Rel-16	LTE_NR_DC_CA_enh-Core	RAN1	RAN2	R4-1909995
R2-1912043	LS Reply on measurements for SRVCC from 5G to 3G (R4-1910026; contact: Huawei)	RAN4	noted	Rel-16	SRVCC_NR_to_UMTS-Core	RAN2		R4-1910026
R2-1912044	Reply to LS on DL channel quality report for configured carrier in RRC connected mode (R4-1910110; contact: Qualcomm)	RAN4	noted	Rel-16	NB_IOTenh3-Core	RAN2	RAN1	R4-1910110
R2-1912045	LS on signalling measurement thresholds for validating the TA for PUR (R4-1910176; contact: Ericsson)	RAN4	noted	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core	RAN2	RAN1	R4-1910176
R2-1912046	Reply LS on SFTD measurement (R4-1910179; contact: ZTE)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2		R4-1910179
R2-1912047	LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 (R4-1910239; contact: Apple)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2		R4-1910239
R2-1912048	LS on FR2 Pmax (R4-1910262; contact: Huawei)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2		R4-1910262
R2-1912049	LS reply on supported BW for initial BWP (R4-1910522; contact: Nokia)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN1, RAN2		R4-1910522
R2-1912050	LS on sidelink BWP reconfiguration on ITS band (R4-1910542; contact: MediaTek)	RAN4	noted	Rel-16	5G_V2X_NRSL-Core	RAN1	RAN2	R4-1910542
R2-1912051	Reply LS on reporting criteria limitation in MR-DC (R4-1910570; contact: Huawei)	RAN4	noted	Rel-15	NR_newRAT-Core	RAN2		R4-1910570
R2-1912052	LS on RSSI definition (R4-1910573; contact: MediaTek)	RAN4	noted	Rel-16	NR_unlic-Core	RAN1	RAN2	R4-1910573
R2-1912053	Reply LS on NR fast SCell activation (R4-1910574; contact: Huawei)	RAN4	noted	Rel-16	LTE_NR_DC_CA_enh-Core	RAN1, RAN2		R4-1910574
R2-1912054	LS on evaluation of S criteria on non-anchor carrier (R4-1910575; contact: Huawei)	RAN4	noted	Rel-16	NB_IOTenh3-Core	RAN2		R4-1910575
R2-1912055	LS to RAN2 on mandatory 90 MHz UE channel bandwidth for n41 and n78 in REL-16 (R4-1910605; contact: Vodafone)	RAN4	noted	Rel-16	NR_newRAT-Core	RAN2	RAN	R4-1910605
R2-1912056	LS on Rel-16 NB-IoT enhancements (RP-192338; contact: Futurewei)	RAN	noted	Rel-16	NB_IOTenh3	SA2, CT1	RAN2, SA, CT	RP-192338
R2-1912057	Reply on Combinations of Uu QoS characteristics values for V2X services (S2 -1906340; contact: Huawei)	SA2	noted	Rel-16	eV2XARC, NR_L1enh_URLLC	RAN1, RAN3	RAN2	S2 -1906340
R2-1912058	Reply LS on Reply LS on Mobile-terminated Early Data Transmission (S3-193059; contact: Nokia)	SA3	noted	Rel-16	LTE_eMTC5-Core	SA2, RAN2, RAN3, CT1		S3-193059
R2-1912059	LS on Sending CAG ID in NAS layer (S3-193142; contact: Qualcomm)	SA3	noted	Rel-16	FS_Vertical_LAN_SEC	SA2, RAN2, RAN3	CT1	S3-193142
R2-1912060	LS to RAN2 and RAN3 on False Base Station Detection (S3-193175; contact: Huawei)	SA3	noted	Rel-16	FS_5GFBS	RAN2, RAN3		S3-193175
R2-1912061	LS on QoE Measurement Collection (S5-195659; contact: Ericsson)	SA5	noted	Rel-16	QOED	CT1, RAN2, RAN3, SA4		S5-195659
R2-1912062	Reply LS on L1 and L2	SA5	noted	Rel-16	5G_SLICE_eP	RAN2,		S5-195941

	measurements (S5-195941; contact: Huawei)				A	RAN3		
R2-1912063	LS on aspects of Mission Critical Services over 5MBS (S6-192003; contact: AT&T)	SA6	postponed	Rel-17	FS_MC5MBS	SA, RAN, SA2, RAN2, RAN3	SA1	S6-192003
R2-1912064	Reply LS to "O-RAN Alliance & 3GPP Coordination on O-RAN Alliance Outputs" (SP-190947; contact: Intel)	SA	noted			O-RAN Alliance	CT, RAN, SA1, SA2, SA3, SA5, SA6, RAN1, RAN2, RAN3, PCG	SP-190947
R2-1913533	LS on NR V2X synchronization procedures and priority (R1-1909910; contact: CATT)	RAN1	noted	Rel-16	5G_V2X_NRSL-Core	RAN2, RAN4		R1-1909910
R2-1913972	Update LS on Release-with-Redirect in 2-step resume procedure (C1-196902; contact: OPPO)	CT1	noted	Rel-15	NR_newRAT-Core	RAN2		C1-196902
R2-1913973	LS Reply on maximum value of MDBV (C3-194330; contact: Nokia)	CT3	available	Rel-16	5GS_Ph1	SA2	RAN1, RAN2, RAN3, CT4, SA1	C3-194330
R2-1914168	LS on CLI measurement reporting range (R4-1911416; contact: LGE)	RAN4	available	Rel-16	NR_CLI_RIM-Core	RAN2		R4-1911416
R2-1914177	Reply LS to LS on maximum value of MDBV (C4-194314; contact: Nokia)	CT4	noted	Rel-16	5GS_Ph1	SA2	RAN1, RAN2, RAN3, CT3, SA1	C4-194314
R2-1914178	LS on NID structure and length (C4-194332; contact: Ericsson)	CT4	available	Rel-16	Vertical_LAN	RAN2, RAN3, CT1, CT3	SA2	C4-194332
R2-1914183	LS on PDCCH-based Power Saving Signal/Channel carrying indication of UE wakeup before DRX ON (R1-1911475; contact; CATT)	RAN1	noted	Rel-16	NR_UE_pow_sav-Core	RAN2		
R2-1914192	LS on UE adaptation to maximum number of MIMO layers (R1-1911528; contact: vivo)	RAN1	noted	Rel-16	NR_UE_pow_sav-Core	RAN2	RAN4	R1-1911528
R2-1914206	LS on NR IAB case-1 timing (R1-1911548; contact: ZTE)	RAN1	available	Rel-16	NR_IAB-core	RAN2	RAN4	R1-1911548
R2-1914207	Reply LS on single PDCCH-based multi-TRP operation (R1- 1911550; contact: Huawei)	RAN1	noted	Rel-16	NR_eMIMO-Core	RAN2		R1- 1911550
R2-1914208	Reply LS on MAC CE design for SCell BFR (R1-1911587; contact: Apple)	RAN1	noted	Rel-16	NR_eMIMO-Core	RAN2		R1-1911587

74 incoming LS, of which 69 were noted, and 1 LS was postponed. The remaining non-treated LSin will be handled in RAN2#108.

Annex D: Outgoing liaison statements

TDoc	Title	Rel	Related WIs	To	Cc
R2-1913996	LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO	Rel-16	LTE_feMob-Core	RAN1	RAN3, RAN4
R2-1913997	LS on UE feature list format for Release-16 UE capability	Rel-16	NR_newRAT-Core	RAN1, RAN4	RAN3
R2-1913999	LS to RAN1&4 on UE capabilities on DAPS HO	Rel-16	NR_Mob_enh-Core, LTE_feMob-Core	RAN1, RAN4	
R2-1914020	LS on multi PDCCH-based and single PDCCH-based multi-TRP operation	Rel-16	NR_eMIMO-Core	RAN1	
R2-1914021	LS For Exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI	Rel-16	NR_CLI_RIM	RAN3	RAN1
R2-1914022	LS on No support of delta signalling	Rel-16	RACS-RAN-Core	SA2	
R2-1914023	LS Radio Capability Signalling Identity on X2/Xn interfaces	Rel-16	RACS-RAN-Core	RAN3	
R2-1914025	LS on RAN2 agreements on LTE and NR mobility enhancements	Rel-16	NR_Mob_enh-Core, LTE_feMob-Core	RAN3	
R2-1914045	LS on RAN2 agreements for 5GC CIoT	Rel-16	LTE_eMTC5-Core, NB_IOTenh3-Core	RAN3	
R2-1914060	LS to RAN1 on WUS for short DRX cycle	Rel-16	NR_UE_pow_sav	RAN1	
R2-1914064	LS on SFN LSB indication in msg2/msgB	Rel-16	NR_unlic-Core, NR_2step_RACH-Core	RAN1	
R2-1914068	LS on PHR reporting for NR-U	Rel-16	NR_unlic-Core	RAN1	
R2-1914087	Reply LS on RACH Optimization and Mobility Robustness Optimization	Rel-16	NR_SON_MDT-Core	RAN3	
R2-1914089	Reply LS on PDCP end user throughput measurements	Rel-16	NR_SON_MDT-Core	SA5	RAN3
R2-1914147	LS on Layer 2 Identifiers for NR Sidelink communication	Rel-16	5G_V2X_NRSL-Core	RAN1, SA2	
R2-1914149	LS on SL RLF handling	Rel-16	5G_V2X_NRSL-Core	SA2	
R2-1914150	LS on Handling Multiple Unicast Links with Peer UE	Rel-16	5G_V2X_NRSL-Core	RAN1	SA2
R2-1914151	LS on PC5-S Signaling and PC5-RRC connection for NR sidelink communication	Rel-16	5G_V2X_NRSL-Core	SA2	SA3
R2-1914191	LS on differentiating between MSG2 and MSGB	Rel-16	NR_2step_RACH-Core	RAN1	
R2-1914200	LS to RAN1 on CSI/SRS reporting	Rel-16	NR_UE_pow_sav	RAN1	RAN4
R2-1914201	Reply LS on potential improvements for delay critical QoS flows	Rel-16	5GS_Ph1, TEI16	SA2	RAN3
R2-1914213	LS to SA2 on reference time delivery	Rel-16	NR_IIOT	SA2	
R2-1914214	LCP restriction for Dynamic Grant	Rel-16	NR_IIOT-Core	RAN1	
R2-1914221	Reply LS to RAN1 on SFTD measurement	Rel-15	NR_newRAT-Core	RAN1	RAN4
R2-1914222	Reply LS on FR2 Pmax	Rel-15	NR_newRAT-Core	RAN4	
R2-1914223	Granularity of periodicity and burst arrival time in TSCAI	Rel-16	NR_IIOT	RAN3	SA2
R2-1914224	Reply LS to SA3 on FBS detection	Rel-16	FS_5GFBS	SA3	RAN3
R2-1914226	LS on BCS reporting for EN-DC B	Rel-15	NR_newRAT-Core	RAN4	
R2-1914227	LS on direct Scell activation in RRC resume message	Rel-16	LTE_NR_DC_CA_enh-Core	RAN4	
R2-1914228	Reply LS on full configuration during SN Modification procedure	Rel-15	NR_newRAT-Core	RAN3	

30 outgoing LS.

Annex E: List of agreed-in-principle CRs and draftCRs

TDoc	Title	Source	Rel	Spec	Related WIs	CR	Rev	Ca
R2-1912141	Corrections on CG-Config	CATT	Rel-15	38.331	NR_newRAT-Core	1267		F
R2-1912326	Correction on PUCCH transform precoding	vivo, Nokia (rapporteur)	Rel-15	38.300	NR_newRAT-Core			F
R2-1912767	CR to introduce timer for DRX based SFTD measurement	ZTE Corporation, Sanechips, MediaTek Inc.	Rel-15	38.331	NR_newRAT-Core	1273		F
R2-1912768	Correction on absence of gapPurpose	ZTE Corporation, Sanechips	Rel-15	38.331	NR_newRAT-Core	1274		F
R2-1913059	Introduction of RRC parameters and UE capabilities for enhanced high speed scenario	NTT DOCOMO INC.	Rel-16	36.331	LTE_high_speed-Core	4095	2	B
R2-1913066	Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16	CMCC, Huawei, HiSilicon, NTTDOCOMO, INC.	Rel-16	36.306	LTE_high_speed_enh2-Core	1712	2	B
R2-1913195	Correction for P-Max in FR2	Ericsson, NTT DOCOMO INC.	Rel-15	38.331	NR_newRAT-Core	1292		F
R2-1913270	Reconfiguration failure in NE-DC	Google Inc.	Rel-15	36.331	NR_newRAT-Core	4115		F
R2-1913273	PDCP configuration generation (email discussion of 107#25)	Huawei, HiSilicon	Rel-15	37.340	NR_newRAT-Core	0158		F
R2-1913280	Correction on EUTRAN terminology	Huawei, HiSilicon	Rel-15	38.305	NR_newRAT-Core	0014		F
R2-1913297	Handling of AS-Config in HandoverPreparationInformation	Ericsson	Rel-15	38.331	NR_newRAT-Core	1300		F
R2-1913298	Corrections on scg-RB-Config in CG-Config	Ericsson	Rel-15	38.331	NR_newRAT-Core	1301		F
R2-1913310	Correction to integrity protection in DRB addition and modification	Ericsson	Rel-15	38.331	NR_newRAT-Core	1309		F
R2-1913433	CR to 36.331 on performing L3 filtering for NR related measurements	Ericsson	Rel-15	36.331	NR_newRAT-Core	4125		F
R2-1913446	Clarification on the restriction of maximum SRS resource sets configuration for uplink beam management.	Intel	Rel-15	38.306	NR_newRAT-Core	0185		F
R2-1913482	Clarification on security key change and bearer termination point change	ZTE Corporation, Ericsson, Intel	Rel-15	37.340	NR_newRAT-Core	0160		F
R2-1913673	Correction on the Msg3 based on demand system information	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1333		F
R2-1913687	Clarification on the feature set report in EUTRAN	Huawei, HiSilicon	Rel-15	38.331	NR_newRAT-Core	1337		F
R2-1913737	CR to 38.331 on CGI information	Huawei, HiSilicon, Ericsson	Rel-15	38.331	NR_newRAT-Core	1341		F
R2-1913783	Correction on parameter description of beamManagementSSB-CSI-RS in 38.306	Huawei, HiSilicon	Rel-15	38.306	NR_newRAT-Core	0194		F
R2-1913898	Correction to PHR in dual connectivity	Qualcomm Inc, Nokia, Nokia Shanghai Bell, Ericsson	Rel-15	36.321	NR_newRAT-Core	0660	2	F
R2-1913976	Clarification of NR-DC synchronization	ZTE Corporation	Rel-15	37.340	NR_NewRAT-Core	0163		F
R2-1913978	Clarification on measurement gap for LTE inter-RAT measurement in NR SA	MediaTek Inc., Nokia (Rapporteur)	Rel-15	38.300	NR_newRAT-Core	0173	1	F
R2-1913979	SMTC setting in MR-DC PSCell change	Nokia, Nokia Shanghai Bell	Rel-15	37.340	NR_newRAT-Core	0157	1	F
R2-1913980	Correction on sending Failure Information via SRB3	Ericsson, ZTE Corporation (Rapporteur)	Rel-15	37.340	NR_newRAT-Core	0159	1	F
R2-1913981	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	Rel-14	36.321	LTE_VoLTE_ViLTE_enh	1456	3	F
R2-1913982	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia Shanghai Bell	Rel-15	36.321	LTE_VoLTE_ViLTE_enh	1457	2	A
R2-1913983	Missing QCI to CAPC mapping	Nokia, Nokia Shanghai Bell	Rel-16	36.300	LTE_unlic-Core	1240	3	F
R2-1913984	Correction to SIB5 acquisition for idle mode measurements	Ericsson	Rel-15	36.331	LTE_5GCN_connect-Core	4120	1	F
R2-1913985	Correction on inter-frequency neighbour cell measurements	Ericsson	Rel-15	36.300	LTE_5GCN_connect-Core	1252	1	F
R2-1913989	Correction on H1 and H2 events	Samsung Electronics Co., Ltd	Rel-16	36.331	TEI16	4103	1	F

R2-1914072	Corrections for Positioning Architecture	Ericsson	Rel-15	38.305	NR_newRAT-Core	0015	1	F
R2-1914091	Correction on T322	Nokia, Nokia Shanghai Bell	Rel-14	36.331	NB_IOTenh-Core	4112	1	F
R2-1914121	Clarification regarding QoS handling in MRDC with 5G CN	Samsung, ZTE Corporation	Rel-15	37.340	NR_newRAT-Core			F
R2-1914122	PDCP version in EN-DC	Ericsson	Rel-15	37.340	NR_newRAT-Core	0155	1	F
R2-1914124	Correction to field conditions in NE-DC	Ericsson	Rel-15	36.331	NR_newRAT-Core	4128	1	F
R2-1914125	Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC	Huawei, HiSilicon	Rel-15	36.331	NR_newRAT-Core	4132	1	F
R2-1914127	Presence and absence of TAC in NR cell	Ericsson	Rel-15	38.331	NR_newRAT-Core	1325	1	F
R2-1914128	Configuration limitation for RRCRelease message in R15	OPPO	Rel-15	38.331	NR_newRAT-Core	1268	1	F
R2-1914129	KgNB derivation upon mobility	Qualcomm Incorporated	Rel-15	38.300	NR_newRAT-Core	0174		F
R2-1914169	Correction to Pcompensation for FR2	Huawei	Rel-15	38.304	NR_newRAT-Core	0140		F
R2-1914172	Correction of SRB3 handling at full configuration (Alt2)	Ericsson	Rel-15	38.331	NR_newRAT-Core	1308	1	F
R2-1914173	Miscellaneous correction for late drop	Ericsson	Rel-15	36.331	NR_newRAT-Core	4117	1	F
R2-1914175	Clarification to CSI reporting in C-DRX	Qualcomm Inc.	Rel-15	38.321	NR_newRAT-Core	0672	2	F
R2-1914193	Miscellaneous corrections on UE capability fields	Intel Corporation, NTT DoCoMo	Rel-15	38.306	NR_newRAT-Core	0186	1	F
R2-1914203	Inclusion of 90MHz UE Bandwidth	Vodafone	Rel-16	38.306	NR_newRAT-Core, TEI16	0171	1	C
R2-1914209	Correction on the frequency indication in SIB2	Huawei, HiSilicon, Ericsson, MediaTek	Rel-15	38.331	NR_newRAT-Core	1296	1	F
R2-1914219	Clarifying the alignment of capability filtering across LTE and NR in MR-DC	Nokia, Nokia Shanghai Bell	Rel-15	38.331	NR_newRAT-Core	1283	1	F
R2-1914225	Security Algorithms for Radio Bearers	Qualcomm Incorporated	Rel-15	38.331	NR_newRAT-Core	1332	3	F

49 Agreed-in-principle CRs and draftCRs.

Annex F: Email Approvals

One week discussions: Deadline Thursday, 2019-10-24, 23:59 Pacific Time (unless stated)

Please request TDoc numbers for the following email discussions from MCC if not already allocated below

- ✉ **[107bis#01][NR R16] LS on feature list format for Rel-16 (Intel)**
  Intended outcome: Approved LS on feature list format for Rel-16 to R1, R4, cc: R3
  Deadline: 1 week

=> Approved in R2-1913997.

- ✉ **[107bis#02][IAB] 38300 (Qualcomm)**
  Intended outcome: Endorsed Running CR. Agreements incl 107bis
  Deadline: 1 week

=> Endorsed in R2-1913998.

- ✉ **[107bis#03][IAB] 38340 (Huawei)**
  Intended outcome: Endorsed Running CR. Agreements incl 107bis
  Deadline: 1 week

=> Endorsed in:
R2-1914006 (v0.0.0).
R2-1914008 (v0.1.0).

- ✉ **[107bis#04][IAB] Running CR 38331 (Ericsson)**

Intended outcome: Endorsed Running CR. Capture agreements of this meeting, include discussion from previous version.
Deadline: 1 week
=> Endorsed in R2-1914027

✉ **[107bis#06][DCCA] 36300 38300 (Ericsson)**
Intended outcome: Endorsed Running CRs, capturing agreements incl 107bis
Deadline: 1 week
=> Endorsed in:
R2-1914004 (36.#10300)
R2-1914005 (38.300)

✉ **[107bis#09][NR LTE MobE] LS to RAN1/4 on UE capabilities (Intel)**
Send LS to RAN1/4 on UE capabilities for DAPS/RUDI based on R2-1913993.
Intended outcome: Approved LS to RAN1/4
Deadline: 1 week
=> Approved in R2-1913999.

✉ **[107bis#10][LTE MobE] Updated Stage-2 running CR LTE mobility (China Telecom)**
Update running CR based on this meeting's agreements.
Intended outcome: Endorsed running CR
Deadline: 1 week
=> Endorsed in R2-1914007.

✉ **[107bis#11][NB-IoT eMTC R16] RAN2 agreements (Blackberry)**
Update RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC
Intended outcome: Endorsed report in R2-1914092
Deadline: 1 week
=> Endorsed in R2-1914102.

✉ **[107bis#12][V2X] Running 37.324 CR (Vivo)**
Intended outcome: Endorsed running CR, 37.324 CR capturing this meeting's agreements
Deadline: 1 week
=> Endorsed in R2-1914152

✉ **[107bis#13][V2X] Running 38.300 CR (LG)**
Intended outcome: Endorsed running CR, 38.300 CR capturing this meeting's agreements
Deadline: 1 week
=> Endorsed in R2-1914000

Two week discussions: Deadline Thursday, 2019-10-31, 23:59 Pacific Time (unless stated)

Please request TDoc numbers for the following email discussions from MCC if not already allocated below

✉ **[107bis#05][IIOT] Running CR 38300 (Nokia)**
Intended outcome: Endorsed Running CR, Capture agreements incl 107bis
Deadline: 2 weeks
=> Endorsed in R2-1914009

✉ **[107bis#08][NR MobE] Updated Stage-2 running CR for NR mobility (Intel)**
Update running CR based on this meeting's agreements (not including conditional PSCell aspects). Including continuation of Offline 107bis#105.
Intended outcome: Endorsed running CR
Deadline: 2 weeks

=> Endorsed in R2-1913995

✉ **[107bis#14][LTE MobE] Updated RRC running CR for LTE mobility (Ericsson)**
Update running CR based on this meeting's agreements.
Intended outcome: Endorsed running CR
Deadline: Next meeting

✉ **[107bis#15][NR LTE MobE] LS to RAN3 on RAN2 agreements (Huawei)**
Capture RAN2 agreements affecting RAN3 and discuss whether or what to include on COUNT as per RAN3 request earlier.
Intended outcome: Approved LS to RAN3
Deadline: 2 weeks
=> Email summary endorsed in R2-1914024
=> LSout approved in R2-1914025

✉ **[107bis#16][NR-U] Running CR for 38.331 (Qualcomm)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914001

✉ **[107bis#17][NR-U] Running CR for 38.321 (Ericsson)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914026

✉ **[107bis#18][NR-U] Running CR for 38.300 (Qualcomm)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914002

✉ **[107bis#19][NR-U] Running CR for 38.304 (Qualcomm)**
Intended outcome: Endorsed running CR
Deadline: 2 weeks
=> Endorsed in R2-1914003

✉ **[107bis#20][NB-IoT R16] 36.331 running CR (Huawei)**
Update 36.331 running CR with agreements from this meeting
Intended outcome: Endorsed running CR in R2-1914101
Deadline: 2 weeks
=> Endorsed in R2-1914101

✉ **[107bis#21][NB-IoT R16] 36.300 running CR (Huawei)**
Update 36.300 running CR with agreements from this meeting
Intended outcome: Endorsed running CR in R2-1914094
Deadline: 2 weeks
=> Endorsed in R2-1914094

✉ **[107bis#22][NB-IoT R16] 38.300 running CR (Qualcomm)**
Update 38.300 running CR with agreements from this meeting
Intended outcome: Endorsed running CR in R2-1914093
Deadline: 2 weeks
=> Endorsed in R2-1914093

✉ **[107bis#23][NB-IoT R16] Running CR on 36.321 (Ericsson)**
Running CR on 36.321 with agreements so far
Intended outcome: Endorsed running CR in R2-1914099
Deadline: 2 weeks
=> Endorsed in R2-1914099

- ✉ **[107bis#24][NB-IoT R16] Running CR on 36.304 (Nokia)**
  Running CR on 36.304 with agreements so far
  Intended outcome: Endorsed running CR in R2-1914100
  Deadline: Next meeting

- ✉ **[107bis#25][eMTC R16] 36.300 running CR (Intel)**
  Update 36.300 running CR with agreements from this meeting
  Intended outcome: endorsed running CR in R2-1914036
  Deadline: 2 weeks

=> Endorsed in R2-1914036

- ✉ **[107bis#26][eMTC R16] 38.300 running CR (Qualcomm)**
  Update 38.300 running CR with agreements from this meeting
  Intended outcome: endorsed running CR in R2-1914037
  Deadline: 2 weeks

=> Endorsed in R2-1914037

- ✉ **[107bis#27][eMTC R16] 36.304 running CR (Nokia)**
  Update 36.304 running CR with agreements from this meeting
  Intended outcome: endorsed running CR in R2-1914046
  Deadline: 2 weeks

=> Endorsed in R2-1914050

- ✉ **[107bis#28][eMTC R16] 36.321 running CR (Ericsson)**
  Update 36.321 running CR with agreements
  Intended outcome: endorsed running CR in R2-1914047
  Deadline: 2 weeks

=> Endorsed in R2-1914047

- ✉ **[107bis#29][eMTC R16] 36.331 running CR (Qualcomm)**
  Update 36.331 running CR with agreements from this meeting
  Intended outcome: endorsed running CR in R2-1914038
  Deadline: 2 weeks

=> Endorsed in R2-1914038

Next meeting discussions: Deadline Thursday, 2019-11-07, 23:59 Pacific Time (unless stated)

TDoc numbers for the following email discussions may be requested via 3GU tool

- ✉ **[107bis#07][NR R16] Running CR On-demand SI in RRC_CONNECTED (Ericsson)**
  Intended outcome: Endorsable running CRs for both 38.300 and 38331, capturing agreements up to now
  Deadline: Next Meeting

- ✉ **[107bis#30][NR R15] Correction on the condition of RBTermChange (Ericsson)**
  Intended outcome: Agreeable CR 38331
  Deadline: Next Meeting

- ✉ **[107bis#31][NR R15] Correction to AS security key update (Ericsson)**
  Intended outcome: CR 38331 for next meeting
  Deadline: Next Meeting

- ✉ **[107bis#32][NR R15] Miscellaneous CR 331 (Ericsson)**

Intended outcome: Agreeable CR 38331 to next meeting, including coordination with 306 changes.
Deadline: Next Meeting

✉ **[107bis#33][NR R15] Exchanging used IDs of SN terminated DRBs (Huawei)**
Intended outcome: Agreeable CRs 36331 38331, if none agreeable: Report
Deadline: Next Meeting

✉ **[107bis#34][NR R15] Ambiguity of UE FDD/TDD FR1/FR2 capabilities (ZTE)**
Intended outcome: Agreeable CR 38306, can take into account also R1 LS
Deadline: Next Meeting

✉ **[107bis#35][NR R15] Consequences if not supported (Nokia)**
Intended outcome: Agreeable CR 38306, based on R2-1913964
Deadline: Next Meeting

✉ **[107bis#36][NR R15] FR2 CA Fallbacks (Nokia)**
Intended outcome: Report to next meeting, Identify possible options, pave the way for discussions next meeting
Deadline: Next Meeting

✉ **[107bis#37][NR R15] Clarifying the interpretation behind the encapsulation of the filter extensions (Nokia)**
Intended outcome: Report to next meeting, possibly agreeable CR 38331 (dep on progress)
Deadline: Next Meeting

✉ **[107bis#38][NR R15] NE-DC dynamic power sharing capability (QC)**
Intended outcome: Agreeable CRs 306 331
Deadline: Next Meeting

✉ **[107bis#39][IAB] 38321 (Samsung)**
Intended outcome: Draft running CR to the next meeting, including agreements incl 107bis
Deadline: Next Meeting

✉ **[107bis#40][IAB] SI Broadast, barring, Initial access, Connection setup (Ericsson)**
Intended outcome: Report to next meeting, agreeable proposals, Draft reply LS
Deadline: Next Meeting

✉ **[107bis#41][IIOT] Running CR 38331 (Ericsson)**
Intended outcome: CR submitted to next meeting, Capture agreements incl 107bis, include the whole WI
Deadline: Next Meeting

✉ **[107bis#42][IIOT] Running CR 38321 (Samsung)**
Intended outcome: CR submitted to next meeting, Capture agreements incl 107bis
Deadline: Next Meeting

✉ **[107bis#43][IIOT] Running CR 38323 (LG)**
Intended outcome: CR submitted to next meeting, Capture agreements incl 107bis
Deadline: Next Meeting

✉ **[107bis#44][DCCA] Running CRs 38331 36331 (Ericsson)**
Intended outcome: Draft agreeable CRs for next meeting, capturing agreements incl 107bis
Deadline: Next Meeting

✉ **[107bis#45][DCCA] Running CR 37340 (Vivo)**
Intended outcome: Draft agreeable CR for next meeting, capturing agreements incl 107bis
Deadline: Next Meeting

- ✉ **[107bis#46][NR TEI16] Voice fallback (QC)**
  Intended outcome: Agreeable CRs 36331 38331
  Deadline: Next Meeting

- ✉ **[107bis#47][NR TEI16] Signalling design Overheating reporting in (NG)EN-DC (Huawei)**
  Intended outcome: Report w agreeable solution, even more preferred: agreeable CRs
  Deadline: Next Meeting

- ✉ **[107bis#48][NR TEI16] PRACH re-transmission for SRS carrier switching (Huawei)**
  Correction on PRACH re-transmission for SRS carrier switching
  Intended outcome: Agreeable CR for next meeting
  Deadline: Next Meeting

- ✉ **[107bis#49][NR TEI16] cDRX enhancement for CA (Ericsson)**
  Intended outcome: Arrive at an agreeable CR
  Deadline: Next Meeting

- ✉ **[107bis#50][NR TEI16] Adding CSI-RS information into inter-node msg (Huawei)**
  Intended outcome: Agreeable CR to next meeting
  Deadline: Next Meeting

- ✉ **[107bis#51][LTE R16] Handling of non-3GPP paging for Rel-16 UEs (Huawei)**
  Discuss how to handle the paging for non-3GPP access using the Rel-15 or Rel-16 flag, including how this works for eMTC.
  Intended outcome: Report and CR for next meeting, implementing the changes to specification(s).
  Deadline: Next Meeting

- ✉ **[107bis#52][NR MobE] Open issues Conditional PSCell addition/change (CATT)**
  Determine open issues that need to be resolved for the feature to be completed.
  Intended outcome: Report (may include TPs of proposals).
  Deadline: Next Meeting

- ✉ **[107bis#53][NR LTE MobE] UE capability structure DAPS/RUDI HO (Intel)**
  Determine the capability signalling structure on DAPS/RUDI.
  Intended outcome: TP on UE capability structure.
  Deadline: Next Meeting

- ✉ **[107bis#54][NR MobE] 38.331 RRC running CR NR mobility (Intel)**
  Update running CR based on this meeting's agreements (not including conditional PSCell aspects).
  Intended outcome: Running CR for next meeting.
  Deadline: Next Meeting

- ✉ **[107bis#55][NR LTE MobE] Running LTE and NR PDCP CRs NR mobility (Huawei)**
  Update running CR based on this meeting's agreements (not including conditional PSCell aspects).
  Intended outcome: Running CRs for next meeting.
  Deadline: Next Meeting

- ✉ **[107bis#56][NR LTE MobE] Updated MAC running CR NR/LTE mobility (vivo)**
  Update running CR based on this meeting's agreements (not including conditional PSCell aspects).
  Intended outcome: Running CRs for next meeting.
  Deadline: Next Meeting

- ✉ **[107bis#57][CLI] Running RRC CR (LG)**

Update running CR based on the comments and solve remaining issues
Intended outcome: Running CR, to be endorsed next meeting
Deadline: Next Meeting

✉ **[107bis#58][CLI] CLI measurements UE capabilities (Qualcomm)**
Discuss other possible UE capabilities, clarifications on the FFSs and possible questions to RAN1/RAN4 on aspects that cannot be decided by RAN2
Intended outcome: List of agreements regarding UE capabilities and updated running CR for TS 38.306
Deadline: Next Meeting

✉ **[107bis#59][NR eMIMO] MAC CE design (Vivo)**
DL MAC CE design to activate/deactivate TCI states for mTRP operation. Both single PDCCH and multiple PDCCH mTRP should be considered
Intended outcome: List of agreeable proposals
Deadline: Next Meeting

✉ **[107bis#60][NR eMIMO] RRC CR (Ericsson)**
Draft running CR for TS 38.331, including ASN.1 details for available RRC parameter list (including rapporteur excel input for the whole WI)
Intended outcome: Initial draft CR for TS 38.331
Deadline: Next Meeting

✉ **[107bis#61][NR eMIMO] Scell BFR MAC CR (Nokia, Samsung)**
Phase 1: Continue the discussion on details of BFR procedure for Scell (Nokia)
- Beam Failure Detection
- BFR-SR modelling
- MAC CE – transmission and format
Phase 2: Tentatively draft running CR for TS 38.321 (Samsung)
Intended outcome: Initial draft CR for TS 38.321, covering Scell BFR aspects
Deadline: Next Meeting

✉ **[107bis#62][PRN] Stage 2 running CR (Nokia)**
Intended outcome: Update the running CR
Deadline: Next Meeting

✉ **[107bis#63][PRN] RRC CR (Nokia)**
Continue the discussion on SIB1 design and draft running CR for TS 38.331 including agreeable ASN.1 details
Intended outcome: Initial draft CR for TS 38.331
Deadline: Next Meeting

✉ **[107bis#64][PRN] Suitable and acceptable NPN cells (Qualcomm)**
Discuss remaining issues on suitable and acceptable NPN cells
Intended outcome: List of agreeable proposals and running CR for 38.304
Deadline: Next Meeting

✉ **[107bis#65][eMTC R16] UE identifier pros and cons (LG)**
To define the problem and compose a list of pros and cons for each UE identifier
Intended outcome: report from the email discussion in R2-1914048
Deadline: Next meeting

✉ **[107bis#66][NTN] Running TP (Thales)**
Running TP capturing new agreements in this meeting and removing editor's notes
Incorporate new pedestrian requirement changes
Intended outcome: Running TP
Deadline: Next Meeting

- **[107bis#67][NTN] Ephemeris data handling (Ericsson)**
  Intended outcome: Agreeable proposals and TP
  Deadline: Next Meeting

- **[107bis#68][PowerSaving] RRM measurement relaxation (Mediatek)**
  Intended outcome: Report, possibly Draft LS
  - Stage 3 details for the triggering criterion based on papers from RAN2#107bis
  - Summarize and discussion of RRM measurement relaxation based on papers from RAN2#107bis
  - Agreable proposals and possible LS to RAN4
  Deadline: Next Meeting

- **[107bis#69][PowerSaving] Running CR 38.300 (CATT)**
  Scope: Capture agreements up to RAN2#107bis
  Intended outcome: Running CR
  Deadline: Next Meeting

- **[107bis#70][PowerSaving] Running CR 38.331 (Mediatek)**
  Scope: Capture agreements up to RAN2#107bis at least for MIMO and SCell Identify and discuss open issues related to stage-3 modelling aspects if needed
  Intended outcome: Running CR
  Deadline: Next Meeting

- **[107bis#71][PowerSaving] Running CR 38.321 (Huawei)**
  Scope: Identify and Discuss open issues related to stage-3 modelling aspects, with the aim to capture agreements up to RAN2#107bis
  Intended outcome: Proposals on open issues and potential running CR
  Deadline: Next Meeting

- **[107bis#74][2step RACH] Running 38.300 CR for 2-step RACH (Nokia)**
  Intended outcome: Running MAC CR to be endorsed
  Deadline: Next Meeting

- **[107bis#75][2step RACH] Running MAC CR for 2-step RACH (ZTE)**
  Intended outcome: Running MAC CR to be endorsed
  Deadline: Next Meeting

- **[107bis#76][2-step RACH] MSG B format design (Samsung)**
  - Discuss remaining open issues (e.g. E bit)
  - Design MAC PDU format based on agreements made on RAN2#107bis and possible outcome of E bit discussion
  Intended outcome: TP on agreeable MAC PDU format for MsgB
  Deadline: Next Meeting

- **[107bis#77][2-step RACH] RRC details and Running CR (Ericsson)**
  Intended outcome: Agreeable proposals for configuration of 2-step RACH according to proposals submitted in RAN2#107bis and Running RRC CR capturing agreements from this meeting
  Deadline: Next Meeting

- **[107bis#78][NR Pos] Running stage 2 CR on NR positioning (Intel)**
  Intended outcome: Update of the running CR to reflect decisions of RAN2#107bis
  Deadline: Next Meeting

- **[107bis#79][NR Pos] Running CR to 38.331 on NR positioning (Ericsson)**
  Intended outcome: Endorsable running CR
  Deadline: Next Meeting

- ✉ **[107bis#80][NR Pos] Capturing RAN1 parameters for positioning (Intel)**
  Generate a draft CR based on any LS from RAN1 regarding their agreed positioning parameters.
  Intended outcome: Draft CR to next meeting
  Deadline: Next Meeting

- ✉ **[107bis#81][NR Pos] Update of SSR phase 2 running CRs (Qualcomm)**
  Intended outcome: Draft CRs for 36.355 and 36.331 for next meeting
  Deadline: Next Meeting

- ✉ **[107bis#82][NR MDT] 37.320 running CR (CMCC, Nokia)**
  Intended outcome: Running CR, to be endorsed next meeting
  Deadline: Next Meeting

- ✉ **[107bis#83][NR MDT] Running 331 CR for introducing MDT (Huawei)**
  Capture agreements from this meeting
  Including stage3 details event triggered MDT
  Divided into 2 phases. Phase1 is targeted to provide a merged MDT CR in one week.
  Intended outcome: Report and Running CR to be endorsed next meeting
  Deadline: Next Meeting

- ✉ **[107bis#84][NR MDT] MR DC related issue (Ericsson)**
  How to handle MDT in DC scenario
  Intended outcome: Report
  Deadline: Next Meeting

- ✉ **[107bis#85][NR MDT] Mobility history (CATT)**
  Intended outcome: report
  Deadline: Next Meeting

- ✉ **[107bis#86][NR L2 meas] running 38.314 (CMCC)**
  Capture the related agreements from this meeting
  Intended outcome: Report and running CR for next meeting
  Deadline: Next Meeting

- ✉ **[107bis#87][NR SON] running 331 CR for introducing SON (Ericsson)**
  Capture agreements from this meeting
  The merged MDT running CR should be taken as baseline
  Intended outcome: Report and Running CR for next meeting
  Deadline: Next Meeting

- ✉ **[107bis#88][NB-IoT R15] NPDCCH monitoring start/stop timers (NTT DoCoMo)**
  Check whether there is impact to timers other than OnDuration timer for NPDCCH monitoring start/stop
  Intended outcome: Report and CR to be submitted to the next meeting.
  Deadline: Next Meeting

- ✉ **[107bis#89][NB-IoT R16] Open issues on UAC in NB-IoT (Huawei)**
  Open issues on UAC in NB-IoT
  Intended outcome: Report
  Deadline: Next Meeting

- ✉ **[107bis#90][NB-IoT eMTC R16] Further details on “m” operation for PUR (Qualcomm)**
  To progress the FFSs on “m” operation
  Intended outcome: Report
  Deadline: Next Meeting

- ✉ **[107bis#91][V2X] 38.331 running CR (Huawei)**

Intended outcome: Draft CR for next meeting, to be endorsed. 38.331 running CR (including discussion of 38.331 miscellaneous open issues considering new RAN1/4 agreements, e.g. L1 parameters, information in Sidelink UE Information, information in UE Assistance Information, need of both Sidelink UE Information and UE Assistance Information, need of Uu MR (if needed including information in the corresponding MR), SIB remaining issues, etc). See also R2-1912377.
Deadline: Next Meeting

✉ **[107bis#92][V2X] 36.331 running CR (Huawei)**
Intended outcome: Draft CR for next meeting, to be endorsed. 36.331 running CR, See also R2-1913698
Deadline: Next Meeting

✉ **[107bis#93][V2X] 38.321 running CR (LG)**
Intended outcome: Draft CR for next meeting, to be endorsed. 38.321 running CR (including discussion of 38.321 miscellaneous open issues considering new RAN1/4 agreements). See also R2-1913825
Deadline: Next Meeting

✉ **[107bis#94][V2X] 36.321 running CR (LG)**
Intended outcome: Draft CR for next meeting, to be endorsed. 36.321 running CR. See also R2-1913824
Deadline: Next Meeting

✉ **[107bis#95][V2X] 38.304 and 36.304 running CRs (ZTE)**
Intended outcome: Draft CRs for next meeting, to be endorsed. Including discuss how to handle editor's note.
Deadline: Next Meeting

✉ **[107bis#96][V2X] RLC AM mismatch (Huawei)**
Intended outcome: Report for next meeting, discuss the RLC AM mismatch issues and decide solution.
Deadline: Next Meeting

Annex G: History

Document history		
Date	**TSG RAN WG2 Tdoc**	**Subject**
22.10.2019		First draft version
12.11.2019		Second draft version (contains results of short email discussions)
17.11.2019	R2-1914301	Version submitted for approval in RAN2#108

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APPENDIX H

TDoc	Title	Source	TDoc Status	Reservation date	Uploaded
R2-1912000	Agenda for RAN2#107bis	Chairma	approved	2019-09-29 10:30:52	2019-10-06 15:09:01
R2-1912001	RAN2#107 Meeting Report	MCC	approved	2019-09-29 10:30:52	2019-10-13 09:36:28
R2-1912002	Reply LS on NAS Aspects of Mobile-terminated Early Data Transmission (C1-195111; contact:	CT1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912003	LS on sending CAG ID during resume procedure (C1-195157; contact: Samsung)	CT1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912004	LS on short MAC-I and ngKSI for 5G-CIoT (C1-195199; contact: Vodafone)	CT1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912005	LS on encoding of UE radio capabilities (C3-193147; contact: Qualcomm)	CT3	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912006	Liaison response on Ethernet header compression (liaison-response-3GPP-RAN2-Ethernet-header-compression-0719-v01; contact: Ericsson, Nokia)	GSMA	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912007	LS on O-RAN Alliance & 3GPP Coordination on O-RAN Alliance Outputs (ORAN_3GPP_Liaison_Statement_final; contact:	O-RAN Alliance	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912008	Reply LS on PDCCH monitoring for NR-DC (R1-1909550; contact: Samsung)	RAN1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912009	LS Reply on overall procedure for 2-step RACH (R1-1909554; contact: ZTE)	RAN1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912010	Reply LS on quality report in Msg3 for LTE-M (R1-1909793; contact: Ericsson)	RAN1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912011	LS on DL/UL Reference Signals and Measurements for NR Positioning (R1-1909796;	RAN1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912012	Reply LS on SFTD measurement (R1-1909819; contact: Huawei)	RAN1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912013	Reply LS on MAC CE design for SCell BFR (R1-1909833; contact: Apple)	RAN1	noted	2019-09-29 10:30:52	2019-09-29 10:34:24
R2-1912014	Reply LS on Tx DC location (R1-1909849; contact:	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912015	Reply LS on transmission of short message with multiple beams (R1-1909852; contact: Qualcomm)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912016	Reply LS on RAN1/4 feature lists R1-1909856; contact: NTT DOCOMO)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912017	LS on mapping between LTE V2X PPPP and NR V2X priority (R1-1909876; contact: Qualcomm)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912018	Reply LS on Sidelink HARQ Feedback for Groupcast (R1-1909879; contact: LGE)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912019	LS on DL HARQ timing for FDD Scell for LTE TDD-FDD CA with TDD Pcell, applied to FDD Pcell, for Dual Uplink EN-DC (R1-1909880;	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912020	LS on SFN sync (R1-1909882; contact: Nokia)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912021	Reply LS to RAN 2 on CSI reporting in C-DRX (R1-1909889; contact: Qualcomm)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:24
R2-1912022	Reply LS on NR fast SCell activation (R1-1909893; contact: Qualcomm)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912023	Reply LS on maximum value of MDBV (R1-1909894; contact: Qualcomm)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912024	LS on NR Rel-16 TEI (R1-1909895; contact: NTT	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912025	Response to LS on Combination 2 of Uu QoS characteristics values for V2X services (R1-	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912026	Reply LS on supported BW for initial BWP (R1-1909900; contact: Nokia)	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912027	Reply LS on propagation delay compensation for reference time information delivery (R1-1909906;	RAN1	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912028	Reply LS on Combinations of Uu QoS characteristics values for V2X services (R3-	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912029	Reply on radio resource management policy (R3-194550; contact: Huawei)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912030	Reply LS on LS on maximum value of MDBV (R3-194553; contact: Qualcomm)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25

R2-1912031	Reply LS on Data activity reporting (R3-194572; contact: Ericsson)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912032	Reply LS on LTE-M identification in 5GC (R3-194748; contact: Qualcomm)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912033	LS on full configuration during SN Modification procedure (R3-194758; contact: Huawei)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912034	LS on enhanced Make-Before-Break data forwarding (R3-194768; contact: Ericsson)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912035	Reply LS on RAN sharing and Emergency services with Non-Public Networks (R3-194785; contact:	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912036	LS on clarifications on Private Networks (R3-194786; contact: Nokia)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912037	LS on the IAB-indication to core network (R3-194787; contact: Qualcomm)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912038	Reply LS on Enhancements to QoS Handling for V2X Communication Over Uu Reference Point (R3-194795; contact: Vodafone)	RAN3	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912039	Reply LS on measurement gap for SRS-RSRP or CLI-RSSI measurements (R4-1908777; contact: LGE)	RAN4	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912040	Reply LS on RAN1/4 feature lists (R4-1909845;	RAN4	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912041	Reply LS on simultaneous RX/TX for NR (R4-1909992; contact: Ericsson)	RAN4	noted	2019-09-29 10:30:53	2019-09-29 10:34:25
R2-1912042	Reply LS on maximum allowed SCell activation delay for Rel16 CA (R4-1909995; contact: Nokia)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912043	LS Reply on measurements for SRVCC from 5G to 3G (R4-1910026; contact: Huawei)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912044	Reply to LS on DL channel quality report for configured carrier in RRC connected mode (R4-	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912045	LS on signalling measurement thresholds for validating the TA for PUR (R4-1910176; contact:	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912046	Reply LS on SFTD measurement (R4-1910179;	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912047	LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2 (R4-1910239; contact: Apple)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912048	LS on FR2 Pmax (R4-1910262; contact: Huawei)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912049	LS reply on supported BW for initial BWP (R4-1910522; contact: Nokia)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912050	LS on sidelink BWP reconfiguration on ITS band (R4-1910542; contact: MediaTek)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912051	Reply LS on reporting criteria limitation in MR-DC (R4-1910570; contact: Huawei)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912052	LS on RSSI definition (R4-1910573; contact:	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912053	Reply LS on NR fast SCell activation (R4-1910574; contact: Huawei)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912054	LS on evaluation of S criteria on non-anchor carrier (R4-1910575; contact: Huawei)	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912055	LS to RAN2 on mandatory 90 MHz UE channel bandwidth for n41 and n78 in REL-16 (R4-1910605;	RAN4	noted	2019-09-29 10:30:54	2019-09-29 10:34:25
R2-1912056	LS on Rel-16 NB-IoT enhancements (RP-192338; contact: Futurewei)	RAN	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912057	Reply on Combinations of Uu QoS characteristics values for V2X services (S2-1906340; contact:	SA2	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912058	Reply LS on Reply LS on Mobile-terminated Early Data Transmission (S3-193059; contact: Nokia)	SA3	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912059	LS on Sending CAG ID in NAS layer (S3-193142; contact: Qualcomm)	SA3	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912060	LS to RAN2 and RAN3 on False Base Station Detection (S3-193175; contact: Huawei)	SA3	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912061	LS on QoE Measurement Collection (S5-195659; contact: Ericsson)	SA5	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912062	Reply LS on L1 and L2 measurements (S5-195941; contact: Huawei)	SA5	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912063	LS on aspects of Mission Critical Services over 5MBS (S6-192003; contact: AT&T)	SA6	postponed	2019-09-29 10:30:54	2019-09-29 10:34:24

R2-1912064	Reply LS to "O-RAN Alliance & 3GPP Coordination on O-RAN Alliance Outputs" (SP-190947; contact: Intel)	SA	noted	2019-09-29 10:30:54	2019-09-29 10:34:24
R2-1912065	Discussion on SL capability signaling for Uu-RRC	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912066	Left issues on SIB and cell reselection for NR-V2X	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912067	Discussion on SL-related Uu-RRC messages	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912068	Discussion on RLC mode configuration collision	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912069	Left issues on RLC, PDCP and SDAP for NR-V2X	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912070	Left issues on MAC for NR-V2X	OPPO	revised	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912071	Left issues on UL-SL prioritization for NR-V2X	OPPO, Apple	noted	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912072	[DRAFT] LS on HARQ option for group-cast	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912073	Left issues on PC5-RRC based AS layer configuration procedure	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912074	Left issues on PC5-S impact on AS-layer	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912075	Left issues on PC5-RRC based capability transfer	OPPO	noted	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912076	Left issues on SLRB configuration for NR-V2X	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912077	Discussion on congestion control and admission	OPPO	noted	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912078	Miscellaneous issues on PC5-RRC	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912079	Left issue on idle mode mobility for NTN	OPPO	not treated	2019-09-30 11:26:00	2019-10-03 15:29:30
R2-1912080	Discussion on DL-TDOA positioning	ZTE	not treated	2019-09-30 11:55:16	2019-10-04 02:20:39
R2-1912081	Discussion on UL-TDOA positioning in NR	ZTE	not treated	2019-09-30 11:59:55	2019-10-04 02:20:39
R2-1912082	Discussion on multi-cell E-CID in NR	ZTE	not treated	2019-09-30 12:02:56	2019-10-04 02:20:39
R2-1912083	Discussion on multi-cell E-CID in NR	ZTE	withdrawn	2019-09-30 12:03:18	2019-10-22 03:18:35
R2-1912084	Remaining issues on supporting only 2-step RACH configuration on a UL BWP	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912085	msgB MAC PDU format in 2-step RACH	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912086	Remaining stage-2 open issues	OPPO	noted	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912087	Stage3 issues on contention resolution for 2-step	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912088	Contention free 2-step RACH	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912089	Remaining issues on UE behaviours when PDCCH-WUS is configured	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912090	Remaining issues on configuration of PDCCH-WUS	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912091	Impacts of power saivng signalling on CSI reporting	OPPO	not treated	2019-09-30 12:11:23	2019-10-10 08:22:26
R2-1912092	MIMO layer adaptation for power saving	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912093	UE assistance information for power saving	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912094	RRM relaxation for power saving	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912095	Remaining issues on detecting uplink LBT failure	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912096	Uplink LBT failure revoery for NR-U	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912097	Issues on contention resolution timer in NR-U	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912098	Remaining issues on extending RA response	OPPO	noted	2019-09-30 12:11:23	2019-10-10 08:22:26
R2-1912099	[Draft] LS on supporting LBT type in RAR	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912100	2-step RACH for NR-U	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912101	Remaining DRX issues for non-numerical K1 and HARQ feedback	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912102	DRX procedure enhancements due to LBT impacts	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912103	Remaining issues on NR-U configured grant	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912104	Discussion RAN1 LS on supporting multiple frequency domain monitoring locations for a	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912105	RLM enhancements	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912106	System information enhancements for NR-U	OPPO	not treated	2019-09-30 12:11:23	2019-10-03 13:52:35
R2-1912107	RAN2 work plan for UE Power Saving WI	CATT	noted	2019-09-30 12:13:36	2019-10-03 13:39:20

R2-1912108	[107#65][NR/Power Saving] Running CR for 38.300 (CATT)	CATT (rapporteur)	**endorsed**	2019-09-30 12:13:36	2019-10-04 08:51:21
R2-1912109	Stage-3 aspects of PDCCH-WUS	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912110	Remaining issues on UE RRC state transition request	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912111	Maximum MIMO layers configuration in power	CATT	**noted**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912112	UE assistance for SCell	CATT, Qualcomm Inc., Apple, Huawei,	**noted**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912113	Considerations on the criterions of RRM measurement relaxation	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912114	Available Cell Reselection Measurement Result Reporting	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:44:04
R2-1912115	Remaining issues of early measurement configurations	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:44:04
R2-1912116	Considerations on Direct SCell activation in DC/CA Scenarios	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 23:23:44
R2-1912117	Temporary RS utilization for SCell and SpCell	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:44:04
R2-1912118	Dormant SCG state	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 23:23:44
R2-1912119	Signalling enhancement for Inactive state	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 23:23:45
R2-1912120	Bearer type negotiation	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 23:23:45
R2-1912121	Common Cell Configuration for Signaling Reduction in NR	CATT	**noted**	2019-09-30 12:13:36	2019-10-03 13:44:04
R2-1912122	Bearer type negotiation	CATT	**withdrawn**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912123	Discussion on BAP Buffer	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912124	Pre-emptive BSR	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912125	Remaining issues with IAB Routing	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912126	Further Discussions on IAB BH RLF	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912127	Summary of the email discussion [106#43][IAB]	CATT	**noted**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912128	Discussion on multi-beam enhancements	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 23:23:45
R2-1912129	Further Considerations on Capability Coordination for DAPS-RUDI	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912130	Remaining PDCP issues for DAPS	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912131	Further Considerations on CP of DAPS-RUDI	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912132	Discussion on the Working Assumption Related	CATT	**not treated**	2019-09-30 12:13:36	2019-10-03 13:39:20

R2-1912133	Conditional PScell Addition/Change	CATT	noted	2019-09-30 12:13:36	2019-10-03 23:35:06
R2-1912134	Further Discussion on Cell Evaluation for CHO Cell Selection	CATT	not treated	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912135	Coexistence of Simultaneous Connectivity and	CATT	not treated	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912136	Discussion on Signaling Structure of CHO Configuration Message	CATT	not treated	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912137	UE Capability Issue for CHO	CATT	not treated	2019-09-30 12:13:36	2019-10-03 13:39:20
R2-1912138	Corrections on the premises of HO to E-UTRA	CATT	not treated	2019-09-30 12:46:13	2019-10-03 04:31:21
R2-1912139	Corrections on the premises of E-UTRA HO to NR	CATT	not treated	2019-09-30 12:46:14	2019-10-03 04:31:21
R2-1912140	Correction on reestablishRLC	CATT	not treated	2019-09-30 12:46:15	2019-10-03 04:31:21
R2-1912141	Corrections on CG-Config	CATT	agreed	2019-09-30 12:46:16	2019-10-03 04:31:21
R2-1912142	Issues for Log MDT Configuration in DC Scenario	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912143	Detection and Reporting of Out-of-coverage	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912144	[Draft] LS on MDT Configuration of Event triggered Out-of-coverage	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912145	Clarification of UL Delay Measurement	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912146	Uncertainty of L2 Measurement Result Related to	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912147	Output of Email Discussion [107#45][NRSON] RACH and Mobility Robustness Optimisation Checking	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912148	[Draft] Reply LS on RACH Optimization and Mobility Robustness Optimization	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912149	RACH Report Optimization	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912150	Recording and Reporting of RACH Failure	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912151	Consideration on Successful HO Report	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912152	Mobility History and State in NR	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912153	Cell Selection and Reselection of NPN cell	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912154	Connection and Mobility Issue for UEs in Idle and Inactive Mode	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912155	Mobility Issue for LEO in NTN System	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912156	Cell Selection and Reselection Issue between NTN and TN System	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912157	Measurement Issues for NTN System	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912158	Paging Load in Two Sub-options of Fixed TA	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912159	Discussion on Random Access Procedure for NTN	CATT	not treated	2019-09-30 12:46:17	2019-10-03 10:34:05
R2-1912160	Consideration on the SPS/CG for NTN	CATT	not treated	2019-09-30 12:46:17	2019-10-03 03:55:05
R2-1912161	Discussion on unicast connection setup procedure	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912162	RLM / RLF procedure in NR V2X Sidelink	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912163	Resource (Re-) selection function in NR V2X Sidelink	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912164	38 323 running CR	CATT	revised	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912165	Remaining Issues on PDCP	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:54
R2-1912166	Resource allocation mode configuration	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:54
R2-1912167	Further discussion on LCP procedure	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912168	Leftover issues for sidelink configured grant	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912169	Prioritization between UL and SL for NR V2X	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912170	SLRB configurations handling during UE states	CATT	noted	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912171	Configuration Procedure of the Bi-directional RLC AM SLRB	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912172	NR Uu controlling LTE sidelink SPS	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912173	Left Issues of BSR/SR	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912174	Admission Control for NR SL	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912175	Type 1 Sidelink Configured Grant Validity Time	CATT	not treated	2019-09-30 13:16:21	2019-10-03 15:39:55
R2-1912176	Remaining Issues on RACH Procedure in NR-U	vivo	not treated	2019-09-30 13:31:07	2019-10-04 04:34:51
R2-1912177	Remaining Issues on Uplink LBT Failure	vivo	not treated	2019-09-30 13:31:07	2019-10-04 04:34:51

R2-1912178	Issue on the Autonomous BWP Switching in NR-U	vivo	not treated	2019-09-30 13:31:07	2019-10-04 04:34:51
R2-1912179	LBT Impacts on 2-step RACH	vivo	not treated	2019-09-30 13:31:07	2019-10-04 04:34:51
R2-1912180	Remaining Issues on Configured Grant in NR-U	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:34:51
R2-1912181	CAPC Restriction to Data Multiplexing for	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:34:51
R2-1912182	Introducing More Transmission Opportunities for DL SPS in NR-U	vivo	noted	2019-09-30 13:31:08	2019-10-04 04:34:51
R2-1912183	On NR-U PHR Handling	vivo	noted	2019-09-30 13:31:08	2019-10-04 04:34:51
R2-1912184	Further Discussion on the Whitelist in NR-U	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:34:51
R2-1912185	Enhancements of System Information in NR-U	vivo	noted	2019-09-30 13:31:08	2019-10-04 04:34:51
R2-1912186	Differentiation Between 2-step and 4-step RACH	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:29:47
R2-1912187	Remaining Issue on Contention Resolution in 2-	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:29:47
R2-1912188	Remaining Issue on Fallback from 2-step to 4-step	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:29:47
R2-1912189	Resource Selection for MsgA	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:29:47
R2-1912190	Prioritized RA Parameters for 2-step RACH	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:29:47
R2-1912191	Discussion on the 2-step CFRA	vivo	not treated	2019-09-30 13:31:08	2019-10-04 04:29:47
R2-1912192	Remaining issues of NR early measurements	Qualcomm	not treated	2019-09-30 13:41:57	2019-10-04 05:35:08
R2-1912193	CR to 38.331 on support of cross-carrier scheduling with different numerology	Qualcomm Incorpor	not treated	2019-09-30 13:44:55	2019-10-04 05:35:08
R2-1912194	Further discussion on NR SCG resume procedure	Qualcomm	not treated	2019-09-30 13:46:29	2019-10-04 05:35:08
R2-1912195	Discussion on fast SCell activation based on RAN1 / RAN4 reply LS	Qualcomm Incorporated, Verizon,	noted	2019-09-30 13:48:52	2019-10-04 05:35:08
R2-1912196	Discussion on common SCell configuration	Qualcomm	not treated	2019-09-30 13:50:19	2019-10-04 05:35:08
R2-1912197	Introducing suspension of SCG	Qualcomm	not treated	2019-09-30 13:51:30	2019-10-04 05:35:08
R2-1912198	Remaining issues of Fast MCG Recovery	Qualcomm	not treated	2019-09-30 13:55:10	2019-10-04 05:35:08
R2-1912199	CR to 38.331 on configuration of rach-ConfigCommon in initial UL BWP for RRC	Qualcomm	revised	2019-09-30 13:57:00	2019-10-04 05:35:08
R2-1912200	Discussion on procedures in RAT-Dependent positioning methods	CATT	noted	2019-09-30 13:57:46	2019-10-03 05:53:40
R2-1912201	Considerations on Broadcast Positioning	CATT	not treated	2019-09-30 13:57:57	2019-10-03 05:53:40
R2-1912202	Open Issues on Broadcast Positioning Procedure	CATT	not treated	2019-09-30 13:57:57	2019-10-03 05:53:39
R2-1912203	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	endorsed	2019-09-30 13:57:57	2019-10-03 05:39:43
R2-1912204	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	revised	2019-09-30 13:57:59	2019-10-03 05:39:43
R2-1912205	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	endorsed	2019-09-30 13:58:00	2019-10-03 05:39:43
R2-1912206	Re-consideration on PLMN-wide Filter	CATT	not treated	2019-09-30 13:58:00	2019-10-03 05:41:26
R2-1912207	Draft LS on PLMN-wide Filter	CATT	not treated	2019-09-30 13:58:00	2019-10-03 05:41:26
R2-1912208	Open Issues of Reference Timing Delivery	CATT	noted	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912209	Remaining Issues on Multiple Active SPS/CGs	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912210	Discussion on Ethernet Header Compression	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912211	Data/data prioritization	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912212	Equal-priority handling	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08

R2-1912213	SR/PUSCH prioritization	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912214	[107#80][NR IIOT] Summary on Deprioritized	CATT	revised	2019-09-30 16:16:24	2019-10-22 03:18:35
R2-1912215	Handling of Dropped MAC PDU	CATT	noted	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912216	The prioritization between MAC CEs and UL data	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912217	LCP restriction enhancement for reliability	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912218	On the number of activated legs	CATT,	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912219	PDCP Duplication Configuration and	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912220	Discussion on UE based Duplication	CATT	not treated	2019-09-30 16:16:24	2019-10-03 13:43:08
R2-1912221	MAC upgrade for SR dropping in PHY	CATT	not treated	2019-09-30 16:21:09	2019-10-03 13:43:08
R2-1912222	BSR trigger issue for CA duplication	CATT	noted	2019-09-30 16:21:10	2019-10-03 13:43:08
R2-1912223	On the remaining open issues of 2-step RACH	CATT	not treated	2019-09-30 16:21:10	2019-10-03 01:07:49
R2-1912224	Load balancing between RACH Types	CATT	not treated	2019-09-30 16:21:10	2019-10-03 01:07:49
R2-1912225	Remaining Issue of RA Type Selection	CATT	not treated	2019-09-30 16:21:10	2019-10-03 01:07:49
R2-1912226	Open issues of 2-step CFRA	CATT	not treated	2019-09-30 16:21:10	2019-10-03 01:07:49
R2-1912227	NR-U RACH enhancements	SHARP	not treated	2019-09-30 18:35:06	2019-10-02 19:20:27
R2-1912228	Report of email discussion [107#56][NB-IoT R15]	NTT DOCOMO INC.	noted	2019-09-30 23:40:06	2019-10-04 06:45:02
R2-1912229	CE Mode Threshold Adjustments for non-BL and BL UE	NTT DOCOMO INC.	not treated	2019-09-30 23:42:51	2019-10-04 06:45:02
R2-1912230	Discussion on capability transfer procedure for NR V2X	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912231	Discussion on SLRB configuration alignment	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912232	Asymmetric UL and DL frame timing at gNB side	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912233	Discussion on communication range in V2X	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912234	Logical channel prioritization Consideration	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912235	Consideration on activation/deactivation of PDCP duplication	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912236	Consideration on early measurement reporting	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912237	Early measurement in NR-U	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912238	Enhancements of resuming MR-DC configuration for RRC_INACTIVE	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912239	Mobility Consideration in NR-U	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912240	Measurement report enhancement in conditional handover	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912241	RRC signaling size restriction in CHO	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912242	PSCell Conditional Change Considerations	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912243	LBT Failures Handling in Non-Connected State	Spreadtrum Commu	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54

R2-1912244	Inconsecutive UL LBT Failures Handling	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912245	Consideration on Logged MDT Report in MR-DC	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912246	Handling of periodicity misalignment between CG periodicity and TSN traffic periodicity	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912247	Discussion on CG and CG collision of equal priority	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912248	Consideration on packet based duplication	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912249	Some remaining issues on UE capability ID	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912250	Filter ID for the selection of UE capability ID	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912251	Discussion on the SuccessRAR for SI request	Spreadtrum	not treated	2019-10-01 02:03:47	2019-10-01 04:42:54
R2-1912252	Running CR to 37324 for 5G_V2X_NRSL	vivo (Rapporteur)	revised	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912253	Left Issues on NR SL RLC and PDCP	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912254	Uplink and Sidelink transmission prioritization in NR V2X	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912255	Indication and resource configuration on HARQ enable disable	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912256	Discussion on SR and BSR	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912257	Discussion on Truncated Sidelink BSR	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912258	Remaining issues on sidelink configured grant	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912259	Left issues for PC5-S messages	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912260	Discussion on sideink radio link management on TX and RX UE	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912261	Remaining issues on PC5-RRC message	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912262	UE ID across multiple PC5-S links	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912263	Report of 107#73 NR V2X SDAP(vivo)	vivo	revised	2019-10-01 03:04:03	2019-10-03 19:39:53
R2-1912264	Left issues on SLRB configuration	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912265	Admission and Congestion control in NR V2X	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912266	Mode switch for QoS guarantee in NR V2X	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912267	Remaining issues about NR SL QoS handling	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:19:11
R2-1912268	Running CR to 37.340 for CA_DC enhancements	vivo, Ericsson	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912269	Power control for NR-DC	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912270	Report of [107#35][NR/DCCA] Remaining aspects of early measurement configuration (vivo)	vivo	noted	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912271	Early Measurement Reporting for INACTIVE State	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912272	UE measurement behaviour regarding autonomous state transition	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912273	IDC impact for early measurement	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912274	Discussion on fast radio link recovery	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912275	Behavior of dormancy SCell and Scell activation	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912276	Minimize signaling overhead for cell setup of MR-	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912277	Remaining issues on MCG fast recovery	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:16:02
R2-1912278	UE capability parameters for SON_MDT	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:13:54
R2-1912279	Running CR to 38.306 for NR_SON_MDT	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:13:54
R2-1912280	Autonomous Gap capability for CGI reporting	vivo, Ericsson	not treated	2019-10-01 03:04:03	2019-10-03 19:14:38
R2-1912281	[Draft] Reply LS on autonomous gap capability	vivo	not treated	2019-10-01 03:04:03	2019-10-03 19:14:38
R2-1912282	SMTC for sync SSB frequency and non-sync SSB frequency	OPPO	not treated	2019-10-01 03:09:09	2019-10-01 13:53:43
R2-1912283	UE measurement behavior due to lower priority frequency and OOS	OPPO	not treated	2019-10-01 03:09:09	2019-10-01 13:53:43

R2-1912284	Fast Scell activation in sTAG	OPPO	not treated	2019-10-01 03:09:09	2019-10-01 13:53:43
R2-1912285	Introduction of dormancy behavior in NR	OPPO	revised	2019-10-01 03:09:09	2019-10-01 13:53:43
R2-1912286	Supporting RRC reestablishment to SN RAT cell	OPPO	not treated	2019-10-01 03:09:09	2019-10-01 13:53:43
R2-1912287	RRC Resume for MR-DC with 5GC	OPPO	not treated	2019-10-01 03:09:09	2019-10-01 13:53:43
R2-1912288	SCell or SCG activation in RRC_INACTIVE	OPPO	not treated	2019-10-01 03:09:09	2019-10-01 13:53:43
R2-1912289	Security algorithom update in RRC reestablishment message	OPPO,Huawei	not treated	2019-10-01 03:09:09	2019-10-01 13:50:58
R2-1912290	Configuration limitation for RRCRelease message	OPPO	revised	2019-10-01 03:09:09	2019-10-01 13:50:58
R2-1912291	Discussion on Cached Data Handling for INACTIVE UE	OPPO	not treated	2019-10-01 03:09:14	2019-10-01 13:50:58
R2-1912292	Discussion on DRB IP failure handling and data recovery	OPPO	not treated	2019-10-01 03:09:14	2019-10-01 13:50:58
R2-1912293	Open issues for early measurement	OPPO	not treated	2019-10-01 03:09:14	2019-10-01 13:53:43
R2-1912294	Lossless Make-Before-Break (MBB) HO support for Low latency, high reliability services	Qualcomm	not treated	2019-10-01 03:15:51	2019-10-04 03:15:27
R2-1912295	Source connection handling during Make-Before-Break (MBB) HO	Qualcomm	not treated	2019-10-01 03:16:55	2019-10-04 03:15:27
R2-1912296	DAPS HO support for simultaneous Tx not feasible scenarios	Qualcomm	not treated	2019-10-01 03:18:28	2019-10-04 03:15:27
R2-1912297	Conditional NR PSCell addition/change procedures	Qualcomm	not treated	2019-10-01 03:19:30	2019-10-04 03:15:27
R2-1912298	Conditional NR PSCell addition/change failure handling	Qualcomm	not treated	2019-10-01 03:20:59	2019-10-04 03:15:27
R2-1912299	Supporting per DRB MBB HO configuration	Qualcomm	not treated	2019-10-01 03:21:53	2019-10-04 03:15:27
R2-1912300	Support Tx sharing during DAPS HO	Qualcomm	not treated	2019-10-01 03:22:45	2019-10-04 03:15:27
R2-1912301	Remaining Aspects of Configured Grant Transmission for NR-U	Qualcomm	noted	2019-10-01 04:33:21	2019-10-04 03:14:00
R2-1912302	Remaining issues on 4-step RACH for NR-U	Qualcomm	noted	2019-10-01 04:35:02	2019-10-04 03:14:00
R2-1912303	Running CR for NR-based Access to Unlicensed Spectrum	Qualcomm	revised	2019-10-01 05:04:56	2019-10-04 03:14:00
R2-1912304	Details of the Uplink LBT failure mechanism	Qualcomm	noted	2019-10-01 05:06:30	2019-10-04 03:14:00
R2-1912305	Broadcasting of System Information in NR-U	Qualcomm	noted	2019-10-01 05:08:12	2019-10-04 03:14:00
R2-1912306	Support for Indian Navigation Satellite System (NavIC)	Reliance Jio	not treated	2019-10-01 05:57:50	2019-10-08 07:46:22
R2-1912307	Remaining Issues on Ethernet Header Compression	China Telecom	not treated	2019-10-01 06:49:52	2019-10-04 00:02:25
R2-1912308	Fast Recovery with CA	Nokia, Nokia	not treated	2019-10-01 07:46:25	2019-10-03 12:08:52
R2-1912309	Consideration on idle and inactive mode procedures	Huawei, HiSilicon	not treated	2019-10-01 07:50:32	2019-10-04 00:57:48
R2-1912310	Consideration on connected mode procedures	Huawei,	not treated	2019-10-01 07:50:32	2019-10-04 00:57:48
R2-1912311	Propagation delay compensation for reference time	vivo	not treated	2019-10-01 07:53:56	2019-10-04 04:41:43
R2-1912312	Email discussion summary on EHC	vivo	noted	2019-10-01 07:53:56	2019-10-04 04:41:43
R2-1912313	Remaining issues for EHC	vivo	not treated	2019-10-01 07:53:56	2019-10-04 04:41:43
R2-1912314	TP on TS 38.323 of EHC	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:43
R2-1912315	TP on TS 38.331 of EHC	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912316	Discussion on the periodicity misalignment between TSC traffic and SPS/CG	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44

R2-1912317	URLLC transmission within measurement gap	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912318	SPS and CG configuration issue on the partial overlapping TSN traffic pattern	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912319	Reliability-based LCP Restriction Enhancement for	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912320	Discussion on the MAC PDU recovery procedure	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912321	Remaining issues of the network-controlled	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912322	Remaining issue for the priority of PUSCH and SR	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912323	Discussion on the PUSCH priority based on MAC	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912324	Discussion on the LCP restriction for CA duplication	vivo	not treated	2019-10-01 07:53:57	2019-10-04 04:41:44
R2-1912325	Adding the Phase Bias Indicator to the SSR Phase Bias message	Swift Navigati	not treated	2019-10-01 08:46:29	2019-10-03 23:29:13
R2-1912326	Correction on PUCCH transform precoding	vivo, Nokia	agreed	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912327	Cell re-selection during RRC connection resume	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912328	Discussion on LS about beamSwitchTiming value of 224 and 336	vivo, Huawei,	agreed	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912329	Introduction of NR IDC solution	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912330	WUS impact on Short DRX cycle	vivo, Qualcom m Inc.,	noted	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912331	WUS impact upon BWP switching	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912332	Stage-3 design for per-BWP MIMO layer	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912333	UE assistance information for power saving	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912334	RRM measurement relaxation criteria	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912335	UE Power Consumption Reduction in RRM	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912336	Summary of EmailDis-78 on MAC aspects for mobility enhancement	vivo (rapporte	noted	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912337	Summary of EmailDis-78 on Text Proposal for 38321 of mobility	vivo (rapporte	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912338	Summary of EmailDis-78 on Text Proposal for 36321 of mobility	vivo (rapporte ur)	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912339	Conditional Handover without explict trigger condition	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912340	Discussion on CHO release	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912341	Discussion on the HOF for CHO	vivo	withdrawn	2019-10-01 09:13:10	2019-10-22 03:18:35
R2-1912342	Discussion on the number of prepared cells for CHO	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912343	Conditional PSCell addition and change	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912344	Text proposal for conditional PSCell addition and	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912345	Discussion on the selective PDCP retransmission at UL PDCP PDU switching	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912346	Discussion on the ROHC failure issue	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912347	Clarificaiton on the reordering after ROHC decompression for NR PDCP	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912348	Issue on the potential duplicated PDCP packets at the network side	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912349	Summary of Email Discussion on CP for DAPS	vivo	noted	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912350	Discussion on the signaling procedures of the	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912351	RAN2 specification impacts of SCell BFR	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912352	Text proposal for 38.321 of SCell BFR	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912353	Text proposal for 38.331 of SCell BFR	vivo	not treated	2019-10-01 09:13:10	2019-10-04 04:38:33
R2-1912354	Data forwarding in RUDI HO	Ericsson	not treated	2019-10-01 12:49:41	2019-10-03 17:28:09
R2-1912355	ROHC handling in RUDI HO	Ericsson	not treated	2019-10-01 12:49:42	2019-10-03 17:28:09
R2-1912356	Uplink handling in RUDI HO	Ericsson	not treated	2019-10-01 12:49:42	2019-10-03 17:28:09

R2-1912357	Handover interruption reduction for UM bearers	Ericsson	noted	2019-10-01 12:49:42	2019-10-03 17:28:09
R2-1912358	Control plane handling in RUDI HO	Ericsson	not treated	2019-10-01 12:49:42	2019-10-03 17:28:09
R2-1912359	TDM pattern for single uplink in RUDI HO	Ericsson	not treated	2019-10-01 12:49:42	2019-10-03 19:35:46
R2-1912360	Further aspects of SNPN	Ericsson	not treated	2019-10-01 12:49:42	2019-10-03 17:28:09
R2-1912361	Further aspects of PNI-NPN	Ericsson	not treated	2019-10-01 12:49:42	2019-10-03 17:28:09
R2-1912362	Introduction of Multiple LTE-CRS-	Ericsson	withdrawn	2019-10-01 12:49:42	2019-10-22 03:18:35
R2-1912363	PDCP version in EN-DC	Ericsson	noted	2019-10-01 12:49:43	2019-10-03 17:28:09
R2-1912364	PDCP version in EN-DC	Ericsson	revised	2019-10-01 12:49:43	2019-10-03 17:28:09
R2-1912365	Remaining issues for routing	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912366	Remaining issues for bearer mapping	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912367	Flow control for IAB networks	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912368	BAP PDU format	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912369	Remaining issues for uplink scheduling	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912370	LCID and LCG space extension for IAB backhaul	Huawei,	noted	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912371	General RLC impacts	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912372	RACH related issues for IAB	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912373	Support of UE PDCP duplication	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912374	Backhaul RLF Recovery	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912375	BAP and RLC configurations	Huawei,	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912376	Cell (re)Selection and Access Control and Connection Establishment	Huawei, HiSilicon	not treated	2019-10-01 12:58:58	2019-10-04 03:18:18
R2-1912377	Running CR to TS 38.331 for 5G V2X with NR	Huawei,	not treated	2019-10-01 13:28:50	2019-10-12 10:49:38
R2-1912378	Discussion on multi-mode co-existence	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:01
R2-1912379	Consideration on mode1 resource allocation	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912380	Discussion on UL and SL prioritisation	ZTE Corporat	noted	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912381	Consideration on NR V2X CBR	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912382	Discussion on left issue in NR V2X PDCP	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912383	Left issues for MAC in NR V2X	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912384	Considerations on sidelink RLC	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912385	Discussion on PC5 RRC procedure for unicast	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912386	Discussion on remaining issues on SLRB parameters	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912387	Discussion on SDAP issues	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912388	Consideration on sidelink RLM management	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912389	Consideration on exceptional resource pool and system information acquisition	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912390	Consideration on NR V2X cross RAT support	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912391	SLRB maintenance during RRC state transition	ZTE Corporat	not treated	2019-10-01 14:03:03	2019-10-03 16:05:02
R2-1912392	(running)36.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporat	revised	2019-10-01 14:10:49	2019-10-03 16:05:02
R2-1912393	(running)38.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporat	revised	2019-10-01 14:20:36	2019-10-03 16:05:02
R2-1912394	Consideration on the issue of SI update	Beijing Xiaomi	not treated	2019-10-01 14:24:59	2019-10-01 14:39:27
R2-1912395	Indication of contentionDetected per SSB	Beijing Xiaomi	not treated	2019-10-01 14:28:04	2019-10-01 14:39:27
R2-1912396	DRX enhancement for NR-U	Xiaomi Commu	not treated	2019-10-01 14:30:19	2019-10-01 14:39:27
R2-1912397	Consideration on MDT in NR	Xiaomi Commu	not treated	2019-10-01 14:32:02	2019-10-01 14:39:27
R2-1912398	Consideration on SR transmission	Xiaomi Commu	not treated	2019-10-01 14:33:48	2019-10-01 14:39:27

R2-1912399	Consideration on the blind SCG configuration	Beijing Xiaomi	not treated	2019-10-01 14:36:14	2019-10-01 14:39:27
R2-1912400	PCell monitoring during conditional PSCell	OPPO	not treated	2019-10-01 14:52:43	2019-10-03 02:07:49
R2-1912401	PCell monitoring during conditional PSCell	OPPO	not treated	2019-10-01 14:52:43	2019-10-03 02:07:49
R2-1912402	Discussion on T312 for PSCell	OPPO	not treated	2019-10-01 14:52:43	2019-10-03 02:07:49
R2-1912403	UL switching time for DAPS HO	OPPO	not treated	2019-10-01 14:52:43	2019-10-03 02:07:49
R2-1912404	Correction on RRC Resume procedure	OPPO	not treated	2019-10-01 14:52:43	2019-10-03 02:07:49
R2-1912405	Revision to Non-Terrestrial Networks scenarios	HUGHES Network Systems	not treated	2019-10-01 15:59:51	2019-10-04 02:30:39
R2-1912406	Remaining issues on UE capability ID	Huawei, HiSilicon	not treated	2019-10-01 17:55:22	2019-10-04 06:52:53
R2-1912407	Remaining issues on UE capability segmentation	Huawei,	noted	2019-10-01 17:55:22	2019-10-04 06:52:53
R2-1912408	UE CLI Measurement Configuration, Reporting and NW Signalling	Nokia, Nokia Shanghai	not treated	2019-10-01 18:30:35	2019-10-07 11:58:11
R2-1912409	[DRAFT] LS For Exchange of related to UE CLI measurement configuration and reporting	Nokia, Nokia Shanghai	revised	2019-10-01 18:30:35	2019-10-07 11:58:11
R2-1912410	GWUS Configuration and Resource mapping for UE-Group Information	Nokia, Nokia	not treated	2019-10-01 18:30:35	2019-10-07 12:27:13
R2-1912411	Remaining Issues for D-PUR Signalling Procedure	Nokia, Nokia	not treated	2019-10-01 18:30:35	2019-10-07 12:27:13
R2-1912412	D-PUR for Control Plane Solution	Nokia, Nokia	not treated	2019-10-01 18:30:35	2019-10-07 12:27:13
R2-1912413	Further analysis of Msg4 based MT EDT	Nokia, Nokia	noted	2019-10-01 18:30:35	2019-10-07 12:41:25
R2-1912414	Running CR for 36.304 -Rel-16 eMTC Enhancements	Nokia, Nokia	revised	2019-10-01 18:30:35	2019-10-07 12:41:25
R2-1912415	Source PS Release of PDCP DAPS during RUDI Handover	Nokia, Nokia	not treated	2019-10-01 18:30:35	2019-10-07 12:16:47
R2-1912416	Broadcast of Barometric Pressure Assistance Data	Polaris Wireless,	not treated	2019-10-01 19:51:51	2019-10-02 18:05:38
R2-1912417	Running 36.300 CR for LTE_feMob	China Telecom	revised	2019-10-01 20:23:15	2019-10-04 05:12:34
R2-1912418	Correction to applicability of UP IP in NR	Ericsson	noted	2019-10-01 20:30:31	2019-10-03 11:13:44
R2-1912419	Correction to applicability of UP IP in NR	Ericsson	not pursued	2019-10-01 20:33:19	2019-10-03 11:13:44
R2-1912420	Operation Principles of PC5 RRC Connection	Futurew	not treated	2019-10-01 21:44:58	2019-10-04 02:09:50
R2-1912421	Sensor Provide Location Information Element	Polaris	not treated	2019-10-02 01:26:41	2019-10-02 18:11:32
R2-1912422	Sensor Provide Location Information Elements	Polaris	revised	2019-10-02 01:30:41	2019-10-02 18:11:32
R2-1912423	Remaining Issues for Extending RAR Window	Samsung	noted	2019-10-02 01:42:30	2019-10-04 01:24:07
R2-1912424	Contention Resolution Timer Handling in NR-U	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:24:07
R2-1912425	Signaling Multiple UL grants for Msg3 Transmission in NR-U	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:24:07
R2-1912426	Draft RRC CR_Supporting RAR Window Size larger than 10ms in NR-U	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:24:07
R2-1912427	Random Access Resource Selection in NR-U	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:24:07
R2-1912428	Draft RRC CR for supporting Additional Opportunities for paging in NR-U	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:24:07
R2-1912429	Handling MIB_SIB1 Acquisition Failure	Samsung	noted	2019-10-02 01:42:30	2019-10-04 01:24:07
R2-1912430	2 Step RA_12bit Timing Advanced Information	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:21:27
R2-1912431	2 Step RA_RACH prioritisation	Samsung	noted	2019-10-02 01:42:30	2019-10-04 01:21:27
R2-1912432	2 Step RACH_RNTI for Receiving Network Response	Samsung	noted	2019-10-02 01:42:30	2019-10-04 01:21:27
R2-1912433	2 Step RA_RACH Configuration	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:21:27

R2-1912434	Impact of Mode 1 Resource Allocation on Uu BWP Operation	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:25:05
R2-1912435	RRC Connection Initiation Trigger for V2X Sidelink Communication	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:25:05
R2-1912436	RAN2 Aspects of SCell BFR	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:21:53
R2-1912437	Discussion on (preventing) access to NPN only cell	Samsung	not treated	2019-10-02 01:42:30	2019-10-04 01:22:19
R2-1912438	UE reporting for mobility optimization	vivo	not treated	2019-10-02 02:23:54	2019-10-03 19:13:54
R2-1912439	Bi-directional UE capability transfer procedure for NR V2X unicast	Samsung	noted	2019-10-02 02:28:21	2019-10-04 05:26:39
R2-1912440	Remaining Issues on Handling of SLRB configuration	Samsung	not treated	2019-10-02 02:28:22	2019-10-04 05:26:39
R2-1912441	AS-layer configuration failure case in SL unicast	Samsung	not treated	2019-10-02 02:28:22	2019-10-04 05:26:39
R2-1912442	Discussion on handling of PC5-S messages for NR V2X unicast	Samsung	not treated	2019-10-02 02:28:22	2019-10-04 05:26:39
R2-1912443	Discussion on Sidelink UE Information Initiation Trigger for NR V2X Sidelink Communication	Samsung	not treated	2019-10-02 02:28:22	2019-10-04 05:26:39
R2-1912444	Interaction between RRC Connection Resume Condition and RNAU for NR V2X SL	Samsung	not treated	2019-10-02 02:28:22	2019-10-04 05:26:39
R2-1912445	Remaining Issues on SL RLM/RLF Declaration for NR V2X Unicast	Samsung	not treated	2019-10-02 02:28:22	2019-10-04 05:26:39
R2-1912446	Correction on H1 and H2 events	Samsung	revised	2019-10-02 02:32:51	2019-10-04 05:26:39
R2-1912447	Support of inter-RAT HO from SA to EN-DC in Rel-16	China Telecom, NTT DOCOM	not treated	2019-10-02 02:48:09	2019-10-04 08:13:17
R2-1912448	Stage2 CR-Support of Inter-RAT HO between NR to EN-DC in Rel-16	China Telecom, NTT DOCOM	not treated	2019-10-02 03:06:20	2019-10-04 08:13:17
R2-1912449	Further discussion on MCG failure recovery via	SHARP	not treated	2019-10-02 03:14:59	2019-10-03 08:19:19
R2-1912450	Discussion on priority value in LTE V2X	SHARP Corporat	noted	2019-10-02 03:14:59	2019-10-03 08:19:19
R2-1912451	Correction on priority values in LTE V2X	SHARP Corporat	not treated	2019-10-02 03:14:59	2019-10-03 08:19:19
R2-1912452	Correction on priority values in LTE V2X	SHARP Corporat	not treated	2019-10-02 03:14:59	2019-10-03 08:19:19
R2-1912453	Correction on value of sensing priority for sidelink mode 3 sensing measurement	SHARP Corporat	not treated	2019-10-02 03:14:59	2019-10-03 08:19:19
R2-1912454	Discussion on the timer design for CHO	vivo	not treated	2019-10-02 03:22:12	2019-10-04 04:38:33
R2-1912455	CAPC for RACH and PUCCH in NR-U	Mediatek India	not treated	2019-10-02 04:40:55	2019-10-03 07:16:50
R2-1912456	SI scheduling enhancements for NR-U	Mediatek India	not treated	2019-10-02 04:45:06	2019-10-03 02:52:01
R2-1912457	On Restrictions in Multiplexing of High and Low Priority LCH in NR-U	Mediatek India	not treated	2019-10-02 04:56:10	2019-10-03 02:56:59
R2-1912458	On Reusing Overheating Assistance Information for UE Power Saving	Samsung	not treated	2019-10-02 05:09:20	2019-10-04 04:17:38
R2-1912459	On Triggering RRM Measurement Relaxation	Samsun	not treated	2019-10-02 05:11:40	2019-10-04 04:17:38
R2-1912460	Leg Selection for Non-duplicated Data	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912461	LCH-to-cell Restriction for CA Duplication Deactivation	Apple, Nokia,	noted	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912462	Selective PDCP Duplication Enhancement	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912463	UE based PDCP Duplication Enhancement	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912464	Consecutive Conditional Handover	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912465	UE Measurement in SCell Dormant State	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912466	PCell Fast Recovery	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912467	UE Assistance Information for EN-DC	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912468	MsgB Retransmission Scheme	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912469	2-step CFRA	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06

R2-1912470	SCell BFR Operation	Apple	not treated	2019-10-02 05:14:31	2019-10-04 03:58:06
R2-1912471	Considering top N cells for PLMN Selection	Samsung	not treated	2019-10-02 05:14:51	2019-10-04 04:17:38
R2-1912472	RLM for NR-U	Samsung	not treated	2019-10-02 05:18:10	2019-10-04 04:17:38
R2-1912473	On Supporting Make-Before-Break in NR	Samsung	not treated	2019-10-02 05:20:41	2019-10-04 04:17:38
R2-1912474	Recovery of consistent UL LBT failures	Samsung	not treated	2019-10-02 05:21:14	2019-10-04 02:02:15
R2-1912475	Remaining issues on CAPC	Samsung	not treated	2019-10-02 05:21:14	2019-10-04 02:02:15
R2-1912476	To reduce SCell activation delay in NR	Samsung	not treated	2019-10-02 05:21:14	2019-10-04 02:02:15
R2-1912477	Support of unaligned frame boundary for inter-band TDD CA	Samsung	not treated	2019-10-02 05:21:14	2019-10-04 02:02:15
R2-1912478	TA handling in 2-step RACH	Samsung	not treated	2019-10-02 05:21:14	2019-10-04 02:02:15
R2-1912479	Introducing Make-Before-Break in NR	Samsung	not treated	2019-10-02 05:23:02	2019-10-04 04:17:38
R2-1912480	(De)Prioritizing the Access for IAB Setup	Samsung	not treated	2019-10-02 05:25:49	2019-10-04 04:17:38
R2-1912481	Including RSSI and Channel Occupancy in Connected Mode Measurements	Mediatek India	not treated	2019-10-02 05:25:51	2019-10-03 02:52:34
R2-1912482	Accessibility Measurements for NR MDT	Samsung	not treated	2019-10-02 05:32:13	2019-10-04 04:17:38
R2-1912483	Details on Event-triggered Logged MDT	Samsung	not treated	2019-10-02 05:34:14	2019-10-04 04:17:38
R2-1912484	CAPC Assignments for SRBs in NR-U	Mediatek India	not treated	2019-10-02 05:35:29	2019-10-03 02:52:56
R2-1912485	Further Logged Information in NR MDT	Samsung	not treated	2019-10-02 05:35:58	2019-10-04 04:17:38
R2-1912486	NR RLF Report	Samsung	not treated	2019-10-02 05:37:46	2019-10-04 04:17:38
R2-1912487	On Providing Mobility State and Mobility History Information in NR	Samsung	withdrawn	2019-10-02 05:39:55	2019-10-22 03:18:35
R2-1912488	On Providing Mobility State and Mobility History Information in NR	Samsung	not treated	2019-10-02 05:41:47	2019-10-04 04:17:38
R2-1912489	SLRB Reconfiguration Handling	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912490	Discussion on MCG Fast Recovery	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912491	Discussion on FailureInformation	Samsung	withdrawn	2019-10-02 05:42:45	2019-10-22 03:18:35
R2-1912492	DL Reordering Problem at MCG Link Recovery	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912493	Remaining Issues on Efficient Transition	Samsung	noted	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912494	Support of Multiple Active CG/SPS Configuration	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912495	Prioritization of SR Transmission for URLLC	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912496	Split Bearer Fallback at Deactivation of PDCP	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912497	Configuration and initial state of PDCP duplication	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912498	Leftover Issues on Accurate Timing Delivery	Samsung	noted	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912499	Discussion on UE Autonomous PDCP Duplication	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912500	Priority of MAC PDU and MAC CE	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912501	Transmission of Deprioritized Data	Samsung	noted	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912502	LCP Restriction on Reliability	Samsung	noted	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912503	MAC CE Format for RLC Activiation	Samsung	not treated	2019-10-02 05:42:45	2019-10-04 06:14:18
R2-1912504	Discussion on RLM for LTE mobility enhancement	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912505	Further details on dual active protocol stack	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912506	Further considerations on capability coordination	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912507	Clarification on HRNN reporting	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912508	Discussion on SIB1 design for NPN	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912509	Discussion on SCell BFR	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912510	MAC CE format to indicate up to two TCI states	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912511	MAC CE format to indicate up to 2 TCI state per	OPPO	not treated	2019-10-02 05:45:12	2019-10-03 14:16:22
R2-1912512	Including RSSI and Channel Occupancy in NR-U UE Capabilities	Mediatek India	not treated	2019-10-02 05:58:00	2019-10-03 02:53:14
R2-1912513	Further considerations for the segmented UECapabilityInformation	Samsung	not treated	2019-10-02 06:14:36	2019-10-04 04:00:56
R2-1912514	MAC CE design for support of multiple beam indication for single PDCCH-based multiple TRPs	Samsung	not treated	2019-10-02 06:14:36	2019-10-04 04:00:56
R2-1912515	Further considerations of support for multi-PDCCH based multi-TRP operation	Samsung	not treated	2019-10-02 06:14:36	2019-10-04 04:00:56
R2-1912516	Discussion on the additional UE capability filtering to limit the total number of carriers in NR	Samsung	not treated	2019-10-02 06:14:36	2019-10-04 04:00:56

R2-1912517	Additional UE capability filtering to limit the total number of carriers in NR	Samsung	not treated	2019-10-02 06:14:36	2019-10-04 04:00:56
R2-1912518	Additional UE capability filtering to limit the total number of carriers in NR	Samsung	not treated	2019-10-02 06:14:37	2019-10-04 04:00:56
R2-1912519	SSR Atmospheric Correction Points Area	u-blox	not treated	2019-10-02 06:47:46	2019-10-04 06:58:36
R2-1912520	Text Proposal for addition of SSR Atmospheric Correction Points Area Definition	u-blox AG	revised	2019-10-02 06:49:59	2019-10-04 06:58:36
R2-1912521	MCG RLF reporting via SCell	Samsung	withdrawn	2019-10-02 06:52:14	2019-10-04 01:02:03
R2-1912522	PDCP security issue	Samsung	not treated	2019-10-02 06:55:02	2019-10-04 01:02:03
R2-1912523	CR on PDCP security issue	Samsung	not treated	2019-10-02 06:58:32	2019-10-04 01:02:03
R2-1912524	Fallback procedure for INACTIVE mode	Samsung	not treated	2019-10-02 07:01:27	2019-10-04 01:02:03
R2-1912525	Unnecessary deciphering for duplicated PDUs	Samsung	not treated	2019-10-02 07:04:59	2019-10-04 01:02:03
R2-1912526	CR on unnecessary deciphering for duplicated PDU	Samsung	not treated	2019-10-02 07:07:49	2019-10-04 01:02:03
R2-1912527	Feedback for EHC algorithm	Samsung	not treated	2019-10-02 07:09:46	2019-10-04 01:02:03
R2-1912528	EHC header handling for IIoT	Samsung	not treated	2019-10-02 07:11:27	2019-10-04 01:02:03
R2-1912529	measurement aspects for CHO	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912530	T312 further enhancement	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912531	relaxed RRM support	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912532	introduction of channel occupancy and RSSI for NR-U CHO	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912533	considerations for NR ECID	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912534	Consideration of beam for NR OTDOA	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912535	EN-DC support in IAB (srb, drb, data flow)	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912536	NR DC support (which link is MCG link, SCG link, MN, SN role in DU	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912537	RLF reporting in dual connection of IAB	Samsung R&D	not treated	2019-10-02 07:36:15	2019-10-04 05:52:05
R2-1912538	Running CR for 38.331 on CA/DC Enhancements	Ericsson	revised	2019-10-02 07:54:40	2019-10-18 11:48:04
R2-1912539	Running CR for 36.331 for CA/DC Enhancements	Ericsson	revised	2019-10-02 07:54:40	2019-10-18 11:48:05
R2-1912540	Running CR for 36.300 on CA/DC Enhancements	Ericsson	revised	2019-10-02 07:54:40	2019-10-03 10:46:08
R2-1912541	Running CR for 38.300 for CA/DC Enhancements	Ericsson	revised	2019-10-02 07:54:40	2019-10-03 10:46:08
R2-1912542	NR-DC power control	Ericsson	not treated	2019-10-02 07:54:40	2019-10-03 16:56:35
R2-1912543	Idle measurement configuration in UE Inactive AS context	Ericsson	not treated	2019-10-02 07:54:40	2019-10-03 16:56:35
R2-1912544	Handling of early measurement configuration and results	Ericsson	not treated	2019-10-02 07:54:40	2019-10-03 17:21:28
R2-1912545	Applicability of early measurement solutions for LTE	Ericsson	not treated	2019-10-02 07:54:40	2019-10-03 16:56:35
R2-1912546	Extended use cases for early measurement other than fast CA/DC setup	Ericsson	not treated	2019-10-02 07:54:41	2019-10-03 16:56:35
R2-1912547	On further aspects of early measurement	Ericsson	not treated	2019-10-02 07:54:41	2019-10-03 16:56:35

R2-1912548	Remaining issues for reference time delivery	Ericsson	not treated	2019-10-02 08:03:49	2019-10-03 16:44:54
R2-1912549	On downlink delay compensation	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912550	SPS and UL CG remaining configuration aspects	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912551	L2 aspects of SPS and UL CG	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912552	Miscellaneous issues with L2 impact	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912553	Ethernet header compression	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912554	Handling of de-prioritized MAC PDUs	Ericsson	noted	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912555	Main functions of intra-UE data-data prioritization	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912556	Reliability aspects in LCP restriction enhancement	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912557	Intra-UE Control-Data prioritization - SR over	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912558	PDCP Control PDUs and primary path	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912559	Open issues related to MAC CE for PDCP	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912560	Discussion on Potential improvements for delay critical QoS Flows	Ericsson	noted	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912561	draft reply LS on potential improvements for delay critical QoS flows	Ericsson	not treated	2019-10-02 08:03:55	2019-10-03 16:44:54
R2-1912562	Apparent contradiction in Zone Configuration	Lenovo, Motorola	not treated	2019-10-02 08:22:33	2019-10-02 08:48:14
R2-1912563	BSR and SR reporting in Cross RAT V2X operation	Lenovo, Motorola	not treated	2019-10-02 08:25:04	2019-10-02 08:48:14
R2-1912564	Cross RAT SL Configuration	Lenovo, Motorola	not treated	2019-10-02 08:28:17	2019-10-02 08:48:14
R2-1912565	HARQ feedback impact on RAN2	Lenovo, Motorola	not treated	2019-10-02 08:30:06	2019-10-02 08:48:14
R2-1912566	PC5-S and Identification on PC5 RRC and RRC Procedures	Lenovo, Motorola	not treated	2019-10-02 08:32:15	2019-10-02 08:48:14
R2-1912567	RLM Procedure and RLF Recovery handling	Lenovo, Motorola	not treated	2019-10-02 08:35:37	2019-10-02 08:48:14
R2-1912568	Subtopics to be addressed in Sim M1M2	Lenovo, Motorola	not treated	2019-10-02 08:37:13	2019-10-02 08:48:14
R2-1912569	Handling UL LBT Failures in NR-U	PANASONIC	not treated	2019-10-02 09:13:32	2019-10-02 11:23:54
R2-1912570	Impact of disabling HARQ on DRX	PANASONIC	not treated	2019-10-02 09:16:35	2019-10-02 11:23:54
R2-1912571	Management based MDT configuration Handling for RRC Inactive state	Qualcomm	not treated	2019-10-02 09:29:02	2019-10-04 01:12:38
R2-1912572	Report on email discussion [106#46][IAB]: Low-latency scheduling	Samsung	noted	2019-10-02 09:33:57	2019-10-02 15:25:20
R2-1912573	Remaining issues with pre-emptive BSR	Samsung	not treated	2019-10-02 09:35:27	2019-10-02 15:48:47
R2-1912574	Signalling Based MDT Configuration Handling for RRC_INACTIVE	Qualcomm	not treated	2019-10-02 09:35:36	2019-10-04 01:12:38
R2-1912575	LCID space extension	Samsung	noted	2019-10-02 09:36:52	2019-10-02 15:43:19
R2-1912576	Downlink hop-by-hop flow control	Samsung	not treated	2019-10-02 09:38:57	2019-10-03 14:51:05
R2-1912577	On the need for bearer ID in the BAP header	Samsung	not treated	2019-10-02 09:40:03	2019-10-02 15:30:06
R2-1912578	Logged MDT Configuration and Reporting for MR-DC	Qualcomm	not treated	2019-10-02 09:46:10	2019-10-04 01:12:38
R2-1912579	Cross-RAT RLF Report	Qualcomm	not treated	2019-10-02 09:49:33	2019-10-04 01:12:38
R2-1912580	Discussion on BAP configuration in IAB	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912581	Further consideration on bearer mapping	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912582	Consideration on routing in IAB	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912583	Discussion on re-routing in IAB network	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912584	Further consideration on flow control in IAB	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32

R2-1912585	Control plane signalling deliver in NSA deployment	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912586	Discussion on low latency scheduling in IAB	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912587	Discussion on low latency scheduling in multi-connectivity scenario	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912588	Consideration on the Extension of LCID and LCG Space in IAB	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912589	Discussion on IAB BH RLF handling	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912590	Discussion on BH RLC channel configuration in IAB network	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912591	Discussion on IAB node connection setup	ZTE Corporat	not treated	2019-10-02 09:50:54	2019-10-03 08:09:32
R2-1912592	UE History Information	Qualcom m	not treated	2019-10-02 09:52:34	2019-10-04 01:12:38
R2-1912593	Discussion about Successful HO in MRO	Qualcom m	not treated	2019-10-02 09:55:13	2019-10-04 01:12:38
R2-1912594	Periodical logged measurements and event-triggered logged measurements configuration	Qualcom m	not treated	2019-10-02 09:58:03	2019-10-04 01:12:38
R2-1912595	Make before break for NTN	Ericsson	noted	2019-10-02 11:14:27	2019-10-03 07:57:47
R2-1912596	[Rapporteur input] RRC parameter list for NR	Samsun	noted	2019-10-02 11:17:25	2019-10-04 04:00:56
R2-1912597	Ephemeris data	Ericsson	revised	2019-10-02 11:33:17	2019-10-04 05:00:10
R2-1912598	Introduction of additional enhancements for NB-IoT in TS 36.331	Huawei	revised	2019-10-02 11:58:08	2019-10-04 04:12:06
R2-1912599	Introduction of additional enhancements for NB-IoT	Huawei	revised	2019-10-02 11:58:09	2019-10-04 07:29:45
R2-1912600	Introduction of UE specific DRX for NB-IoT	Huawei,	noted	2019-10-02 11:58:09	2019-10-04 04:12:06
R2-1912601	Discussion on DL channel Quality remaining open	Huawei,	noted	2019-10-02 11:58:09	2019-10-04 04:12:06
R2-1912602	Discussion on RRM measurements on non-anchor	Huawei,	noted	2019-10-02 11:58:09	2019-10-04 04:12:06
R2-1912603	Discussion on SON ANR remaining open issues	Huawei,	not treated	2019-10-02 11:58:09	2019-10-04 04:12:06
R2-1912604	Discussion on SON RACH and RLF remaining	Huawei,	not treated	2019-10-02 11:58:09	2019-10-04 04:12:06
R2-1912605	Clarification on UP-EDT	Huawei, HiSilicon	revised	2019-10-02 11:58:09	2019-10-04 04:12:06
R2-1912606	Discussion on MT-EDT Msg4 based option	Huawei, HiSilicon	noted	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912607	[DRAFT] LS on Mobile-terminated Early Data Transmission	Huawei	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912608	Discussion on RAN1 agreements on D-PUR	Huawei, HiSilicon	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912609	FFSes on D-PUR	Huawei, HiSilicon	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912610	Handling of D-PUR configuration for CP solution	Huawei, HiSilicon	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912611	[Draft] LS on handling of D-PUR configuration for the CP solution	Huawei	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912612	DRX timers in multiple TBs scheduling of NB-IoT	Huawei, HiSilicon	noted	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912613	DRX timers in multiple TBs scheduling of eMTC	Huawei, HiSilicon	withdrawn	2019-10-02 11:58:10	2019-10-22 03:18:35
R2-1912614	Remaining issues to support user plane optimisations for eMTC and NB-IoT connected to 5GC	Huawei, HiSilicon	noted	2019-10-02 11:58:10	2019-10-04 04:12:06

R2-1912615	Support of RRC connection Re-establishment for the Control plane for NB-IoT connected to 5GC	Huawei, HiSilicon	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912616	Access Stratum Release Assistance Indicator for eMTC and NB-IoT connected to 5GC	Huawei, HiSilicon	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912617	Discussion on support of RRC_INACTIVE for eMTC connected to 5GC	Huawei, HiSilicon	not treated	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912618	Unified access control for NB-IoT and eMTC connected to 5GC	Huawei, HiSilicon	noted	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912619	PDCP for NB-IoT and eMTC connected to 5GC	Huawei, HiSilicon	noted	2019-10-02 11:58:10	2019-10-04 04:12:06
R2-1912620	Remaining issues for mode1 and 2 operation	Intel Corporat	not treated	2019-10-02 12:11:40	2019-10-04 02:54:09
R2-1912621	NR UL SL prioritization aspects	Intel Corporat	not treated	2019-10-02 12:11:40	2019-10-04 02:54:09
R2-1912622	On admission/congestion control	Intel Corporat	not treated	2019-10-02 12:11:40	2019-10-04 02:54:09
R2-1912623	Remaining aspects on groupcast operation	Intel	not treated	2019-10-02 12:11:40	2019-10-04 02:54:09
R2-1912624	Cross-RAT scheduling for NR V2X SL	Intel Corporat	not treated	2019-10-02 12:11:40	2019-10-04 02:54:09
R2-1912625	Detecting and Handling of UL LBT failures	Intel	not treated	2019-10-02 12:11:40	2019-10-04 02:57:02
R2-1912626	Further consideration on configured UL grant	Intel	noted	2019-10-02 12:11:40	2019-10-04 02:57:02
R2-1912627	Channel Access Priority selection & multiplexing for Configured Grant	Intel Corporat	not treated	2019-10-02 12:11:40	2019-10-04 05:12:31
R2-1912628	Sidelink and Uplink Prioritization	Samsun g	not treated	2019-10-02 12:37:17	2019-10-04 03:44:40
R2-1912629	Congestion control in NR-V2X	Samsun g	not treated	2019-10-02 12:37:17	2019-10-04 03:44:40
R2-1912630	Discussion on V2X specific validity area	Samsun g	not treated	2019-10-02 12:37:17	2019-10-04 03:44:40
R2-1912631	Discussion on Default SLRB and HARQ	Samsun	not treated	2019-10-02 12:37:17	2019-10-04 03:44:40
R2-1912632	Open issues from email discussion [107#30][NR/LTE/Mob-enh]	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912633	Handling of a HO command while UE is monitoring CHO	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912634	Suspend while monitoring CHO in NR	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912635	Conditional PSCell addition/change	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912636	TP for 38.331 on CHO	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912637	Further details on CHO failure handling	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912638	Discussion on incoming LS for QoE measurement collection in LTE	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912639	Corrections of QoE measurement collection	Ericsson	not treated	2019-10-02 12:38:10	2019-10-03 19:56:05
R2-1912640	Draft reply LS on QoE Measurement Collection	Ericsson	not treated	2019-10-02 12:38:11	2019-10-03 19:56:05
R2-1912641	Outstanding issues for SRVCC from 5G to 3G	Ericsson	noted	2019-10-02 12:38:11	2019-10-03 19:56:05
R2-1912642	Measurements for SRVCC from 5G to 3G	Ericsson	not treated	2019-10-02 12:38:11	2019-10-03 19:56:05
R2-1912643	Running CR for introduction of SRVCC from 5G to 3G	Ericsson	endorsed	2019-10-02 12:38:11	2019-10-03 19:56:05
R2-1912644	Extended PO and early termination for page	Ericsson	revised	2019-10-02 12:38:11	2019-10-03 19:56:05
R2-1912645	Cell (re)selection for NR-U	Ericsson	revised	2019-10-02 12:38:11	2019-10-03 19:56:05
R2-1912646	RRM in NR-U	Ericsson	noted	2019-10-02 12:38:11	2019-10-03 19:56:06
R2-1912647	SLRB configuration for NR V2X UE	Lenovo, Motorola	not treated	2019-10-02 12:48:44	2019-10-03 14:12:47
R2-1912648	Discussion on QoS management for NR V2X	Lenovo, Motorola	not treated	2019-10-02 12:48:46	2019-10-03 14:12:47
R2-1912649	RRM Measurements for Mobility in NR-U	Fraunhof er HHI,	not treated	2019-10-02 12:58:36	2019-10-02 16:27:40

R2-1912650	Resource Pool Sharing between Mode 1 and Mode 2 UEs	Fraunhofer HHI,	not treated	2019-10-02 13:02:04	2019-10-02 16:27:40
R2-1912651	Resource Allocation for Mode 2 NR V2X	Fraunhofer HHI,	not treated	2019-10-02 13:04:08	2019-10-02 16:27:40
R2-1912652	Resource Allocation Procedures for NR V2X	Fraunhofer HHI,	not treated	2019-10-02 13:06:26	2019-10-02 16:27:40
R2-1912653	Inclusion of 90MHz UE Bandwidth	Vodafone	revised	2019-10-02 13:08:19	2019-10-03 09:45:40
R2-1912654	On Analysis of RACH Capacity in NTN	Mediatek India	not treated	2019-10-02 13:29:50	2019-10-03 03:00:22
R2-1912655	Improving Cell Reselection using Next Cell Information in NTN	Mediatek India	not treated	2019-10-02 13:35:39	2019-10-03 03:00:43
R2-1912656	Network and cell (re)selection in SNPN access mode	Nokia, Nokia	not treated	2019-10-02 13:38:59	2019-10-04 05:46:45
R2-1912657	RRC considerations to support SNPNs	Nokia, Nokia	not treated	2019-10-02 13:39:10	2019-10-04 05:46:45
R2-1912658	Discussion on PLMN and Cell selection and reselection enhancements for NR-U	Nokia, Nokia	not treated	2019-10-02 13:39:10	2019-10-04 05:46:45
R2-1912659	RLM/RLF measurement on NR-U	Nokia, Nokia	not treated	2019-10-02 13:39:10	2019-10-04 05:46:45
R2-1912660	On UL transmissions during SMTC in NR-U	Nokia, Nokia	noted	2019-10-02 13:39:10	2019-10-04 05:46:45
R2-1912661	Handling of pending TB for CG transmission	Lenovo, Motorola	not treated	2019-10-02 14:32:48	2019-10-03 07:57:40
R2-1912662	LBT impact to Multi-TTI scheduling	Lenovo, Motorola	not treated	2019-10-02 14:35:04	2019-10-03 07:57:40
R2-1912663	Impact of LBT on power headroom reporting functionality	Lenovo, Motorola	noted	2019-10-02 14:37:04	2019-10-03 07:57:40
R2-1912664	Report of [107#60] [NR/NTN] RACH capacity evaluation and procedures (ZTE)	ZTE Corporat	noted	2019-10-02 14:37:57	2019-10-03 22:56:03
R2-1912665	TP on RACH capacity evaluation and procedures	ZTE Corporation, Sanechip	revised	2019-10-02 14:37:57	2019-10-03 22:56:03
R2-1912666	Consideration on the limited C-RNTI size in NTN	ZTE Corporat	not treated	2019-10-02 14:37:57	2019-10-03 07:41:46
R2-1912667	[DRAFT] LS on handling the limited size of C-RNTI in NTN (FS_NR_NTN_solutions)	ZTE Corporat	not treated	2019-10-02 14:37:57	2019-10-03 07:41:46
R2-1912668	Location report in NTN	ZTE Corporat	not treated	2019-10-02 14:37:57	2019-10-03 07:41:46
R2-1912669	Consideration on measurements in NTN-TN service continuity	ZTE Corporat	not treated	2019-10-02 14:37:57	2019-10-03 07:41:46
R2-1912670	Further consideration on tracking area management in NTN	ZTE Corporat	noted	2019-10-02 14:37:57	2019-10-03 07:41:46
R2-1912671	Clarification on the RRCReconfiguration for unauthenticated emergency call	ZTE Corporat	not pursued	2019-10-02 14:37:57	2019-10-03 07:42:07
R2-1912672	Consideration on UE radio capability ID signaling in inter-node RRC messages	ZTE Corporat	not treated	2019-10-02 14:37:58	2019-10-03 07:42:07
R2-1912673	Introduction of UE radio capability ID in inter-node RRC messages	ZTE Corporat	noted	2019-10-02 14:37:58	2019-10-03 07:42:07
R2-1912674	Introduction of efficient transition out of RRC_CONNECTED by UE assistance in TS38.331	ZTE Corporation, Sanechip	not treated	2019-10-02 14:37:58	2019-10-03 07:42:07
R2-1912675	Further consideration on the System Information of the Private Network	ZTE Corporat	not treated	2019-10-02 14:37:58	2019-10-04 03:56:21
R2-1912676	Considerations on the remaining Idle/Inactive state issues of the Private Network	ZTE Corporat	not treated	2019-10-02 14:37:58	2019-10-04 03:56:21
R2-1912677	The issue of putting all SIBs in one SI message	PANASONIC R&D Center Germany,	noted	2019-10-02 14:38:02	2019-10-02 15:41:58
R2-1912678	Open issues for msgB formats for 2-step RA	Ericsson	not treated	2019-10-02 14:39:05	2019-10-03 20:28:19
R2-1912679	RNTI design and HARQ aspects for 2-step RA	Ericsson	noted	2019-10-02 14:39:05	2019-10-03 20:28:19

R2-1912680	Configuration of 2-step RA	Ericsson	not treated	2019-10-02 14:39:05	2019-10-03 20:28:19
R2-1912681	2-step CFRA	Ericsson	not treated	2019-10-02 14:39:05	2019-10-03 20:28:19
R2-1912682	PUSCH selection and MsgA payloads in 2-step RA	Ericsson	not treated	2019-10-02 14:39:05	2019-10-03 20:28:19
R2-1912683	2-step RA 38.331 Draft CR	Ericsson	not treated	2019-10-02 14:39:05	2019-10-03 20:28:19
R2-1912684	Impact of systematic LBT failure on UL transmission procedure	Lenovo, Motorola	not treated	2019-10-02 14:39:13	2019-10-03 07:57:40
R2-1912685	Further details of the RACH procedure for NR-U	Lenovo, Motorola	noted	2019-10-02 14:41:03	2019-10-03 07:57:40
R2-1912686	SL HARQ protocol operation	Lenovo, Motorola	not treated	2019-10-02 14:42:58	2019-10-03 07:57:40
R2-1912687	SR trigger for NR SL	Lenovo, Motorola	not treated	2019-10-02 14:44:47	2019-10-03 07:57:40
R2-1912688	SL LCP procedure considering the MCR requirements	Lenovo, Motorola	noted	2019-10-02 14:46:41	2019-10-03 07:57:40
R2-1912689	CSI/SRS reporting for WUS	Lenovo, Motorola Mobilty	noted	2019-10-02 14:49:31	2019-10-03 07:57:40
R2-1912690	SCell Beam Failure Recovery Procedure	Lenovo, Motorola	not treated	2019-10-02 14:51:16	2019-10-03 07:57:40
R2-1912691	Considerations on the RRM measurement relaxation	PANASONIC	not treated	2019-10-02 14:52:02	2019-10-02 15:41:58
R2-1912692	Loading Control in the RACH Type Selection	PANASONIC	not treated	2019-10-02 15:01:07	2019-10-02 15:41:58
R2-1912693	Discussion on the leaving conditions for CHO	PANASONIC	not treated	2019-10-02 15:07:27	2019-10-02 15:41:58
R2-1912694	SI update notification and PWS notification in WUS	PANASONIC R&D	not treated	2019-10-02 15:11:26	2019-10-02 15:41:58
R2-1912695	DRX HARQ RTT enhancements for NTN	Nomor Researc	revised	2019-10-02 15:56:08	2019-10-02 16:09:07
R2-1912696	Multiple PLMN Identities in NTN	Nomor Researc	not treated	2019-10-02 15:59:25	2019-10-02 16:09:07
R2-1912697	System Information in NTN	Nomor Researc	not treated	2019-10-02 16:00:59	2019-10-02 16:09:07
R2-1912698	HARQ process selection and logical channel prioritization	Nomor Researc	not treated	2019-10-02 16:04:14	2019-10-02 17:37:16
R2-1912699	MAC CE signaling impact of enhanced TCI indication framework	Ericsson	not treated	2019-10-02 16:15:14	2019-10-03 07:57:47
R2-1912700	Report of email discussion [107#39] [NR - eMIMO]	Ericsson	not treated	2019-10-02 16:18:52	2019-10-11 10:39:07
R2-1912701	Report of email discussion [107#63][NR/NTN]	Ericsson	revised	2019-10-02 16:20:20	2019-10-09 13:52:09
R2-1912702	Congestion Control in NR V2X	Fraunhofer IIS,	not treated	2019-10-02 16:40:32	2019-10-02 16:58:25
R2-1912703	Running stage 2 CR on NR positioning 107#69	Intel Corporation, ESA	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912704	Support of NR dependent positioning methods	Intel Corporation	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912705	Assistance data for UE based DL only positioning	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912706	Initial Access and Network Setup for IAB	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912707	Multi-route support in IAB	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912708	Flow control in IAB - remaining issues	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912709	Uplink latency reduction	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912710	Further discussion on Backhaul RLF handling	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:32
R2-1912711	Handling of Fairness in IAB	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:32
R2-1912712	Conditional Handover for Non-Terrestrial	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:32
R2-1912713	Access Control for SNPN and CAG	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:32
R2-1912714	Suitability criteria for NPN	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912715	Support of multiple SPS and CG configurations	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33

R2-1912716	TSC assistance information	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912717	Details for Ethernet header compression solution	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912718	Intra UE prioritization of UL Data and Data	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912719	PDCP duplication with multiple RLC entities	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912720	UE based PDCP duplication activation/deactivation	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912721	Full configuration indication to SN - Feedback on	Intel	not treated	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912722	False base station detection – feedback on SA3 LS	Intel	noted	2019-10-02 16:48:42	2019-10-04 05:27:33
R2-1912723	Updates to reestablishment procedure	ZTE Corporation,	not treated	2019-10-02 17:18:47	2019-10-03 19:58:52
R2-1912724	Scheduling enhancements for TSC network	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912725	Discussion on confirmation MAC CE for TSC	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912726	Email discussion summary of [107#55][IIOT] CG/SPS for TSC	OPPO	revised	2019-10-02 17:33:42	2019-10-09 06:06:23
R2-1912727	Discussion on Ethernet Header Compression	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912728	Other issue on intra-UE prioritization in IIoT	OPPO	noted	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912729	Intra-UE prioritization involving configured grant	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912730	Discussion on SR cancelling on intra-UE prioritization involving SR	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912731	Intra-UE prioritization between multiple SRs	OPPO, Huawei,	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912732	Draft LS on intra-UE prioritization for multiple SRs	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912733	Discussion on data duplication enhancement in IIoT	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912734	Discussion on UE-based data duplication	OPPO	not treated	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912735	Discussion on potential improvements for delay critical QoS Flows	OPPO	noted	2019-10-02 17:33:42	2019-10-03 01:04:39
R2-1912736	On Maximum Number of CHO Candidate Cells and Nodes	Charter Communications, Inc	not treated	2019-10-02 17:36:58	2019-10-03 05:37:39
R2-1912737	Addition of broadcast of barometric pressure assistance data	Polaris Wireless,	not treated	2019-10-02 17:53:20	2019-10-02 18:06:21
R2-1912738	Addition of broadcast of barometric pressure assistance data	Polaris Wireless,	not treated	2019-10-02 18:00:49	2019-10-02 18:06:21
R2-1912739	Discussion on configuration aspect for CHO	Huawei, HiSilicon	not treated	2019-10-02 18:08:27	2019-10-02 18:47:05
R2-1912740	Discussion on execution aspect for CHO	Huawei, HiSilicon	not treated	2019-10-02 18:08:27	2019-10-02 18:47:05
R2-1912741	Discussion on failure handling for CHO	Huawei, HiSilicon	not treated	2019-10-02 18:08:27	2019-10-02 18:47:05
R2-1912742	Discussion on UE capabilities for mobility enhancements	Huawei, HiSilicon	not treated	2019-10-02 18:08:27	2019-10-02 18:47:05
R2-1912743	Discussion on combination of simultaneous connectivity and CHO	Huawei, HiSilicon	not treated	2019-10-02 18:08:27	2019-10-02 18:46:43
R2-1912744	Discussion on fast handover failure recovery	Huawei,	not treated	2019-10-02 18:08:27	2019-10-02 18:46:43
R2-1912745	Discussion on CHO for Pscell change	Huawei,	not treated	2019-10-02 18:08:27	2019-10-02 18:46:43
R2-1912746	Reprot of email discussion 107-47	Huawei	noted	2019-10-02 18:08:27	2019-10-08 09:51:30
R2-1912747	Running 38.331 CR for introducing logged MDT	Huawei	merged	2019-10-02 18:08:27	2019-10-08 09:51:30
R2-1912748	Discussion on user consent for MDT	Huawei, HiSilicon	not treated	2019-10-02 18:08:27	2019-10-02 18:46:43
R2-1912749	Discussion on remaining aspects on logged MDT and Accessibility measurements	Huawei, HiSilicon	noted	2019-10-02 18:08:27	2019-10-02 18:46:43
R2-1912750	Discussion on remaining aspects on immediate	Huawei,	noted	2019-10-02 18:08:27	2019-10-02 18:46:43
R2-1912751	Discussion on UE impacts and UE capabilities due to MDT	Huawei, HiSilicon	not treated	2019-10-02 18:08:27	2019-10-02 18:46:17
R2-1912752	Discussion on L2 measurements based on SA5 TS	Huawei,	not treated	2019-10-02 18:08:27	2019-10-02 18:46:17

R2-1912753	Draft LS on L2 measurements in TS 28.552	Huawei	not treated	2019-10-02 18:08:27	2019-10-02 18:46:17
R2-1912754	Discussion on new L2 measurements	Huawei, HiSilicon	noted	2019-10-02 18:08:27	2019-10-02 18:46:17
R2-1912755	Discussion on delay measurement and collection	Huawei,	not treated	2019-10-02 18:08:27	2019-10-02 18:46:17
R2-1912756	Discussion on RLF report and RACH report for	Huawei,	not treated	2019-10-02 18:08:27	2019-10-02 18:46:17
R2-1912757	Discussion on mobility history information	Huawei,	not treated	2019-10-02 18:08:27	2019-10-02 18:45:54
R2-1912758	Correction to the handling of stored AS context upon CN type change	Huawei, HiSilicon	revised	2019-10-02 18:08:27	2019-10-02 18:45:54
R2-1912759	Discussion on paging issue for LTE-5GC	Huawei, HiSilicon	not treated	2019-10-02 18:08:28	2019-10-02 18:45:54
R2-1912760	Correction on paging for LTE-5GC	Huawei, HiSilicon	postponed	2019-10-02 18:08:28	2019-10-02 18:45:54
R2-1912761	Discussion on UE behaviours on location info for	Huawei,	noted	2019-10-02 18:08:29	2019-10-02 18:45:54
R2-1912762	Correction on location info collection for logged	Huawei,	not pursued	2019-10-02 18:08:29	2019-10-02 18:45:54
R2-1912763	Discussion on potential impacts due to management of QMC	Huawei, HiSilicon	not treated	2019-10-02 18:08:31	2019-10-03 18:32:36
R2-1912764	Draft reply LS on QoE Measurement Collection	Huawei	not treated	2019-10-02 18:08:31	2019-10-03 18:32:36
R2-1912765	Measurement coordination on maxMeasIdentitiesSCG in MR-DC	ZTE Corporat	not treated	2019-10-02 18:24:42	2019-10-03 16:03:47
R2-1912766	Corrections on maxMeasIdentitiesSCG-NR in MR-DC	ZTE Corporat	not treated	2019-10-02 18:24:42	2019-10-03 16:03:47
R2-1912767	CR to introduce timer for DRX based SFTD measurement	ZTE Corporation,	agreed	2019-10-02 18:24:43	2019-10-03 16:03:47
R2-1912768	Correction on absence of gapPurpose	ZTE Corporat	agreed	2019-10-02 18:24:45	2019-10-03 16:03:47
R2-1912769	Consideration on DRX coordination in ANR	ZTE Corporat	not treated	2019-10-02 18:24:46	2019-10-03 16:03:47
R2-1912770	Corrections on DRX coordination in ANR	ZTE Corporat	not treated	2019-10-02 18:24:46	2019-10-03 16:03:47
R2-1912771	Report of [107#28][NR R15] Ambiguity of UE FDD&TDD FR1&FR2 RAN2 capability	ZTE Corporation, Sanechip	noted	2019-10-02 18:24:54	2019-10-04 04:08:26
R2-1912772	Correction on ambiguity of UE FDD/TDD FR1/FR2 capabilities	ZTE Corporation, Sanechip	revised	2019-10-02 18:24:54	2019-10-04 04:08:26
R2-1912773	Remaining issues on UTRAN measurement	ZTE Corporat	not treated	2019-10-02 18:24:57	2019-10-03 16:03:47
R2-1912774	Corrections on UTRAN measurement	ZTE Corporat	noted	2019-10-02 18:24:57	2019-10-03 16:03:47
R2-1912775	Remaining issues on CLI measurement	ZTE Corporation,	not treated	2019-10-02 18:24:57	2019-10-03 16:03:47
R2-1912776	Control plane consideration for dual active protocol stack (DAPS) based RUDI HO	Intel Corporation, Qualcomm Inc,	not treated	2019-10-02 18:39:50	2019-10-04 02:54:09
R2-1912777	Control plane signaling flow for DAPS based RUDI HO	Intel Corporat	not treated	2019-10-02 18:39:50	2019-10-04 04:07:41
R2-1912778	Stage 2 TP for DAPS based RUDI	Intel Corporation	not treated	2019-10-02 18:39:50	2019-10-04 04:07:41
R2-1912779	Report of [107#30][NR/LTE/Mob-enh] Configuration of CHO and execution condition	Intel Corporat	noted	2019-10-02 18:39:50	2019-10-06 11:06:50
R2-1912780	TS38.331 TP of 107#30	Intel Corporation	not treated	2019-10-02 18:39:50	2019-10-06 11:06:50
R2-1912781	Running CR for the introduction of NR mobility	Intel	revised	2019-10-02 18:39:50	2019-10-04 02:54:09

R2-1912782	Capability design for DAPS based RUDI HO	Intel Corporation	not treated	2019-10-02 18:39:51	2019-10-04 02:54:37
R2-1912783	DL data forwarding in DAPS based RUDI HO	Intel Corporat	not treated	2019-10-02 18:39:51	2019-10-04 04:07:41
R2-1912784	Confirmation of WA for failure handling	Intel Corporation, InterDigital Inc., China Telecom, OPPO, MediaTek, Lenovo, Motorola Mobility,	noted	2019-10-02 18:39:51	2019-10-04 02:54:09
R2-1912785	RAN2 details of the wake-up signal	Intel Corporation	noted	2019-10-02 18:39:51	2019-10-04 02:54:50
R2-1912786	Efficient RRC state transition out of RRC_CONNECTED	Intel Corporation	not treated	2019-10-02 18:39:51	2019-10-04 02:54:50
R2-1912787	Configuration of MIMO layers per DL BWP	Intel	not treated	2019-10-02 18:39:51	2019-10-04 02:54:50
R2-1912788	UE assistance for C-DRX configuration	Intel	noted	2019-10-02 18:39:51	2019-10-04 02:54:50
R2-1912789	Relaxation of RRM measurements	Intel	not treated	2019-10-02 18:39:51	2019-10-04 02:54:50
R2-1912790	Remaining aspects on SL PDCP	Intel Corporat	not treated	2019-10-02 18:39:51	2019-10-04 05:11:12
R2-1912791	On the support of simultaneous configuration of mode1 and mode2	Intel Corporat	not treated	2019-10-02 18:39:51	2019-10-04 05:11:12
R2-1912792	Need for SL RLC re-establishment	Intel Corporat	not treated	2019-10-02 18:39:51	2019-10-04 05:11:12
R2-1912793	PC5 RRC procedure details for NR V2X	Intel	not treated	2019-10-02 18:39:51	2019-10-04 05:11:12
R2-1912794	Further consideration on the SucessRAR design and Fallback RAR	Intel Corporat	not treated	2019-10-02 18:39:51	2019-10-04 02:54:09
R2-1912795	Preamble grouping selection or PUSCH TBS size selection for 2-step RACH	Intel Corporat	noted	2019-10-02 18:39:51	2019-10-04 02:54:09
R2-1912796	Support of CFRA in 2-step RACH	Intel	not treated	2019-10-02 18:39:51	2019-10-04 02:54:09
R2-1912797	IAB workplan update	Qualcomm Incorpor	noted	2019-10-02 20:21:29	2019-10-03 21:05:40
R2-1912798	IAB (TP to CR on 38300) L2 structures	Qualcomm	not treated	2019-10-02 20:23:09	2019-10-03 21:05:40
R2-1912799	SA IAB operation with EN-DC UEs	Qualcomm	not treated	2019-10-02 20:24:23	2019-10-03 21:05:40
R2-1912800	IAB extension of LCID space	Qualcomm	not treated	2019-10-02 20:25:31	2019-10-03 21:05:41
R2-1912801	IAB extension of LCG space	Qualcomm	not treated	2019-10-02 20:26:26	2019-10-03 21:05:41
R2-1912802	IAB load reporting to IAB-donor CU-CP	Qualcomm	not treated	2019-10-02 20:27:38	2019-10-03 21:05:41
R2-1912803	Issue on ping pong state transition for sidelink UE	Beijing Xiaomi	withdrawn	2019-10-02 20:58:17	2019-10-02 21:06:58
R2-1912804	Discussion on resource allocation	Beijing Xiaomi	not treated	2019-10-02 20:58:17	2019-10-02 21:06:58
R2-1912805	Discussion on sidelink admission control	Beijing Xiaomi	not treated	2019-10-02 20:58:17	2019-10-02 21:06:58
R2-1912806	Discussion on BSR prioritization	Beijing Xiaomi	not treated	2019-10-02 20:58:17	2019-10-02 21:06:58
R2-1912807	Introduction of RACS [36.300]	MediaTe	endorsed	2019-10-02 21:18:16	2019-10-04 04:39:06
R2-1912808	Introduction of RACS [38.300]	MediaTe	endorsed	2019-10-02 21:20:50	2019-10-04 04:39:06
R2-1912809	Decision on support of delta signalling	MediaTek Inc.	noted	2019-10-02 21:23:08	2019-10-04 04:39:06

R2-1912810	Introduction of UECapabilityInformation segmentation in 36.331	MediaTek Inc., CATT, Ericsson, Spreadtrum	revised	2019-10-02 21:26:12	2019-10-04 04:39:06
R2-1912811	Work plan for RACS-RAN work item	MediaTe	noted	2019-10-02 21:28:43	2019-10-04 04:39:06
R2-1912812	Access handling for multiple candidate cells in CHO	Futurewei	not treated	2019-10-02 21:30:17	2019-10-04 05:12:19
R2-1912813	Support (or not) of PC5-RRC for groupcast	MediaTe	not treated	2019-10-02 21:30:39	2019-10-04 04:39:06
R2-1912814	Contents and handling of PC5-RRC configuration	MediaTe	not treated	2019-10-02 21:32:35	2019-10-04 04:39:06
R2-1912815	Single vs. multiple PC5-RRC connection	MediaTek Inc.	not treated	2019-10-02 21:34:15	2019-10-04 04:39:06
R2-1912816	Procedure and configurations for conditional SN change	Futurewei	not treated	2019-10-02 21:34:29	2019-10-04 05:12:19
R2-1912817	RLM with aperiodic reference signals	MediaTe	not treated	2019-10-02 21:35:55	2019-10-04 04:39:06
R2-1912818	Discussion on RLM & RLF reduction for conditional PSCell addition/change	Futurewei	not treated	2019-10-02 21:37:20	2019-10-04 05:12:19
R2-1912819	RLM and state modelling based on PC5-S	MediaTe	not treated	2019-10-02 21:37:42	2019-10-04 04:39:06
R2-1912820	Validity areas based on cell lists	MediaTek Inc.	not treated	2019-10-02 21:40:04	2019-10-04 04:39:06
R2-1912821	Email discussion report for [107#79] [LTE/feMOB] Capability coordination for RUDI HO	Qualcomm India	noted	2019-10-02 22:07:46	2019-10-04 02:48:59
R2-1912822	UE capability sharing aspects for DAPS based enhanced MBB HO	Qualcomm Inc, Charter communications,	not treated	2019-10-02 22:12:33	2019-10-04 02:48:59
R2-1912823	Report on [107#48][NR/MDT] Running 38.331 CR for introducing Immediate MDT and other MDT	Ericsson	noted	2019-10-02 22:13:22	2019-10-03 21:46:36
R2-1912824	Running 38.331 CR for introducing Immediate MDT and other MDT functions	Ericsson	merged	2019-10-02 22:13:22	2019-10-03 21:46:36
R2-1912825	Mobility history information reporting from the UE	Ericsson	not treated	2019-10-02 22:13:25	2019-10-03 23:00:26
R2-1912826	Logged MDT Configuration & Reporting handling in DC scenarios	Ericsson	not treated	2019-10-02 22:13:25	2019-10-03 21:46:36
R2-1912827	Leftover issues for Logged MDT	Ericsson	noted	2019-10-02 22:13:25	2019-10-03 21:46:36
R2-1912828	CR on introducing UE capability for MDT in NR	Ericsson	not treated	2019-10-02 22:13:25	2019-10-03 21:46:36
R2-1912829	UE Location Report capability indication for MDT	Ericsson	not treated	2019-10-02 22:13:26	2019-10-03 21:46:36
R2-1912830	Area Scope in MDT configuration	Ericsson	not treated	2019-10-02 22:13:26	2019-10-03 21:46:36
R2-1912831	Remaining issues for RRC Segmentation	Ericsson	noted	2019-10-02 22:13:26	2019-10-03 21:46:36
R2-1912832	Remaining aspects on Capability ID	Ericsson	noted	2019-10-02 22:13:26	2019-10-03 21:46:36
R2-1912833	Introduction of RRC Segmentation - Downlink	Ericsson	not treated	2019-10-02 22:13:26	2019-10-03 21:46:36
R2-1912834	Introduction of RRC Segmentation - Downlink	Ericsson	not treated	2019-10-02 22:13:27	2019-10-03 21:46:36
R2-1912835	Segmentation in DL	Ericsson, DT,	not treated	2019-10-02 22:13:28	2019-10-03 21:46:36
R2-1912836	Introduction of RRC Segmentation - Downlink	Ericsson, DT,	not treated	2019-10-02 22:13:28	2019-10-03 21:46:36
R2-1912837	Introduction of RRC Segmentation - Downlink	Ericsson	not treated	2019-10-02 22:13:29	2019-10-03 21:46:36
R2-1912838	UL TDM aspects of enhanced MBB HO using Dual Active Protocol Stack	Qualcomm Inc, Charter communications,	noted	2019-10-02 22:16:34	2019-10-04 02:48:59
R2-1912839	[Draft] LS for DAPS Handover UE capabilities	Qualcomm India	not treated	2019-10-02 22:25:49	2019-10-04 02:48:59
R2-1912840	Split Threshold for DC and NR-U	Nokia, Nokia	not treated	2019-10-02 22:26:11	2019-10-04 03:54:04
R2-1912841	NPN Work Plan	Nokia, China	noted	2019-10-02 22:26:11	2019-10-04 03:54:04

R2-1912842	NPN Stage 2 Draft CR	Nokia, China	not treated	2019-10-02 22:26:11	2019-10-04 03:54:04
R2-1912843	Report of Email Discussion [107#41] on CSG	Nokia	noted	2019-10-02 22:26:11	2019-10-04 03:54:04
R2-1912844	PDCP Reordering Problems	Nokia, Nokia Shanghai	noted	2019-10-02 22:26:11	2019-10-04 03:54:04
R2-1912845	Fixed LCP Restrictions	Nokia, Ericsson, Fujitsu,	noted	2019-10-02 22:26:11	2019-10-04 03:54:04
R2-1912846	QoS Flow Handling	Nokia, Nokia	not treated	2019-10-02 22:26:11	2019-10-04 03:54:04
R2-1912847	MDBV Enforcement	Nokia, Nokia	not treated	2019-10-02 22:26:11	2019-10-04 03:54:04
R2-1912848	[Draft] LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO	Qualcomm India	not treated	2019-10-02 22:29:06	2019-10-04 02:48:59
R2-1912849	Access Stratum Release Assistance Indicator for eMTC and NB-IoT connected to 5GC	Qualcomm India	noted	2019-10-02 22:34:20	2019-10-04 02:48:59
R2-1912850	Access stratum changes to support short eDRX for eMTC connected 5GC in RRC_INACTIVE state	Qualcomm	not treated	2019-10-02 22:36:37	2019-10-04 02:48:59
R2-1912851	Idle Mode cell reselection based on CN type supported	Qualcomm	not treated	2019-10-02 22:39:35	2019-10-04 02:48:59
R2-1912852	PDCP type to be used for NB-IoT and eMTC connected to 5GC	Qualcomm	not treated	2019-10-02 22:41:55	2019-10-04 02:48:59
R2-1912853	UAC information change indication in 5GC	Qualcomm	not treated	2019-10-02 22:44:33	2019-10-04 02:48:59
R2-1912854	UE identity for CIoT/5GC UP Optimization and RRC indication to upper layers	Qualcomm India	not treated	2019-10-02 22:47:52	2019-10-04 02:48:59
R2-1912855	Unified access control for NB-IoT connected to 5GC	Qualcomm India	not treated	2019-10-02 22:51:48	2019-10-04 02:48:59
R2-1912856	Remaining issues in MT EDT for UP solution	Intel Corporat	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912857	Remaining issues in Msg4-based Control Plane solution for MT EDT	Intel Corporat	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912858	After the acquisition of ETWS/CMAS by non-BL UEs in connected mode	Intel Corporat	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912859	Remaning issues in DL Quality report	Intel	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912860	Remaning issues on the support of 5GCN connectivity	Intel Corporat	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912861	Remaining issues in RRC inactive state	Intel Corporat	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912862	Additional issues in D-PUR in RRC_IDLE	Intel	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912863	Non-BL UE operation in standalone deployment	Intel	not treated	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912864	Introduction of Rel-16 eMTC enhancements	Intel Corporation	revised	2019-10-02 23:01:47	2019-10-04 04:07:41
R2-1912865	Remaining FFSs on enabling the UE to camp on	Intel	not treated	2019-10-02 23:01:49	2019-10-04 02:54:09
R2-1912866	Remaining issues related to random access procedure	Intel Corporation	noted	2019-10-02 23:01:49	2019-10-04 02:54:09
R2-1912867	Non-BL UE in normal and enhanced coverage	Intel	not treated	2019-10-02 23:01:49	2019-10-04 04:07:41
R2-1912868	Considerations for Geographical Zone Design for NR V2X	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912869	RAN2 Aspects of HARQ for NR V2X	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912870	LCP for NR V2X	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912871	Remaining Aspects of UL/SL Prioritization	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912872	Multiple SL Configured Grants and UE Assistance	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912873	Handling Multiple Unicast Links in NR V2X	InterDigit	noted	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912874	RLM/RLF for NR V2X	InterDigit	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912875	RAN2 Aspects of Simultaneous Configuration of Mode 1 and Mode 2	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912876	Draft LS on Handling of Multiple Unicast Links	InterDigit	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05

R2-1912877	Admission Control for NR SL	InterDigital, Ericsson	noted	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912878	QoS-Based SLRB Establishment Decision	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912879	Remaining Aspects of Fast MCG Link Recovery using SRB3	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912880	Summary of Email Discussion [107#32]NR/DCCA] MCG Scell/SCG Resume	InterDigital	noted	2019-10-02 23:30:02	2019-10-04 14:52:54
R2-1912881	On Combining RUDI and CHO	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912882	Conditional PSCell addition/change	InterDigital	not treated	2019-10-02 23:30:02	2019-10-04 01:04:05
R2-1912883	Intra-UE Prioritization for overlapping PUSCHs	InterDigital	not treated	2019-10-02 23:31:57	2019-10-03 23:02:10
R2-1912884	Handling of deprioritized PDUs in MAC	InterDigital	noted	2019-10-02 23:31:57	2019-10-03 23:02:10
R2-1912885	Intra UE prioritization between SR and PUSCH	InterDigital	not treated	2019-10-02 23:31:57	2019-10-03 23:02:10
R2-1912886	Scheduling enhancements for TSC traffic	InterDigital	not treated	2019-10-02 23:31:57	2019-10-03 23:02:09
R2-1912887	Paging procedure in NR-U	InterDigital	not treated	2019-10-02 23:31:57	2019-10-03 23:02:09
R2-1912888	Random access in NR-U	InterDigital	not treated	2019-10-02 23:31:57	2019-10-03 23:02:09
R2-1912889	Handling UL LBT Failures in MAC	InterDigital	noted	2019-10-02 23:31:57	2019-10-03 23:02:10
R2-1912890	CAPC selection for Configured grant transmission	InterDigital	noted	2019-10-02 23:31:57	2019-10-03 23:02:10
R2-1912891	Impact of non-numeric K1 value on DRX Timers	InterDigital	not treated	2019-10-02 23:31:57	2019-10-03 23:02:10
R2-1912892	RLM and RLF for NR-U	InterDigital	not treated	2019-10-02 23:31:57	2019-10-03 23:02:10
R2-1912893	Correction on field description of cellReselectionInfoCommon	Qualcomm	not treated	2019-10-03 00:05:24	2019-10-04 03:06:58
R2-1912894	DRX considerations for preconfigured resources	Sequans Communications	not treated	2019-10-03 00:07:38	2019-10-03 12:48:19
R2-1912895	Remaining FFSs for ANR report in NB-IoT	ZTE Corporat	noted	2019-10-03 00:38:17	2019-10-04 04:11:01
R2-1912896	Remaining issues for D-PUR in IDLE	ZTE Corporat	not treated	2019-10-03 00:43:09	2019-10-04 04:32:25
R2-1912897	Signalling aspects for accurate reference timing delivery in TSC	ZTE Corporation, Sanechip	noted	2019-10-03 00:46:31	2019-10-04 04:58:10
R2-1912898	Other issues related to accurate reference timing delivery in TSC	ZTE Corporation, Sanechip	not treated	2019-10-03 00:49:05	2019-10-04 04:58:22
R2-1912899	Correction of cell reselection parameters for multi-beam operation	Qualcomm	not treated	2019-10-03 00:51:16	2019-10-04 03:06:58
R2-1912900	TP for accurate reference timing delivery in TSC	ZTE Corporation, Sanechip	not treated	2019-10-03 00:55:15	2019-10-04 04:58:38
R2-1912901	Remaining issues for EHC in TSC	ZTE Corporat	not treated	2019-10-03 00:59:53	2019-10-04 05:04:37
R2-1912902	Support of eDRX in CM-CONNECTED with RRC_INACTIVE for 5GC	ZTE Corporat	noted	2019-10-03 01:03:58	2019-10-04 05:17:42
R2-1912903	User plane solutions for connecting to 5GC	ZTE Corporat	not treated	2019-10-03 01:07:32	2019-10-04 05:50:29
R2-1912904	Some remaining issues for Msg4-based MT-EDT	ZTE Corporat	not treated	2019-10-03 01:16:56	2019-10-04 05:50:54
R2-1912905	Remaining issues of quality report for non-anchor access	ZTE Corporat	noted	2019-10-03 01:20:56	2019-10-04 06:12:53
R2-1912906	Remaining issues for DL quality report for eMTC	ZTE Corporat	noted	2019-10-03 01:26:33	2019-10-04 06:13:13
R2-1912907	Other remaining issues of UE grouping for WUS	ZTE Corporat	not treated	2019-10-03 01:29:43	2019-10-04 06:13:28
R2-1912908	Remaining issue of non-BL UE enhancement	ZTE Corporat	not treated	2019-10-03 01:34:43	2019-10-04 06:13:43
R2-1912909	Discussion on configuration of CHO	China Telecom	not treated	2019-10-03 02:03:27	2019-10-04 02:57:26
R2-1912910	Simulations on PDCCH-WUS not applying to the DRX short cycles	Xiaomi Communications	noted	2019-10-03 02:05:07	2019-10-03 03:09:20

R2-1912911	Avoid ping pong state transition for sidelink UE	Beijing Xiaomi	noted	2019-10-03 02:20:25	2019-10-03 02:23:23
R2-1912912	Discussion on details of PDCP for DAPS	China Telecom	not treated	2019-10-03 02:24:04	2019-10-04 02:57:26
R2-1912913	Remaining issue for prioritization for NR V2X	Lenovo, Motorola	not treated	2019-10-03 02:26:22	2019-10-03 14:11:28
R2-1912914	Considerations on QoS based resource pool for NR V2X	Lenovo, Motorola	not treated	2019-10-03 02:26:22	2019-10-03 14:11:28
R2-1912915	Further discussion on scheduling enhancement for TSN traffic	Lenovo, Motorola	not treated	2019-10-03 02:26:22	2019-10-03 14:11:28
R2-1912916	Paging probability information based UE grouping	Lenovo, Motorola	not treated	2019-10-03 02:26:22	2019-10-03 14:37:09
R2-1912917	Consideration on WUS configuration	Lenovo, Motorola	not treated	2019-10-03 02:26:22	2019-10-03 14:38:41
R2-1912918	Discussion on PDCCH-WUS missing problems during BWP switching and handover	Xiaomi Communications	not treated	2019-10-03 02:27:48	2019-10-03 03:09:35
R2-1912919	Some issues on the PDCCH-WUS working with C-DRX	Xiaomi Communications	not treated	2019-10-03 02:30:11	2019-10-03 03:09:48
R2-1912920	Considerations on UE power saving for BWP scenarios	Xiaomi Communications	not treated	2019-10-03 02:33:11	2019-10-03 03:10:05
R2-1912921	PRACH prioritization parameters for MPS for Rel-16	Perspecta Labs, ECD, AT&T, FirstNet,	merged	2019-10-03 02:36:54	2019-10-03 21:28:28
R2-1912922	PRACH prioritization procedure for MPS	Perspecta Labs, ECD, AT&T, FirstNet, T-Mobile, Sprint, Verizon, Qualcomm,	merged	2019-10-03 02:51:36	2019-10-03 21:28:28
R2-1912923	Grouping and Automatic Reconfiguration for Handover Enhancement in LEO NTN	Mediatek India	not treated	2019-10-03 03:23:09	2019-10-03 03:26:30
R2-1912924	Left issues in idle and inactive mode for NPN	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912925	Left issues in active mode for NPN	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912926	Further consideration on HARQ configuration in NTN	CMCC, Huawei,	revised	2019-10-03 03:36:54	2019-10-04 02:35:15
R2-1912927	Analysis on RAN1 LS on propagation delay	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912928	Support on TSN periodicities of non-integer multiple CG-SPS periodicities	CMCC	noted	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912929	Draft LS on support of the activation DCI of Type 2 CGs/SPS to adjust the start offset	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912930	Repetitions Transmission for SPS configurations	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912931	Down selection on the PDCP Duplication MAC CE	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912932	Further discussion on fast HO failure recovery in	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912933	Handling of deprioritized transmissions	CMCC	noted	2019-10-03 03:36:54	2019-10-04 02:46:51
R2-1912934	Handling for CG resource collision of equal priority	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912935	BAP mapping support for routing	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912936	BWP and sub-band switching for NR-U in RACH	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912937	Further consideration on consistent LBT failures	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912938	Consideration on further CP enhancements for NR-	CMCC	revised	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912939	Differentiating steerable and moving cells of LEO	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912940	Using beam footprint information for GEO mobility	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912941	Impact analysis of NR CA frame timing relaxation	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912942	Further consideration on PRACH prioritization	CMCC	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36

R2-1912943	Discussion on the flexible configuration of Maximum Data Rate Enumeration for UP Integrity	CMCC	revised	2019-10-03 03:36:54	2019-10-22 03:18:35
R2-1912944	Mobility-state-based cell reselection in NR for HSDN	CMCC, MediaTe	not treated	2019-10-03 03:36:54	2019-10-04 02:28:36
R2-1912945	Discussion on LCP restriction enhancements for	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:43:34
R2-1912946	Discussion on fast handover failure recovery	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:43:34
R2-1912947	HARQ feedback for MsgB	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:39:00
R2-1912948	PUSCH segmentation and repetition	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:39:00
R2-1912949	Discussion of the PUSCH transmission of MsgA	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:39:00
R2-1912950	Handling of de-prioritized MAC PDU	CMCC	withdrawn	2019-10-03 03:36:55	2019-10-22 03:18:35
R2-1912951	Discussion on IE design of TimeReferenceInfo	CMCC	noted	2019-10-03 03:36:55	2019-10-04 02:28:36
R2-1912952	[DRAFT] LS to SA3 on privacy concern of transmission of CAG ID	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:28:36
R2-1912953	Discussion of primary path configuration for PDCP	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:28:36
R2-1912954	Further discussion on RA type selection	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:28:36
R2-1912955	System information for 2-step RACH resources	CMCC	not treated	2019-10-03 03:36:55	2019-10-04 02:28:36
R2-1912956	[107#49][NR L2 measurement] Running TS38.314	CMCC	noted	2019-10-03 03:36:55	2019-10-04 02:28:36
R2-1912957	Draft TS 38.314 v002	CMCC	endorsed	2019-10-03 03:36:55	2019-10-04 02:28:36
R2-1912958	TP for TS 38.314 on number of Ues	CMCC	not treated	2019-10-03 03:36:57	2019-10-04 02:28:36
R2-1912959	Discussion on power saving in inter-frequency	CMCC	not treated	2019-10-03 03:36:57	2019-10-04 02:28:36
R2-1912960	Further consideration on EN-DC cell reselection	CMCC	revised	2019-10-03 03:36:57	2019-10-22 03:18:35
R2-1912961	Discussion on support of NR RAN sharing	CMCC	revised	2019-10-03 03:36:57	2019-10-22 03:18:35
R2-1912962	Running TS 37.320 CR	CMCC	revised	2019-10-03 03:36:57	2019-10-04 04:27:44
R2-1912963	LS on Logged Measurements	CMCC	not treated	2019-10-03 03:36:57	2019-10-04 04:27:45
R2-1912964	Broadcast Handover in LEO-Satellite based NTN	Mediatek India	not treated	2019-10-03 03:40:03	2019-10-03 03:42:05
R2-1912965	Consideration on further CP enhancements for NR-	CMCC	not treated	2019-10-03 03:48:42	2019-10-04 02:51:43
R2-1912966	Report of email discussion: [107#44][LTE and NR /feMOB] Discussion on PDCP details for RUDI HO	Mediatek Inc.,	noted	2019-10-03 03:57:45	2019-10-04 02:55:04
R2-1912967	PRACH prioritization parameters for MCS for Rel-16	FirstNet, Perspecta Labs,	merged	2019-10-03 03:59:11	2019-10-03 15:55:13
R2-1912968	Bearer handling for RUDI during HO with DAPS	Mediatek Inc., Intel Corporation, Qualcom	noted	2019-10-03 04:04:38	2019-10-04 02:55:04
R2-1912969	PRACH prioritization procedure for MCS for Rel-16	FirstNet, Perspecta Labs,	merged	2019-10-03 04:07:28	2019-10-03 15:55:13
R2-1912970	RLC Impacts analysis with DAPS during HO	Mediatek	not treated	2019-10-03 04:13:50	2019-10-04 02:55:04
R2-1912971	PDCP Duplication Configuration	Mediatek	not treated	2019-10-03 04:18:57	2019-10-04 02:55:04
R2-1912972	Discussion on the use case of CHO failure recovery	Beijing Xiaomi	not treated	2019-10-03 04:20:26	2019-10-03 04:21:38
R2-1912973	Service continuity between TN and NTN	NEC Telecom	not treated	2019-10-03 04:32:19	2019-10-03 04:46:45
R2-1912974	Clarification on RSSI and Channel Occupancy measurement in LAA	Qualcom m	not treated	2019-10-03 04:33:01	2019-10-04 06:47:20
R2-1912975	Clarification on RSSI and Channel Occupancy measurement in LAA	Qualcom m	not treated	2019-10-03 04:33:02	2019-10-04 06:47:20
R2-1912976	Clarification on RSSI and Channel Occupancy measurement in LAA	Qualcom m	not treated	2019-10-03 04:33:02	2019-10-04 06:47:20
R2-1912977	Location based mobility enhancement	NEC Telecom	not treated	2019-10-03 04:35:24	2019-10-03 04:46:45
R2-1912978	Downstream Next hop ID design	NEC Telecom	not treated	2019-10-03 04:37:14	2019-10-03 04:46:45
R2-1912979	End to end reliability in IAB	NEC Telecom	not treated	2019-10-03 04:39:55	2019-10-03 04:46:45

R2-1912980	Flow control in IAB	NEC Telecom	not treated	2019-10-03 04:40:54	2019-10-03 04:46:45
R2-1912981	IAB backhaul RLF handling	NEC Telecom	not treated	2019-10-03 04:41:40	2019-10-03 04:46:45
R2-1912982	Missing QCI to CAPC mapping	Nokia, Nokia	revised	2019-10-03 04:42:24	2019-10-04 05:37:24
R2-1912983	Applicability of CHO agreements to conditional	NEC	not treated	2019-10-03 04:48:40	2019-10-04 05:58:48
R2-1912984	Configuration of fast MCG recovery	NEC	not treated	2019-10-03 04:48:42	2019-10-04 05:58:48
R2-1912985	Pcompensation and FR2	Nokia, Nokia	noted	2019-10-03 04:55:30	2019-10-04 05:37:24
R2-1912986	Clarification on PO calculation	Nokia, Nokia	not treated	2019-10-03 04:55:30	2019-10-04 05:37:24
R2-1912987	Paging in NR-U	Nokia, Nokia	noted	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912988	Consecutive failed connection attempts in NR-U	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912989	Details of early measurement configuration	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912990	Early measurements and Inter-RAT	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912991	UE capabilities for early measurements	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912992	Dormant behaviour	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912993	Aspects of MCGFailureInformation over SRB3	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912994	CR on how to introduce x-scheduling with different numerologies	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912995	Multiple SMTC for Idle	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912996	CR on multiple SMTC for idle	Nokia, Nokia	not treated	2019-10-03 04:55:31	2019-10-04 05:37:24
R2-1912997	PDCP uplink transmit operation for split-bearer	Qualcomm	not pursued	2019-10-03 05:02:40	2019-10-04 03:06:58
R2-1912998	Reselection to a Cell with Valid Dedicated Frequency Offset	MediaTek Inc, LG	postponed	2019-10-03 05:30:53	2019-10-04 06:58:36
R2-1912999	Reselection to a Cell with Valid Dedicated Frequency Offset	MediaTek Inc.,	not treated	2019-10-03 05:34:20	2019-10-04 06:58:36
R2-1913000	Mobility Failure Handling with Conditional Handover Candidates	MediaTek Inc.	not treated	2019-10-03 05:35:39	2019-10-04 06:58:36
R2-1913001	Measurement Report for Conditional Handover Procedures	MediaTek Inc.	not treated	2019-10-03 05:37:03	2019-10-04 06:58:36
R2-1913002	Power Saving for RRM Measurements in NR	MediaTek Inc.	noted	2019-10-03 05:42:38	2019-10-04 06:58:36
R2-1913003	CN Type Indication for Cell Reselection from NR to LTE	MediaTek Inc.	not treated	2019-10-03 05:43:51	2019-10-04 06:58:36
R2-1913004	Considerations on IAB multi connectivity	KDDI	not treated	2019-10-03 06:36:57	2019-10-04 00:31:29
R2-1913005	Discussion on reselection between NPNs and	KDDI	not treated	2019-10-03 06:38:42	2019-10-04 00:31:29
R2-1913006	PDU format for msgB	Huawei,	not treated	2019-10-03 06:49:31	2019-10-03 15:59:37
R2-1913007	msgA resource configuration and selection	Huawei,	not treated	2019-10-03 06:49:33	2019-10-03 15:59:37
R2-1913008	Discussion on the MsgA transmission	Huawei,	not treated	2019-10-03 06:49:33	2019-10-03 15:59:37
R2-1913009	Discussion on MsgB reception	Huawei,	not treated	2019-10-03 06:49:33	2019-10-03 15:59:36
R2-1913010	fallback procedure for 2-step RACH	Huawei,	not treated	2019-10-03 06:49:33	2019-10-03 15:59:36
R2-1913011	Differentiation for two-step random access	Huawei,	not treated	2019-10-03 06:49:33	2019-10-03 15:59:37
R2-1913012	MAC aspects of BFR on SCell	Ericsson	not treated	2019-10-03 06:49:41	2019-10-03 20:19:03
R2-1913013	Analysis of RRC impacts from multi-beam enhancements	Ericsson	not treated	2019-10-03 06:49:41	2019-10-03 20:19:03
R2-1913014	Addition of indication for successful Random	Ericsson	not treated	2019-10-03 06:49:41	2019-10-03 20:15:43
R2-1913015	UE capabilities for CHO	Nokia, Nokia	not treated	2019-10-03 06:55:37	2019-10-03 15:50:28
R2-1913016	UE capabilities for RUDI handover	Nokia, Nokia	not treated	2019-10-03 06:55:37	2019-10-03 15:50:28
R2-1913017	Report for email discussion [107#26] [NR/R15] SMTC setting in MR-DC PSCell change (Nokia)	Nokia, Nokia	not treated	2019-10-03 06:55:37	2019-10-03 15:50:28

R2-1913018	SMTC setting in MR-DC PSCell change	Nokia, Nokia	revised	2019-10-03 06:55:37	2019-10-03 15:50:28
R2-1913019	Clarification regarding the supportedSRS-TxPortSwitch capability	Nokia, Nokia	not pursued	2019-10-03 06:55:38	2019-10-03 15:50:28
R2-1913020	Importing consequences if not approved from RAN1 and RAN4 excel files	Nokia, Nokia	revised	2019-10-03 06:55:39	2019-10-03 15:50:28
R2-1913021	Importing feature index numbers from TR 38.822	Nokia, Nokia	not pursued	2019-10-03 06:55:40	2019-10-03 15:50:28
R2-1913022	On FR2 CA fall-backs	Nokia, Nokia	revised	2019-10-03 06:55:41	2019-10-03 15:50:28
R2-1913023	Clarifying the alignment of capability filtering across LTE and NR in MR-DC	Nokia, Nokia	revised	2019-10-03 06:55:41	2019-10-03 15:50:28
R2-1913024	Clarifying the alignment of capability filtering across LTE and NR in MR-DC	Nokia, Nokia	merged	2019-10-03 06:55:42	2019-10-03 15:50:28
R2-1913025	Clarifying the interpretation behind the encapsulation of the filter extensions - Option 1	Nokia, Nokia	not treated	2019-10-03 06:55:43	2019-10-03 15:50:28
R2-1913026	Clarifying the interpretation behind the encapsulation of the filter extensions - Option 2	Nokia, Nokia	not treated	2019-10-03 06:55:44	2019-10-03 15:50:28
R2-1913027	Clarifying the interpretation behind the encapsulation of the filter extensions - Option 3	Nokia, Nokia	not treated	2019-10-03 06:55:45	2019-10-03 15:50:28
R2-1913028	Clarifying the interpretation behind the encapsulation of the filter extensions - Option 4	Nokia, Nokia	postponed	2019-10-03 06:55:45	2019-10-03 15:50:28
R2-1913029	UL LBT failure handling	Huawei,	not treated	2019-10-03 06:55:47	2019-10-03 16:56:58
R2-1913030	Configured grant for NR-U	Huawei,	not treated	2019-10-03 06:55:47	2019-10-03 16:56:58
R2-1913031	Discussion on DRX for NR-U	Huawei,	noted	2019-10-03 06:55:47	2019-10-03 16:56:58
R2-1913032	Impacts of Cross-COT HARQ feedback to BWP	Huawei,	not treated	2019-10-03 06:55:47	2019-10-03 16:56:58
R2-1913033	RAR format and contention resolution for NR-U	Huawei,	not treated	2019-10-03 06:55:47	2019-10-03 16:56:58
R2-1913034	PRACH and msg3 for NR-U	Huawei,	not treated	2019-10-03 06:55:47	2019-10-03 16:56:58
R2-1913035	Enhancement on 2-step RACH for NR-U	Huawei,	not treated	2019-10-03 06:55:47	2019-10-03 16:56:58
R2-1913036	Conditional PSCell addition and change	Nokia, Nokia	not treated	2019-10-03 06:56:57	2019-10-07 12:16:47
R2-1913037	Consideration on DL positioning method in NR	Huawei,	not treated	2019-10-03 06:57:15	2019-10-03 17:44:13
R2-1913038	Discussion on broadcasting of positioning	Huawei,	not treated	2019-10-03 06:57:15	2019-10-03 17:44:13
R2-1913039	Consideration on UL positioning method in NR	Huawei,	not treated	2019-10-03 06:57:15	2019-10-03 17:44:13
R2-1913040	Consideration on Multi-RTT positioning in NR	Huawei,	not treated	2019-10-03 06:57:15	2019-10-03 17:44:13
R2-1913041	Consideration on E-CID in NR	Huawei,	not treated	2019-10-03 06:57:15	2019-10-03 17:44:13
R2-1913042	Further discussion on on-demand SI in	Huawei,	not treated	2019-10-03 06:57:15	2019-10-03 17:44:13
R2-1913043	Remaining issue on scheduling ehancement for TSN	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:26:08
R2-1913044	Considerations on support of split bearer in the case of PDCP duplication with multiple copies	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:49:00
R2-1913045	Discussion on UE based PDCP Duplication activationdeactivation	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:26:08
R2-1913046	Consideration on the multiplexing BSR MAC CE and URLLC data	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:26:08
R2-1913047	Consideration on HARQ conflict between configured grant and dynamic grant	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:26:08
R2-1913048	Considerations on Beam failure Recovery for SCell	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:49:00
R2-1913049	Consideration on Enhancement of TCI state for Multi-TRP transmission	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:26:08
R2-1913050	Remaining issues on the impact from WUS signal	ZTE Corporation,	noted	2019-10-03 07:11:19	2019-10-04 05:26:08
R2-1913051	Discussion on the ambiguity in calculation of RA-RNTI	ZTE Corporat	not treated	2019-10-03 07:11:19	2019-10-04 05:26:09
R2-1913052	Discussion on human-readable network name	China Telecom	withdrawn	2019-10-03 07:11:24	
R2-1913053	DL PDCP handling for RLC AM	NEC	not treated	2019-10-03 07:13:13	2019-10-04 00:24:20
R2-1913054	DL PDCP handling for RLC UM	NEC	not treated	2019-10-03 07:13:13	2019-10-04 00:24:20
R2-1913055	Capability coordination for DAPS based handover	NEC	not treated	2019-10-03 07:13:13	2019-10-04 00:24:20
R2-1913056	Behaviours when handover configuration exceeds UE capabilities	NEC	not treated	2019-10-03 07:13:13	2019-10-04 00:24:20
R2-1913057	Failure handling and RLF report for CHO	NEC	not treated	2019-10-03 07:13:13	2019-10-04 00:24:20
R2-1913058	Discussion on human-readable network name	China Telecom	withdrawn	2019-10-03 07:13:21	

R2-1913059	Introduction of RRC parameters and UE capabilities for enhanced high speed scenario	NTT DOCOM	agreed	2019-10-03 07:33:21	2019-10-04 06:49:06
R2-1913060	Discussion on human-readable network name	China Telecom	not treated	2019-10-03 07:41:23	2019-10-04 02:57:26
R2-1913061	Paging opportunities overlapping for the NR-U	ITRI	not treated	2019-10-03 07:44:29	2019-10-04 06:59:31
R2-1913062	Msg1 transmission opportunities	ITRI	not treated	2019-10-03 07:44:29	2019-10-04 06:59:32
R2-1913063	Backhaul RLF handling	ITRI	not treated	2019-10-03 07:44:29	2019-10-04 06:59:32
R2-1913064	Handling of consistent UL LBT failures during HO	ITRI	not treated	2019-10-03 07:44:29	2019-10-04 06:59:32
R2-1913065	Trigger Conditions for low-latency IAB Uplink	ITRI	not treated	2019-10-03 07:44:29	2019-10-04 06:59:32
R2-1913066	Introduction of UE capabilities for further performance enhancement for LTE in high speed scenario in Rel-16	CMCC, Huawei, HiSilicon	agreed	2019-10-03 07:45:21	2019-10-04 06:48:27
R2-1913067	Clarification of PDCCH monitoring period with non-zero DRX-startoffset for NB-IoT	NTT DOCOM	revised	2019-10-03 07:46:54	2019-10-04 06:45:02
R2-1913068	Discussion on phase of the LTE CHO procedure	China Telecom	revised	2019-10-03 07:51:06	2019-10-04 04:12:42
R2-1913069	Discussion on the deployment for CAG	China Telecom	withdrawn	2019-10-03 07:54:49	
R2-1913070	Discussion on the deployment for CAG	China Telecom	not treated	2019-10-03 07:56:33	2019-10-04 04:12:42
R2-1913071	Further consideration on D-PUR aspect	III	not treated	2019-10-03 08:06:03	2019-10-04 04:39:40
R2-1913072	Discussion on MDT in DC scenario	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913073	MDT activation for INACTIVE&IDLE mode UE	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913074	Immediate MDT continuity upon handover procedure	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913075	Discussion on out-of-coverage measurement and report	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913076	Restriction on MDT measurement and report	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913077	Discussion on RLF & CEF report	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913078	Further consideration on RACH optimization	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913079	Further consideration on INACTIVE UE counting	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913080	Correction on the definition of over-the-air delay in UL	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913081	Discussion on PRB usage of a cell	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913082	Enhancement on RACH procedure for SI request	ZTE Corporat	not treated	2019-10-03 08:07:13	2019-10-04 04:38:58
R2-1913083	Further consideration on MAC enhancements	ZTE Corporat	not treated	2019-10-03 08:07:14	2019-10-04 04:38:58
R2-1913084	Handling of de-prioritized MAC PDUs	III	noted	2019-10-03 08:08:05	2019-10-04 04:08:19
R2-1913085	Consideration on UL low-latency scheduling	Lenovo, Motorola	not treated	2019-10-03 08:09:51	2019-10-04 03:48:58
R2-1913086	Pre-emptive BSR in multiple connection scenario	Lenovo, Motorola	not treated	2019-10-03 08:09:51	2019-10-04 03:48:58
R2-1913087	Cell selection for IAB RLF recovery	Lenovo, Motorola	not treated	2019-10-03 08:09:51	2019-10-04 03:48:58
R2-1913088	RLF notification to downstream IAB node	Lenovo, Motorola	not treated	2019-10-03 08:09:51	2019-10-04 03:48:58
R2-1913089	Failure handling with CHO candidate	Lenovo, Motorola	not treated	2019-10-03 08:09:51	2019-10-04 09:01:32
R2-1913090	Further consideration on On demand SI in RRC_CONNECTED	ZTE Corporat	not treated	2019-10-03 08:10:16	2019-10-03 08:28:48
R2-1913091	Handling of De-prioritized MAC PDUs	Nokia, Nokia	noted	2019-10-03 08:19:33	2019-10-03 13:29:28
R2-1913092	Remaining Issues for Resource Conflicts Involving SR	Nokia, Nokia	not treated	2019-10-03 08:19:34	2019-10-03 13:29:28

R2-1913093	On Primary Path of PDCP Duplication	Nokia, Nokia Shanghai Bell, NTT	noted	2019-10-03 08:19:34	2019-10-03 13:29:28
R2-1913094	MAC CE Format and Network Coordination for Uplink PDCP Duplication	Nokia, Nokia	not treated	2019-10-03 08:19:34	2019-10-03 13:29:28
R2-1913095	Introduction of additional enhancements for NB-IoT	Qualcomm Incorporated	not treated	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913096	WUS grouping design overview and UE distribution	Qualcomm	not treated	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913097	Non-anchor carrier measurements for RRM	Qualcomm	noted	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913098	Support for UE specific DRX in NB-IoT	Qualcomm Incorpor	noted	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913099	Draft LS on UE specific DRX in NB-IoT	Qualcomm	not treated	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913100	Introduction of additional enhancements for eMTC	Qualcomm Incorporated	not treated	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913101	Outstanding issues and TP for ETWS/CMAS support by non-BL UE	Qualcomm	withdrawn	2019-10-03 08:23:27	
R2-1913102	TP for downlink channel quality reporting in MSG3 for eMTC	Qualcomm	not treated	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913103	Open issues and TP for ETWS/CMAS support by non-BL UE	Qualcomm	noted	2019-10-03 08:23:27	2019-10-03 19:30:19
R2-1913104	On efficient transition from RRC_CONNECTED to RRC_IDLE/RRC_INACTIVE	Nokia, Nokia Shanghai	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913105	On UE assistance for C-DRX configuration	Nokia, Nokia	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913106	Dedicated RRM Measurement Relaxation	Nokia, Nokia	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913107	Further details on WUS	Nokia, Nokia Shanghai	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913108	Further details on RRM measurement relaxation	Nokia, Nokia	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913109	On adaptation of maximum number of MIMO layers	Nokia, Nokia	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913110	On combined RRC procedures	Nokia, Nokia	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913111	RRC processing delays for combined procedures	Nokia, Nokia	not treated	2019-10-03 08:29:04	2019-10-03 13:53:27
R2-1913112	Remaining issues in Msg4-based MT EDT	Ericsson	noted	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913113	Scheduling enhancements for LTE-MTC and NB-IoT	Ericsson	noted	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913114	MPDCCH performance improvement for LTE-M	Ericsson	noted	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913115	ETWS/CMAS notification delivery in connected mode for non-BL UEs in CE	Ericsson	noted	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913116	S-Criterion interpretation for non-BL UEs	Ericsson	not treated	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913117	Cell Reselection improvement for LTE-M	Ericsson	not treated	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913118	Remaining issues for UP solution and 5GC	Ericsson	noted	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913119	PUR periodicity and UE multiplexing	Ericsson	not treated	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913120	PUR with DCI scheduling	Ericsson	not treated	2019-10-03 08:41:27	2019-10-04 00:21:14

R2-1913121	PUR data transmission - remaining open issues	Ericsson	not treated	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913122	PUR configuration - remaining open issues	Ericsson	not treated	2019-10-03 08:41:27	2019-10-04 00:21:14
R2-1913123	PDCP type when connecting LTE-M and NB-IoT to 5GC	Ericsson	noted	2019-10-03 08:41:28	2019-10-04 00:21:14
R2-1913124	Discussion on leftover issues of Inter-RAT measurement	Huawei, HiSilicon	not treated	2019-10-03 08:41:42	2019-10-04 05:06:15
R2-1913125	Discusion on the SRVCC capability	Huawei, HiSilicon	not treated	2019-10-03 08:41:42	2019-10-04 05:06:15
R2-1913126	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, HiSilicon	revised	2019-10-03 08:41:42	2019-10-04 05:06:15
R2-1913127	Discussion on SL radio link management	Nokia, Nokia	not treated	2019-10-03 08:43:21	2019-10-03 19:49:30
R2-1913128	Report buffer status with one padding byte	Google Inc.	not treated	2019-10-03 08:56:38	2019-10-03 09:33:57
R2-1913129	Additional opportunity for Msg1 in 4-step RACH	LG	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913130	Problems in BFD-inspired detection mechanism for consistent UL LBT failures	LG Electroni	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913131	Dynamic DL opportunity enhancement based on channel busy level in NR-U	LG Electroni	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913132	Measurement enhancement for channel occupancy	LG	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913133	Periodicity misalignment between TSN traffic and SPS/CG	LG Electroni	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913134	LCP enhancements for mapping between LCH and	LG	noted	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913135	Measurement gap skipping for TSN traffic	LG	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913136	Impact of intra-UE prioritization on SR cancellation	LG	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913137	Discussion on beam failure recovery for SCell	LG Electroni	not treated	2019-10-03 09:00:04	2019-10-04 04:56:38
R2-1913138	Need for fast transition to RRC_IDLE	LG Electroni cs Inc.	not treated	2019-10-03 09:04:45	2019-10-04 04:31:21
R2-1913139	Consideration on UE assistance information	LG	not treated	2019-10-03 09:04:45	2019-10-04 04:31:21
R2-1913140	Discussion on the impact of WUS on drx-onDurationTimer	LG Electroni cs Inc.	not treated	2019-10-03 09:04:45	2019-10-04 04:31:21
R2-1913141	Consideration on PDCCH-based power saving signals	LG Electroni cs Inc.	not treated	2019-10-03 09:04:45	2019-10-04 04:31:21
R2-1913142	Consideration on dormancy behavior	LG Electroni	not treated	2019-10-03 09:04:45	2019-10-04 04:31:21
R2-1913143	Confirmation MAC CE for multiple CG	LG	not treated	2019-10-03 09:05:13	2019-10-04 04:56:38
R2-1913144	Discussion on HARQ and RNTI design for msgB	Google	not treated	2019-10-03 09:12:42	2019-10-04 06:48:28
R2-1913145	Discussion on simultaneous connectivity in CHO	vivo	not treated	2019-10-03 09:13:39	2019-10-04 04:38:33
R2-1913146	Even further views on NR V2X System Information	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913147	Unresolved issues on SL and UL prioritization	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913148	On NR V2X Sidelink transmissions during Handover or Uu PHY layer problems	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-04 05:39:25
R2-1913149	On PC5 capability transfer and link management	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913150	Network Based Monitoring and Reporting of QoS parameters for NR V2X Sidelink	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913151	On RRC Reconfigurations in CHO-prepared state	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913152	On RRC processing and CHO command compliance check	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913153	Failure handling in the presence of prepared CHO candidates	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913154	Mobility Robustness for DAPS eMBB handover	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913155	Further thoughts on RLF detection in NR	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913156	Remaining Details on UL User Data Transmission Switching in eMBB	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06

R2-1913157	On early data forwarding and per-DRB eMBB Handover	Nokia, Nokia	not treated	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913158	Correction to nrofSS-BlocksToAverage and nrofCSInrofCSI-RS-ResourcesToAverage	Nokia, Nokia	not pursued	2019-10-03 09:26:03	2019-10-03 15:38:06
R2-1913159	Missing reportAddNeighMeas in periodic measurement reporting	Nokia, Nokia	not pursued	2019-10-03 09:26:05	2019-10-03 15:38:06
R2-1913160	Mobility challenges for NR V2X platooning/groupcast	Nokia, Nokia	not treated	2019-10-03 09:26:06	2019-10-03 15:38:06
R2-1913161	Latency reduction enhancements for SCG RACH procedure	Qualcomm	not treated	2019-10-03 09:27:12	2019-10-04 05:35:08
R2-1913162	UE behavior upon consistenB2:AE10t UL LBT	Fujitsu	withdrawn	2019-10-03 09:27:48	
R2-1913163	On PDU overwritten in NR-U configured grant	Fujitsu	not treated	2019-10-03 09:27:48	2019-10-04 06:23:26
R2-1913164	Discussion on sidelink SR trigger	Fujitsu	not treated	2019-10-03 09:27:48	2019-10-04 06:23:54
R2-1913165	RLM/RLF for unicast in NR V2X	Fujitsu	not treated	2019-10-03 09:27:48	2019-10-04 06:23:54
R2-1913166	MAC CE structure for PDCP duplication activation	Fujitsu	not treated	2019-10-03 09:27:48	2019-10-04 06:23:54
R2-1913167	NW-based per-packet PDCP duplication	Fujitsu	not treated	2019-10-03 09:27:48	2019-10-04 06:29:33
R2-1913168	Considerations on MsgB reception	Fujitsu	not treated	2019-10-03 09:27:48	2019-10-04 06:23:54
R2-1913169	On open questions to 2-step CF-RACH	Fujitsu	not treated	2019-10-03 09:27:48	2019-10-04 06:29:33
R2-1913170	SR_COUNTER initialization due to RRC reconfiguration	Fujitsu, LG	not treated	2019-10-03 09:27:48	2019-10-04 06:29:33
R2-1913171	Consideration on MAC CE design for single PDCCH based multi-TRP transmission	CMCC	not treated	2019-10-03 09:35:03	2019-10-04 02:28:36
R2-1913172	Discussion on the flexible configuration of Maximum Data Rate Enumeration for UP Integrity	CMCC, Huawei,	not treated	2019-10-03 09:37:22	2019-10-04 02:28:37
R2-1913173	Further consideration on HARQ configuration in NTN	CMCC, Huawei,	revised	2019-10-03 09:39:49	2019-10-04 02:28:37
R2-1913174	Service continuity and feeder link switch in NTN	Huawei,	not treated	2019-10-03 09:40:41	2019-10-04 05:15:11
R2-1913175	Discussion on TA management and cell reselection	Huawei,	not treated	2019-10-03 09:40:41	2019-10-04 05:15:11
R2-1913176	Discussion on inactive state in NTN	Huawei,	not treated	2019-10-03 09:40:41	2019-10-04 05:15:11
R2-1913177	Running CR to TS 38.331 on IAB for NR	Ericsson	revised	2019-10-03 09:46:18	2019-10-18 11:48:05
R2-1913178	Draft CR to 38.331 on IAB for enhancements to existing signaling for TDD pattern configuration	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913179	Summary for Email Discussion [107#53] [NR_IAB-Core] Routing	Ericsson	noted	2019-10-03 09:46:18	2019-10-11 15:04:41
R2-1913180	Remaining Issues for BAP Layer	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913181	Uplink BH RLC Channel Mapping in IAB Nodes	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913182	LCID and LCG Extension in IAB Networks	Ericsson	noted	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913183	Remaining Issues Related to Flow Control	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913184	Further details for BSR in IAB Networks	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913185	On Multi-connectivity for IAB	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 19:58:39
R2-1913186	Access Identities and Access Categories for IAB	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913187	Allowing only IAB Nodes in a Standalone NR	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913188	Backhaul link RLF Notification Types to	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:49
R2-1913189	Support for LTE Deployment at IAB Node Sites	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:50
R2-1913190	Draft CR to 38.300 on IAB to add definitions for IAB-MT and IAB-DU	Ericsson	not treated	2019-10-03 09:46:18	2019-10-03 17:12:50
R2-1913191	Correction on T322	Nokia, Nokia	revised	2019-10-03 10:07:08	2019-10-03 13:53:27
R2-1913192	Correction on T322	Nokia, Nokia	not treated	2019-10-03 10:07:09	2019-10-03 13:53:28
R2-1913193	Correction on the actions for frequencyBandList in SIB1 and SIB2	Ericsson,	not treated	2019-10-03 10:16:36	2019-10-04 06:50:01
R2-1913194	RAN2 impact of undefined Pmax for FR2 in REL-15	Ericsson, NTT	not treated	2019-10-03 10:16:38	2019-10-04 06:50:01
R2-1913195	Correction for P-Max in FR2	Ericsson, NTT	agreed	2019-10-03 10:16:38	2019-10-04 06:50:01
R2-1913196	cDRX enhancement for CA	Ericsson, Qualcomm Inc.,	not treated	2019-10-03 10:16:39	2019-10-04 06:50:01
R2-1913197	RAN2 impact of WUS in connected mode	Ericsson	not treated	2019-10-03 10:16:39	2019-10-04 06:50:01

R2-1913198	UE assistance for RRC connection release	Ericsson	noted	2019-10-03 10:16:39	2019-10-04 06:50:01
R2-1913199	UE adaptation to maximum number of MIMO	Ericsson	not treated	2019-10-03 10:16:39	2019-10-04 06:50:01
R2-1913200	UE Assistance Information for cDRX configuration	Ericsson	noted	2019-10-03 10:16:39	2019-10-04 06:50:01
R2-1913201	UE Assistance Information for SCell configuration	Ericsson	not treated	2019-10-03 10:16:39	2019-10-04 06:50:01
R2-1913202	RRM measurement relaxation	Ericsson	not treated	2019-10-03 10:16:39	2019-10-04 06:50:01
R2-1913203	Considerations on user plane for DAPS	Huawei,	not treated	2019-10-03 10:20:32	2019-10-04 05:24:36
R2-1913204	Considerations on UE capability coordination	Huawei,	not treated	2019-10-03 10:20:32	2019-10-04 05:24:36
R2-1913205	Considerations on control plane for DAPS	Huawei, HiSilicon ,China	not treated	2019-10-03 10:20:32	2019-10-04 05:24:36
R2-1913206	Problems of ROHC handling for DAPS	Huawei,	not treated	2019-10-03 10:20:32	2019-10-04 05:24:36
R2-1913207	Further consideration on reply LSs from RAN1 and RAN4	Huawei, HiSilicon ,China	not treated	2019-10-03 10:20:32	2019-10-04 05:24:36
R2-1913208	Discussion on Groupcast and Broadcast QoS	ITRI	not treated	2019-10-03 10:22:42	2019-10-03 19:03:58
R2-1913209	Details of hop-by-hop flow control	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:50
R2-1913210	Signalling for radio aware scheduling	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:50
R2-1913211	Discussion on number of LCIDs and LCGs for IAB	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:50
R2-1913212	Discussion on MAC subheader structures for IAB	Nokia, Nokia	noted	2019-10-03 10:25:22	2019-10-04 05:47:50
R2-1913213	Buffer status reporting for IAB	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913214	T_delta signalling for IAB timing	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913215	Increasing Tx opportunities for Msg1	Nokia, Nokia	noted	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913216	Msg2 format and contention resolution based on LBT outcome of Msg3	Nokia, Nokia	noted	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913217	RNTI design for MsgB reception	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913218	Draft LS on MsgB RNTI design	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913219	Further design aspects of MsgB MAC subheader formats	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913220	New TAC MAC CE for 2-step RACH	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913221	Preamble groups for 2-step RACH	Nokia, Nokia	noted	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913222	CFRA for 2-step RACH	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913223	BFR procedure for SCell	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913224	Candidate detection and MAC CE format for SCell BFR	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913225	Draft CR on Introduction of SCell BFR	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913226	CFRA resource handling for BFR upon TAT expiry	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:51
R2-1913227	PDCP handling and RLC UM support for RUDI HO	Nokia, Nokia	not treated	2019-10-03 10:25:22	2019-10-04 05:47:50
R2-1913228	NR UE-based Positioning Modes and Geographical Information	ITRI	not treated	2019-10-03 10:32:14	2019-10-03 19:03:58
R2-1913229	Clarification to CA fallback band combinations	Nokia, Nokia	not treated	2019-10-03 10:38:37	2019-10-03 13:49:18
R2-1913230	Efficient RRC configuration with low latency	Nokia, Nokia	not treated	2019-10-03 10:38:38	2019-10-03 13:49:18
R2-1913231	Support of multiple LTE CRS rate matching patterns	Nokia, Nokia	postponed	2019-10-03 10:38:38	2019-10-03 13:49:18
R2-1913232	Support of multiple LTE CRS rate matching patterns	Nokia, Nokia	postponed	2019-10-03 10:38:40	2019-10-03 13:49:18

R2-1913233	Further consideration on EN-DC cell reselection	CMCC, Huawei,	not treated	2019-10-03 10:58:42	2019-10-04 02:28:37
R2-1913234	Conditional presence on ue-CapabilityInfo and servCellIndexRangeSCG for inter-MN handover without SN change	NTT DOCOMO, INC.	not treated	2019-10-03 11:04:15	2019-10-04 06:30:53
R2-1913235	Prioritization between NR-UL and NR-SL	MediaTek Inc.	not treated	2019-10-03 11:10:37	2019-10-04 06:53:31
R2-1913236	Remaining issues of SL LCP	MediaTek Inc.	not treated	2019-10-03 11:10:37	2019-10-04 06:53:31
R2-1913237	On SL configured grant	MediaTek Inc.	not treated	2019-10-03 11:10:37	2019-10-04 06:53:31
R2-1913238	Support of simultaneous mode 1 and mode 2	MediaTe	not treated	2019-10-03 11:10:37	2019-10-04 06:53:31
R2-1913239	MAC CE format for single PDCCH multi-TRP	MediaTe	not treated	2019-10-03 11:10:37	2019-10-04 06:53:31
R2-1913240	Support BFR for SCell	MediaTek Inc.	not treated	2019-10-03 11:10:37	2019-10-04 06:53:31
R2-1913241	Solution for intra-UE prioritization	Huawei,	not treated	2019-10-03 11:23:16	2019-10-04 01:17:36
R2-1913242	Handling of de-prioritized MAC PDU due to intra-UE prioritization	Huawei, HiSilicon	noted	2019-10-03 11:23:16	2019-10-04 01:17:36
R2-1913243	Prioritization issues for MAC Ces	Huawei,	not treated	2019-10-03 11:23:16	2019-10-04 01:17:36
R2-1913244	Activation/deactivation of PDCP duplication of up to	Huawei,	not treated	2019-10-03 11:23:16	2019-10-04 01:17:36
R2-1913245	Cell restriction for PDCP duplication with up to 4	Huawei,	noted	2019-10-03 11:23:16	2019-10-04 01:17:36
R2-1913246	Configuration of early measurments by SN	Samsung	not treated	2019-10-03 11:24:25	2019-10-03 21:05:10
R2-1913247	Remaining aspects on early measurement configuration	Samsung, MediaTek Incorpor	not treated	2019-10-03 11:24:26	2019-10-03 21:05:10
R2-1913248	CA/ DC enhancements, signalling reduction	Samsung	not treated	2019-10-03 11:24:26	2019-10-03 21:05:10
R2-1913249	Immediate MDT, inter-node aspects	Samsung	not treated	2019-10-03 11:24:26	2019-10-03 21:05:10
R2-1913250	Logged MDT, inter-node aspects (SN configuration)	Samsung	not treated	2019-10-03 11:24:26	2019-10-03 21:05:10
R2-1913251	MDT for early measurments (Logged, immediate)	Samsung Telecom	not treated	2019-10-03 11:24:26	2019-10-03 21:05:10
R2-1913252	General framework to harmonise transfer of UE information	Samsung	not treated	2019-10-03 11:24:26	2019-10-03 21:05:10
R2-1913253	Report of email discussion [107#08][NR IAB]	Huawei,	noted	2019-10-03 11:37:23	2019-10-11 11:08:57
R2-1913254	Running CR for TS 38.340 (BAP)	Huawei, HiSilicon	revised	2019-10-03 11:37:23	2019-10-11 11:08:57
R2-1913255	Correction on initial DL BWP and CORESET#0	Huawei, MediaTe	merged	2019-10-03 11:39:01	2019-10-04 01:17:36
R2-1913256	Correction on capabilities of BWP bandwidth	Huawei,	postponed	2019-10-03 11:39:07	2019-10-04 01:17:36
R2-1913257	Correction on camping conditions	Huawei,	postponed	2019-10-03 11:39:08	2019-10-04 01:17:36
R2-1913258	Introduction of a second SMTC per frequency carrier in idle/inactive	Orange, AT&T, Vodafone,	not treated	2019-10-03 11:44:40	2019-10-03 13:43:41
R2-1913259	Periodic CSI and SRS with wake-up indication	MediaTek Inc.	noted	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913260	On consistent LBT failures	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913261	RAR design for NR-U	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913262	On PHR and autonomous retransmissions	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913263	MAC behaviour for LBT failures in Msg3	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913264	MsgB format proposal for 2-step RACH	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913265	Ethernet Header Compression Message Format	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913266	Misalignment Between TSC and SPS/CG	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913267	Propagation Delay Compensation by the gNB	MediaTe	not treated	2019-10-03 11:49:45	2019-10-03 16:54:22
R2-1913268	Reconfiguration with sync for NE-DC	Google	revised	2019-10-03 11:50:01	2019-10-04 06:06:36
R2-1913269	Introduction of a second SMTC for inter-RAT cell reselection	Orange, AT&T, Vodafone,	not treated	2019-10-03 11:50:45	2019-10-03 13:43:41

R2-1913270	Reconfiguration failure in NE-DC	Google	agreed	2019-10-03 11:53:55	2019-10-04 06:06:36
R2-1913271	Reconfiguration failure in NE-DC	Google	reserved	2019-10-03 11:54:11	
R2-1913272	Support of releasing UL configuration	Huawei, HiSilicon, CMCC, China Telecom, MediaTe	not treated	2019-10-03 11:55:00	2019-10-04 00:56:34
R2-1913273	PDCP configuration generation (email discussion	Huawei,	agreed	2019-10-03 11:55:02	2019-10-04 00:56:34
R2-1913274	Resource Pool Configuration	LG Electroni	not treated	2019-10-03 12:07:54	2019-10-03 16:48:53
R2-1913275	NR V2X System Information Aspects	LG Electroni	not treated	2019-10-03 12:08:57	2019-10-03 16:49:43
R2-1913276	SLRB Management in NR V2X	LG	not treated	2019-10-03 12:10:19	2019-10-03 16:50:33
R2-1913277	Simultaneous Mode 1 and Mode 2 Configuration	LG	not treated	2019-10-03 12:11:22	2019-10-03 16:51:18
R2-1913278	On PRS Information for NR Positioning	LG	not treated	2019-10-03 12:12:24	2019-10-03 17:23:51
R2-1913279	Correction on the frequency indication in SIB2	Huawei, HiSilicon	revised	2019-10-03 12:42:42	2019-10-04 02:02:36
R2-1913280	Correction on EUTRAN terminology	Huawei,	agreed	2019-10-03 12:42:45	2019-10-04 02:02:36
R2-1913281	Remaining issues for the MAC specification	Huawei,	not pursued	2019-10-03 12:42:46	2019-10-04 02:02:36
R2-1913282	Correction on PRACH re-transmission for SRS carrier switching	Huawei, HiSilicon	revised	2019-10-03 12:42:47	2019-10-04 02:02:36
R2-1913283	Correction on PUSCH frequency hopping	Huawei, HiSilicon	merged	2019-10-03 12:42:48	2019-10-04 02:54:16
R2-1913284	Correction on synchoronous reconfiguration	Huawei, HiSilicon	merged	2019-10-03 12:42:49	2019-10-04 02:02:36
R2-1913285	Correction on delta signalling for handover	Huawei,	not pursued	2019-10-03 12:42:49	2019-10-04 02:02:36
R2-1913286	Discussion on support of NR RAN sharing	CMCC	not treated	2019-10-03 12:44:45	2019-10-04 02:28:37
R2-1913287	Remaining issues on UL LBT	Nokia, Nokia	noted	2019-10-03 12:51:33	2019-10-03 13:29:14
R2-1913288	Non-numeric K1 impacts	Nokia, Nokia	noted	2019-10-03 12:51:33	2019-10-03 13:29:14
R2-1913289	Multiple configured grants for NR-U	Nokia, Nokia	not treated	2019-10-03 12:51:33	2019-10-03 13:29:14
R2-1913290	CAPC for configured grant and dynamic grant	Nokia, Nokia	noted	2019-10-03 12:51:33	2019-10-03 13:29:14
R2-1913291	Stage-2 running CR for 2-step RACH	Nokia (rapporteur),	endorsed	2019-10-03 12:51:33	2019-10-03 13:29:14
R2-1913292	Further consideration on logged MDT	CMCC	not treated	2019-10-03 13:02:20	2019-10-04 02:28:37
R2-1913293	UE behavior upon consisten UL LBT failures	Fujitsu	withdrawn	2019-10-03 13:19:24	
R2-1913294	UE behavior upon consistent UL LBT failures	Fujitsu	not treated	2019-10-03 13:29:23	2019-10-04 06:23:54
R2-1913295	Routing details in IAB	Sony	not treated	2019-10-03 13:38:50	2019-10-03 20:52:57
R2-1913296	Summary of email discussion [107#31][NR/DCCA] MCG fast recovery	Ericsson	noted	2019-10-03 13:39:33	2019-10-03 21:15:10
R2-1913297	Handling of AS-Config in	Ericsson	agreed	2019-10-03 13:39:33	2019-10-03 21:15:10
R2-1913298	Corrections on scg-RB-Config in CG-Config	Ericsson	agreed	2019-10-03 13:39:34	2019-10-03 21:15:10
R2-1913299	Correction on candidateCellInfoListSN-EUTRA in HandoverPreparationInformation	Ericsson	merged	2019-10-03 13:39:35	2019-10-03 21:15:10
R2-1913300	Corrections to power limitations in NE-DC	Ericsson	revised	2019-10-03 13:39:36	2019-10-03 21:15:10
R2-1913301	Correction of SRB3 handling at full configuration	Ericsson	not treated	2019-10-03 13:39:36	2019-10-03 21:15:11
R2-1913302	Correction on MCG measurements in SCGFailureInformation	Ericsson	not treated	2019-10-03 13:39:37	2019-10-03 21:15:11
R2-1913303	Correction on SCGFailureInformation	Ericsson	not treated	2019-10-03 13:39:38	2019-10-03 21:15:11
R2-1913304	Remaining issues for correction on the condition of RBTermChange	Ericsson	revised	2019-10-03 13:39:39	2019-10-03 21:15:11
R2-1913305	Remaining issues for correction on the condition of RBTermChange	Ericsson	not treated	2019-10-03 13:39:41	2019-10-03 21:15:11
R2-1913306	Correction of SRB3 handling at full configuration (Alt2)	Ericsson	revised	2019-10-03 13:39:41	2019-10-03 21:15:11
R2-1913307	Miscellaneous correction for late drop	Ericsson	revised	2019-10-03 13:39:42	2019-10-03 21:15:11
R2-1913308	Correction to connection resume in EN-DC	Ericsson	not pursued	2019-10-03 13:39:43	2019-10-03 21:15:11
R2-1913309	Correction to power limitations in (NG)EN-DC	Ericsson	revised	2019-10-03 13:39:44	2019-10-03 21:15:11

R2-1913310	Correction to integrity protection in DRB addition and modification	Ericsson	agreed	2019-10-03 13:39:45	2019-10-03 21:15:11
R2-1913311	Correction on handover terminology	Ericsson	not pursued	2019-10-03 13:39:46	2019-10-03 21:15:11
R2-1913312	Correction on sending Failure Information via SRB3	Ericsson, ZTE Corporat	revised	2019-10-03 13:39:47	2019-10-03 21:15:11
R2-1913313	Correction on inter-node messages from CU to DU	Ericsson	not pursued	2019-10-03 13:39:48	2019-10-03 21:15:11
R2-1913314	Correction to SIB5 acquisition for idle mode measurements	Ericsson	revised	2019-10-03 13:39:49	2019-10-03 21:15:11
R2-1913315	Correction on inter-frequency neighbour cell measurements	Ericsson	revised	2019-10-03 13:39:49	2019-10-03 21:15:11
R2-1913316	Summary of email discussion [107#42][NR-Rel-16] On demand SI in connected	Ericsson	noted	2019-10-03 13:39:50	2019-10-03 21:15:11
R2-1913317	Running CR on on-demand SI procedure in RRC_CONNECTED	Ericsson	revised	2019-10-03 13:39:50	2019-10-03 21:15:11
R2-1913318	Remaining issues regarding on-demand SI for	Ericsson	not treated	2019-10-03 13:39:50	2019-10-03 21:15:11
R2-1913319	Inter-node resource coordination in NR SL	Ericsson	not treated	2019-10-03 13:39:50	2019-10-03 21:15:11
R2-1913320	Discussion on NR SL QoS management	Ericsson	not treated	2019-10-03 13:39:50	2019-10-03 21:15:11
R2-1913321	Discussion on SL link management	Ericsson	not treated	2019-10-03 13:39:50	2019-10-03 21:15:11
R2-1913322	Discussion on SL cross-RAT scheduling and configurations	Ericsson	not treated	2019-10-03 13:39:50	2019-10-03 21:15:11
R2-1913323	Discussion on SL Mode 2 left issues	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913324	Discussion on SL information reporting over Uu	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913325	Discussion on SL mode 1 left issues	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913326	Remaining issues on UL-SL prioritisation	Ericsson	noted	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913327	Support on HARQ procedure over sidelink	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913328	Summary of email discussion [107#75][NR/V2X]	Ericsson	noted	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913329	Remaining issues on RLC AM and UM support in SL	Ericsson	noted	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913330	Discussion on NR SL lower layer procedures	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913331	Running CR for 38.322 for NR V2X	Ericsson	revised	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913332	Discussion on SL AS configuration request over NR Uu	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913333	Handling of capability transfer in sidelink	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913334	Handling of SL in Uu RRC state transitions	Ericsson	not treated	2019-10-03 13:39:51	2019-10-03 21:15:11
R2-1913335	Left issues on random access procedure in NTN	OPPO	not treated	2019-10-03 13:40:07	2019-10-03 14:13:00
R2-1913336	Discussion on DRX operation in NTN	OPPO	not treated	2019-10-03 13:40:07	2019-10-03 14:13:00
R2-1913337	Discussion on UL scheduling enhancement in NTN	OPPO	not treated	2019-10-03 13:40:07	2019-10-03 14:13:00
R2-1913338	Impacts of disabling HARQ on LCP	OPPO	not treated	2019-10-03 13:40:07	2019-10-03 14:13:00
R2-1913339	Discussion on handover procedure for NTN	OPPO	not treated	2019-10-03 13:40:07	2019-10-03 14:13:00
R2-1913340	Considerations on performing and criteria of measurement relaxation	LG Electroni	not treated	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913341	Considerations on reporting measurement relaxation upon access	LG Electroni	revised	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913342	Handling early meaurment results upon cell reselection	LG Electroni	not treated	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913343	Validity area enhancements in NR	LG Electroni	not treated	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913344	Considerations on ways to provide SSB configuration in early measurements	LG Electroni	not treated	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913345	Report of email discussion [107#64][NTN] Cell selection&reselection	LG Electroni	revised	2019-10-03 13:40:21	
R2-1913346	Considerations on CHO in NTN	LG	not treated	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913347	Dual connectivity use cases in NTN	LG	not treated	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913348	Remaining issues of tracking area management in	LG	not treated	2019-10-03 13:40:21	2019-10-04 05:28:09
R2-1913349	TA update after PUR transmission via MAC CE	Sequans Commu	not treated	2019-10-03 13:47:00	2019-10-04 07:51:43
R2-1913350	IAB System information handling	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913351	BSR enhancement for IAB	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57

R2-1913352	Handling a deprioritized PDU for uplink Intra-UE prioritization in IIoT	Sony	noted	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913353	Consideration on activation/deactivation for CG	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913354	Location report in NTN	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913355	Bulk handover signalling for mobility enhancement	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913356	Fallback to 4-step RACH with BI	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913357	HARQ support for MsgB of 2-Step RACH	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913358	Power Saving techniques, UE assistance	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913359	UE power saving for inter frequency	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913360	Relaxed monitoring for beam measurement	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913361	Details of Relaxed monitoring for NR UE power	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913362	On supporting UE-group wake-up signal for	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913363	Cell selection/reselection with NPN cells	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913364	Mobility enhancements for Connectivity to 5GC for MTC and NB-IoT	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913365	Discussion on RAT dependent NR Positioning	Sony	not treated	2019-10-03 13:47:15	2019-10-03 20:52:57
R2-1913366	Differentiating between MSG2 and MSGB	ZTE Corporat	not treated	2019-10-03 13:59:37	2019-10-03 19:58:52
R2-1913367	Remaining Stage 2 issues for 2-step RACH	ZTE Corporat	noted	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913368	Support of CFRA with 2-step RACH	ZTE Corporation,	noted	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913369	Configuration aspects of 2-step RACH	ZTE Corporat	not treated	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913370	Running MAC CR for 2-step RACH	ZTE Corporation	not treated	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913371	RAR MAC PDU design for NR-U	ZTE Corporat	not treated	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913372	Multiple Msg1 transmission opportunities for NR-U	ZTE Corporat	not treated	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913373	Discussion on configured grant for NR-U	ZTE Corporat	not treated	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913374	Considerations on camping on non-best cell	ZTE Corporat	not treated	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913375	Recovery from consistent LBT failures	ZTE Corporat	not treated	2019-10-03 13:59:38	2019-10-03 19:58:52
R2-1913376	Report on [107#74] QoS flow in SLRB	Apple	noted	2019-10-03 14:02:59	2019-10-06 11:06:50
R2-1913377	Discussion on QoS flow in SLRB	Apple	revised	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913378	PC5 RRC procedure	Apple	not treated	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913379	Maximum Data Rate Enumeration for UP Integrity Protection	Apple, ZTE	not treated	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913380	Draft LS on Maximum Data Rate Enumeration for UP Integrity Protection	Apple	not treated	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913381	SI Acquisition in Connected Mode	Apple	not treated	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913382	CMAS/ETWS Reception at UE Configured with	Apple	noted	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913383	Handling of fallbacks for combined contiguous and non-contiguous CA in FR2	Apple	revised	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913384	CR to TS38.306 on FR2 intra band contiguous and non-contiguous CA fallback	Apple	not treated	2019-10-03 14:02:59	2019-10-04 06:41:22
R2-1913385	Full configuration in inter-RAT handover	Google	not treated	2019-10-03 14:07:11	2019-10-04 06:06:36
R2-1913386	Full configuration in inter-RAT handover	Google	not treated	2019-10-03 14:12:05	2019-10-04 06:06:36
R2-1913387	Baseline NTN-TN service continuity and mobility mechanism	HUGHES Network Systems Ltd	reserved	2019-10-03 14:24:18	
R2-1913388	Discussion on LCP procedure for NTN	Nokia, Nokia	not treated	2019-10-03 14:28:48	2019-10-04 05:08:31

R2-1913389	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile	not treated	2019-10-03 14:48:49	2019-10-04 06:24:17
R2-1913390	Introduction of voice fallback indication	Qualcomm Incorporated, T-Mobile	not treated	2019-10-03 14:48:49	2019-10-04 06:24:17
R2-1913391	Draft LS on RRC establishment cause value in EPS fallback	Qualcomm	not treated	2019-10-03 14:48:49	2019-10-04 15:23:31
R2-1913392	CLI measurements UE capabilities	Qualcomm Incorporated	not treated	2019-10-03 14:48:49	2019-10-04 06:46:54
R2-1913393	Too strong interference during CLI-RSSI/SRS-RSRP measurement	Qualcomm Incorpor	not treated	2019-10-03 14:48:49	2019-10-04 06:24:17
R2-1913394	ARFCN used for security key derivation	Qualcomm	noted	2019-10-03 14:48:49	2019-10-04 06:24:17
R2-1913395	DL and UL NR Positioning Procedures	Qualcomm	not treated	2019-10-03 15:02:34	2019-10-04 05:49:23
R2-1913396	TP for 38.305 Baseline CR: Transmission Measurement Function in NG-RAN	Qualcomm	noted	2019-10-03 15:04:28	2019-10-04 05:49:23
R2-1913397	GNSS SSR Assistance Data	Qualcomm Incorpor	not treated	2019-10-03 15:06:19	2019-10-04 05:49:23
R2-1913398	Broadcast of Location Assistance Data by NG-RAN	Qualcomm	noted	2019-10-03 15:07:59	2019-10-04 05:49:23
R2-1913399	Assistance Data for DL-only UE-based mode	Qualcomm	not treated	2019-10-03 15:09:48	2019-10-04 05:49:23
R2-1913400	Running CR for Introduction of Even futher Mobility enhancement in E-UTRAN	Ericsson India Private	not treated	2019-10-03 15:15:01	2019-10-03 19:56:06
R2-1913401	Discussion on HARQ feedback for msgB and RNTI design for msgB	Qualcomm	not treated	2019-10-03 15:21:13	2019-10-04 05:50:23
R2-1913402	Prioritized 2-step RACH	Qualcomm	noted	2019-10-03 15:23:10	2019-10-04 05:50:23
R2-1913403	Report of email discussion [107#68] [NR/2-step RACH]: MAC PDU format for msgB	Qualcomm Incorpor	noted	2019-10-03 15:25:35	2019-10-04 05:50:23
R2-1913404	msgB MAC PDU format	Qualcomm	not treated	2019-10-03 15:27:30	2019-10-04 05:50:23
R2-1913405	Remaining issue on contention resolution and fall back procedure	Qualcomm	not treated	2019-10-03 15:30:00	2019-10-04 05:50:23
R2-1913406	[107#61][NR/NTN] Rapporteur Running TP	THALES	revised	2019-10-03 15:36:57	2019-10-10 12:29:39
R2-1913407	Enhanced TCI States Activation/Deactivation PDSCH MAC CE for Multi-TRP	Qualcomm	not treated	2019-10-03 15:37:50	2019-10-04 05:50:23
R2-1913408	Use case and Signaling for RSS	Ericsson	not treated	2019-10-03 15:50:44	2019-10-04 05:00:47
R2-1913409	NRS Signalling Configuration	Ericsson	not treated	2019-10-03 15:50:44	2019-10-04 05:00:47
R2-1913410	New SIB for hosting posSI Scheduling Information	Ericsson	not treated	2019-10-03 15:50:44	2019-10-04 05:11:20
R2-1913411	Specify UDC Header is part of Data Field	Ericsson	postponed	2019-10-03 15:50:44	2019-10-04 05:00:47
R2-1913412	Running CR for the introduction of NR positioning	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:11:20
R2-1913413	Quality Report in eMTC Remaining Issues	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:00:47
R2-1913414	Text Proposal for MAC specification on Quality	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:00:47
R2-1913415	Introduction of additional posSIBs for QZSS PPP-	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:11:20
R2-1913416	UE-based configuration options	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:11:20
R2-1913417	S-Criterion for Non anchor Carrier based NRS	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:00:47
R2-1913418	RSS Signalling Configuration	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:00:47
R2-1913419	Remaining Issues for ANR measurements	Ericsson	noted	2019-10-03 15:50:45	2019-10-04 05:00:47
R2-1913420	posSIBs on a selective carrier	Ericsson	noted	2019-10-03 15:50:45	2019-10-04 05:11:20
R2-1913421	PosSIB Broadcast carrier	Ericsson	not treated	2019-10-03 15:50:45	2019-10-04 05:11:20

R2-1913422	Stage-3 structure details for RAT-dependent NR	Ericsson	not treated	2019-10-03 15:50:46	2019-10-04 05:11:20
R2-1913423	RAT dependent positioning methods - architecture and protocol aspects	Ericsson	not treated	2019-10-03 15:50:46	2019-10-04 05:11:20
R2-1913424	GNSS Integer Ambiguity Level Indications	Ericsson	not treated	2019-10-03 15:50:46	2019-10-04 05:11:20
R2-1913425	Corrections for Positioning Architecture	Ericsson	revised	2019-10-03 15:50:46	2019-10-04 05:11:20
R2-1913426	RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC	Document Rapporteur (BlackBerry)	revised	2019-10-03 15:51:36	2019-10-03 15:59:18
R2-1913427	CR to 38.331 on SSB-ToMeasure clarifications	Ericsson	not treated	2019-10-03 15:52:27	2019-10-03 16:44:27
R2-1913428	CR to 36.331 on SSB-ToMeasure clarifications	Ericsson	not treated	2019-10-03 15:52:28	2019-10-03 16:44:27
R2-1913429	CR to 36.306 on FR2 related ANR capability	Ericsson	not pursued	2019-10-03 15:52:29	2019-10-03 16:44:27
R2-1913430	CR to 36.331 on FR2 related ANR capability	Ericsson	not pursued	2019-10-03 15:52:30	2019-10-03 16:44:27
R2-1913431	CR to 38.306 on FR2 related ANR capability	Ericsson	not pursued	2019-10-03 15:52:31	2019-10-03 16:44:27
R2-1913432	CR to 38.331 on FR2 related ANR capability	Ericsson	not pursued	2019-10-03 15:52:32	2019-10-03 16:44:27
R2-1913433	CR to 36.331 on performing L3 filtering for NR related measurements	Ericsson	agreed	2019-10-03 15:52:33	2019-10-03 16:44:27
R2-1913434	CR to 36.331on NR CGI reporting related to cellReservedForOtherUse	Ericsson	not pursued	2019-10-03 15:52:34	2019-10-03 16:44:27
R2-1913435	CR to 38.331 on NR CGI reporting related to cellReservedForOtherUse and LTE CGI reporting related to CSG cells	Ericsson	not pursued	2019-10-03 15:52:35	2019-10-03 16:44:27
R2-1913436	CR to 38.331 on A2 event definition clarification	Ericsson	not treated	2019-10-03 15:52:35	2019-10-03 16:44:28
R2-1913437	CR to 36.331 on A2 event definition clarification	Ericsson	not treated	2019-10-03 15:52:36	2019-10-03 16:44:28
R2-1913438	Triggering conditions for A1-A6 events in NR	Ericsson	not treated	2019-10-03 15:52:38	2019-10-03 16:44:28
R2-1913439	CR to 38.331 on Triggering conditions for A1 to A6 events in NR	Ericsson	not treated	2019-10-03 15:52:38	2019-10-03 16:44:28
R2-1913440	CR to 38.306 on Triggering conditions for A1 to A6 events in NR	Ericsson	not treated	2019-10-03 15:52:39	2019-10-03 16:44:28
R2-1913441	Open issues of L2 measurements in NR	Ericsson	noted	2019-10-03 15:52:41	2019-10-03 16:44:28
R2-1913442	Open issues related to RACH report	Ericsson	not treated	2019-10-03 15:52:41	2019-10-03 16:44:28
R2-1913443	Open issues related to RLF report	Ericsson	not treated	2019-10-03 15:52:41	2019-10-03 16:44:28
R2-1913444	Successful handover report	Ericsson	not treated	2019-10-03 15:52:41	2019-10-03 16:44:28
R2-1913445	Correction on the usage of the TCI capability	Intel	reserved	2019-10-03 16:00:23	
R2-1913446	Clarification on the restriction of maximum SRS resource sets configuration for uplink beam	Intel	agreed	2019-10-03 16:00:26	2019-10-04 05:27:33
R2-1913447	Miscellaneous corrections on UE capability fields	Intel Corporat	revised	2019-10-03 16:00:27	2019-10-04 05:27:33
R2-1913448	Discussion on some open issues in running MAC CR	Email discussion	noted	2019-10-03 16:10:32	2019-10-03 19:58:52
R2-1913449	Summary of running MAC CR review issue list	ZTE Corporation	not treated	2019-10-03 16:14:37	2019-10-03 19:58:52
R2-1913450	Updated Work Plan for NR Industrial IoT WI	Nokia, Nokia	not treated	2019-10-03 16:17:44	2019-10-03 17:56:54
R2-1913451	Remaining issues for accurate reference time delivery	Nokia, Nokia	noted	2019-10-03 16:17:44	2019-10-03 17:56:54
R2-1913452	Periodicity and burst arrival encoding in TSCAI	Nokia, Nokia	revised	2019-10-03 16:17:44	2019-10-03 18:13:23

R2-1913453	Support for arbitrary TSC message periodicities	Nokia, Nokia	noted	2019-10-03 16:17:44	2019-10-03 18:59:22
R2-1913454	CG and SPS occasions determination for new periodicities	Nokia, Nokia	not treated	2019-10-03 16:17:44	2019-10-03 17:56:54
R2-1913455	SPS collisions with multiple SPS configurations	Nokia, Nokia	not treated	2019-10-03 16:17:44	2019-10-03 17:56:54
R2-1913456	Padding removal	Nokia, Nokia	not treated	2019-10-03 16:17:44	2019-10-03 18:00:14
R2-1913457	Joint IP and Ethernet Header compression	Nokia, Nokia	not treated	2019-10-03 16:17:44	2019-10-03 17:56:54
R2-1913458	LCP restrictions enhancements	Nokia, Nokia	noted	2019-10-03 16:17:44	2019-10-03 17:56:54
R2-1913459	Route priority and local routing	Nokia, Nokia	not treated	2019-10-03 16:17:45	2019-10-03 17:33:43
R2-1913460	BH link failure handling	Nokia, Nokia	not treated	2019-10-03 16:17:45	2019-10-03 17:33:43
R2-1913461	IAB initial access and IAB support indication	Nokia, Nokia	not treated	2019-10-03 16:17:45	2019-10-03 17:33:43
R2-1913462	Routing and mapping configuration in IAB nodes	Nokia, Nokia	not treated	2019-10-03 16:17:45	2019-10-04 06:15:37
R2-1913463	IAB-MT terminology	Nokia, Nokia	noted	2019-10-03 16:17:45	2019-10-03 17:33:43
R2-1913464	Admission control for IAB	Nokia, Nokia	reserved	2019-10-03 16:17:45	
R2-1913465	Revisions of usage scenarios for NTN	THALES	reserved	2019-10-03 16:22:00	
R2-1913466	SSB-ToMeasure related clarification	Ericsson LM	not treated	2019-10-03 16:38:15	2019-10-03 16:44:28
R2-1913467	On Layer 2 parameter values to support delay critical GBR QoS flows	Huawei, HiSilicon	not treated	2019-10-03 17:03:58	2019-10-03 18:27:07
R2-1913468	Solutions to mitigate the periodicity misalignment between TSC traffic and CG/SPS	Huawei, HiSilicon	not treated	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913469	Remaining issues of LCP enhancement for TSC	Huawei,	not treated	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913470	Propagation delay compensation for accurate	Huawei,	revised	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913471	Remaining issues of reference time delivery	Huawei,	revised	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913472	Further discussion on Configured Grant Confirmation MAC CE	Huawei, HiSilicon	not treated	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913473	Discussion on EHC header format	Huawei,	not treated	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913474	Paging for NR-U	Huawei,	not treated	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913475	SI enhancement for NR-U	Huawei,	not treated	2019-10-03 17:03:58	2019-10-03 18:27:08
R2-1913476	Discussion on multiplexing of data	Huawei,	not treated	2019-10-03 17:03:59	2019-10-03 18:27:08
R2-1913477	Discussion on DL LBT failure impact on RLF	Huawei,	not treated	2019-10-03 17:03:59	2019-10-03 18:27:08
R2-1913478	Further discussion on PLMN selection for NR-U	Huawei,	noted	2019-10-03 17:03:59	2019-10-03 18:27:08
R2-1913479	Consistent LBT failure detection	Google	not treated	2019-10-03 17:04:41	2019-10-03 17:52:36
R2-1913480	CAPC for configured grants in NR-U	Google	not treated	2019-10-03 17:07:36	2019-10-03 17:52:36
R2-1913481	Correction to RRCReconfigurationComplete in NR-	Ericsson	withdrawn	2019-10-03 17:09:37	2019-10-03 17:15:45
R2-1913482	Clarification on security key change and bearer termination point change	ZTE Corporat	agreed	2019-10-03 17:28:04	2019-10-04 00:10:05
R2-1913483	Further issues for CHO configuration and execution	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913484	Discussion on fast RLF recovery when applying CHO and fast MCG recovery	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913485	Discussion on conditional PSCell addition/change	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913486	Discussion on capability coordination for RUDI HO	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913487	Remaining Issues on Early Measurements	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913488	On Inter-RAT Operation	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913489	On directly donfiguring SCell as activated	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913490	Further Consideration on fast SCell activation	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913491	On SCG suspension	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05

R2-1913492	Signalling overhead reduction for cell configuration and BWP configuration	ZTE Corporat	not treated	2019-10-03 17:28:06	2019-10-04 00:10:05
R2-1913493	UE positioning in legacy satellite communication systems for 5G NTN	THALES	noted	2019-10-03 17:48:04	2019-10-03 18:57:43
R2-1913494	Discussion on SDAP protocol for NR V2X	Apple	not treated	2019-10-03 17:49:01	2019-10-04 05:44:59
R2-1913495	Discussion on prioritization between SL BSR and UL BSR	Apple, OPPO	not treated	2019-10-03 17:49:01	2019-10-04 05:44:59
R2-1913496	Discussion on remaining issues on HARQ feedback	Apple	not treated	2019-10-03 17:49:01	2019-10-04 05:44:59
R2-1913497	Draft LS on Support HARQ feedback design for SL groupcast	Apple	not treated	2019-10-03 17:49:01	2019-10-04 05:44:59
R2-1913498	UE Mobility for Simultaneous Mode 1 & Mode 2	Apple	not treated	2019-10-03 17:49:01	2019-10-04 05:44:59
R2-1913499	Resource allocations for UEs with simultaneous mode 1 & mode 2 configurations	Apple	not treated	2019-10-03 17:49:01	2019-10-04 05:44:59
R2-1913500	Improved transmission mechanism for PUCCH-	Ericsson	not treated	2019-10-03 17:50:15	2019-10-03 20:51:01
R2-1913501	Discussions on configured grant in NR-U	Ericsson	noted	2019-10-03 17:50:16	2019-10-03 20:51:01
R2-1913502	Further discussions on channel access priority	Ericsson	not treated	2019-10-03 17:50:16	2019-10-03 20:51:01
R2-1913503	DRX enhancement for NR-U	Ericsson	not treated	2019-10-03 17:50:17	2019-10-03 20:51:01
R2-1913504	Handling LBT failures	Ericsson	not treated	2019-10-03 17:50:17	2019-10-03 20:51:01
R2-1913505	RACH enhancements for NR-U	Ericsson	not treated	2019-10-03 17:50:17	2019-10-03 20:51:01
R2-1913506	RAN2 impact of supporting wideband operation	Ericsson	not treated	2019-10-03 17:50:17	2019-10-03 20:51:01
R2-1913507	Channel access for Msg3	Ericsson	not treated	2019-10-03 17:50:17	2019-10-03 20:51:01
R2-1913508	2-step Random Access for NR-U	Ericsson	not treated	2019-10-03 17:50:17	2019-10-03 20:51:01
R2-1913509	Running MAC CR for NR-U	Ericsson	endorsed	2019-10-03 17:50:17	2019-10-03 20:51:01
R2-1913510	PC5-RRC and PC5-S interactions and their security in NR V2X	Qualcomm Incorporated	not treated	2019-10-03 17:50:43	2019-10-03 23:37:39
R2-1913511	Discussion on mode 1 resource allocation	Qualcomm Incorporated	not treated	2019-10-03 17:53:48	2019-10-03 23:43:22
R2-1913512	Inter-RAT resource allocation in NR V2X	Qualcomm Incorporated	not treated	2019-10-03 17:55:39	2019-10-03 23:49:40
R2-1913513	Timing of Key Derivation in Conditional Handover	Futurew	not treated	2019-10-03 18:00:00	2019-10-04 02:09:50
R2-1913514	Draft LS on the Timing of AS Key Derivation in Conditional Handover	Futurewei	not treated	2019-10-03 18:00:00	2019-10-04 02:09:50
R2-1913515	Handling of Key Derivation in Conditional PSCell Addition/Change	Futurewei	not treated	2019-10-03 18:00:00	2019-10-04 02:09:50
R2-1913516	Correction to secondary key derivation	Ericsson	not pursued	2019-10-03 18:16:58	2019-10-03 18:53:14
R2-1913517	Miscellaneous corrections to 38.306	Ericsson	merged	2019-10-03 18:17:01	2019-10-03 18:53:14
R2-1913518	Correction to field conditions in NE-DC	Ericsson	revised	2019-10-03 18:17:02	2019-10-03 18:53:14
R2-1913519	Addition of dynamic power sharing for NE-DC (38.306)	Ericsson	not pursued	2019-10-03 18:17:03	2019-10-03 18:53:14
R2-1913520	Addition of dynamic power sharing for NE-DC	Ericsson	noted	2019-10-03 18:17:03	2019-10-03 18:53:14
R2-1913521	Clarification to radio bearer handling for intra-5GC HO from LTE to NR (38.331)	Ericsson	postponed	2019-10-03 18:17:03	2019-10-03 18:53:14
R2-1913522	Clarification to radio bearer handling for intra-5GC HO from NR to LTE (36.331)	Ericsson	postponed	2019-10-03 18:17:05	2019-10-03 18:53:14
R2-1913523	Correction on capability coordination terminology	Ericsson	not pursued	2019-10-03 18:17:06	2019-10-03 18:53:14
R2-1913524	Correction to Feature Set Combinations for NR-	Ericsson	not treated	2019-10-03 18:17:07	2019-10-03 18:53:14
R2-1913525	Handling of fallback band combinations	Ericsson, NTT	not treated	2019-10-03 18:17:07	2019-10-03 18:53:14
R2-1913526	[DRAFT] Reply LS on Handling of Fallbacks for combined contiguous and non-contiguous CA or DC configurations in FR2	Ericsson	not treated	2019-10-03 18:17:07	2019-10-03 18:53:14

R2-1913527	Introducing multiple BC-FS	Ericsson	not treated	2019-10-03 18:17:07	2019-10-03 18:53:14
R2-1913528	Returning multiple BC+FS in CG-Config	Ericsson	not treated	2019-10-03 18:17:08	2019-10-03 18:53:14
R2-1913529	Overheating enhancements for EN-DC	Ericsson	not treated	2019-10-03 18:17:08	2019-10-03 18:53:14
R2-1913530	Use of group signaling for NR-CA	Ericsson	not treated	2019-10-03 18:17:08	2019-10-03 18:53:14
R2-1913531	Further RRC impact due to dormancy behaviour	Ericsson	not treated	2019-10-03 18:17:08	2019-10-03 18:53:14
R2-1913532	Email Discussion [107#27][NR/R15] Determining L2 buffer size (Ericsson)	Ericsson	noted	2019-10-03 18:17:08	2019-10-03 18:53:15
R2-1913533	LS on NR V2X synchronization procedures and priority (R1-1909910; contact: CATT)	RAN1	noted	2019-10-03 18:37:19	2019-10-03 19:58:50
R2-1913534	Clarification on satellite beam and PCI mapping	THALES	withdrawn	2019-10-03 18:49:54	2019-10-03 18:58:32
R2-1913535	Draft CR on CLI for TS 38.306	Ericsson (rapporteur)	endorsed	2019-10-03 18:53:36	2019-10-03 22:12:56
R2-1913536	Remaining issues on CLI	Ericsson	not treated	2019-10-03 18:53:36	2019-10-03 22:12:56
R2-1913537	On s measure for CLI	Ericsson	not treated	2019-10-03 18:53:36	2019-10-03 22:12:56
R2-1913538	Open Issues for IAB Routing	Futurewei	not treated	2019-10-03 18:59:06	2019-10-04 07:13:55
R2-1913539	Enhancements for low-latency IAB Uplink scheduling	Futurewei	not treated	2019-10-03 19:00:55	2019-10-04 06:09:12
R2-1913540	Miscellaneous non-controversial corrections Set IV	Ericsson	postponed	2019-10-03 19:03:14	2019-10-03 23:49:14
R2-1913541	Definition of NR standalone	Ericsson	revised	2019-10-03 19:03:15	2019-10-03 23:49:14
R2-1913542	Presence and absence of TAC in NR cell	Ericsson	revised	2019-10-03 19:03:16	2019-10-03 23:49:14
R2-1913543	On Scell AddMod and Release lists	Ericsson	noted	2019-10-03 19:03:17	2019-10-03 23:49:14
R2-1913544	Backhaul RLF Notification and Recovery Procedure	Futurewei	not treated	2019-10-03 19:06:02	2019-10-04 06:09:12
R2-1913545	Logged MDT for RRC_INACTIVE state	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 07:59:28
R2-1913546	Logged MDT configuration events	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 07:59:28
R2-1913547	Impact of SNPN on PLMN check for MDT	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 07:59:28
R2-1913548	RACH Scenarios and their presence in the RACH Report	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 07:59:28
R2-1913549	RACH Fallback from NUL to SUL	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 07:59:28
R2-1913550	TP to 38.300 on SON support	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 08:48:42
R2-1913551	Counting number of inactive Ues	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 08:22:20
R2-1913552	Measurement event for interference-forced inter-RAT/inter-freq HO	Nokia, Nokia	not treated	2019-10-03 19:07:18	2019-10-04 07:59:28
R2-1913553	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia	revised	2019-10-03 19:07:18	2019-10-04 07:59:28
R2-1913554	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia	revised	2019-10-03 19:07:19	2019-10-04 07:59:28
R2-1913555	MAC Scheduling Aspects of Multi-TTI Grant	Qualcomm	not treated	2019-10-03 19:10:57	2019-10-04 03:14:00
R2-1913556	Impact of ACK/NACK transmission to NR-U DRX	Qualcomm	noted	2019-10-03 19:17:51	2019-10-04 03:14:00
R2-1913557	Report for [107#51][NR IAB] F1 over LTE (AT&T)	AT&T	noted	2019-10-03 19:26:20	2019-10-03 21:30:02
R2-1913558	Impact of non-Numeric K1 Value to NR-U DRX	Qualcomm	revised	2019-10-03 19:44:47	2019-10-04 03:14:00
R2-1913559	Paging monitoring in NR-U	Qualcomm	noted	2019-10-03 19:49:00	2019-10-04 04:02:28
R2-1913560	Remaining FFS on cell reselection for NR-U	Qualcomm	not treated	2019-10-03 19:50:45	2019-10-04 03:14:00

R2-1913561	DRX Active Time for NR-U	Qualcomm	not treated	2019-10-03 19:57:38	2019-10-04 03:14:00
R2-1913562	CAPC and uplink transmission	Qualcomm	noted	2019-10-03 20:02:16	2019-10-04 03:14:00
R2-1913563	Clarification on satellite beam and PCI mapping	THALES	revised	2019-10-03 20:02:36	2019-10-03 20:06:31
R2-1913564	On SL HARQ configuration for NR V2X	Intel	not treated	2019-10-03 20:02:38	2019-10-04 02:54:09
R2-1913565	Correction to Pcompensation for FR2	Huawei, HiSilicon	withdrawn	2019-10-03 20:12:11	2019-10-03 20:36:36
R2-1913566	Correction to the parameter descriptions for cell measurement quallity derivation in multi-beam	Huawei, HiSilicon	not treated	2019-10-03 20:12:12	2019-10-03 20:36:36
R2-1913567	Correction to the field description of cellReselectionInfoCommon for cell measurement quallity derivation in multi-beam operation	Huawei, HiSilicon	not treated	2019-10-03 20:12:13	2019-10-03 20:36:36
R2-1913568	Remaining issues on time domain measurement	Huawei,	not treated	2019-10-03 20:12:15	2019-10-03 20:36:36
R2-1913569	Reducing the number of neighbour cells/carriers to	Huawei,	not treated	2019-10-03 20:12:15	2019-10-03 20:36:36
R2-1913570	Remaining issues of DL quality report	Huawei,	noted	2019-10-03 20:12:15	2019-10-03 20:36:36
R2-1913571	MPDCCH performance improvement using CRS	Huawei, HiSilicon	noted	2019-10-03 20:12:15	2019-10-03 20:36:36
R2-1913572	Enhancements to idle mode mobility for non-BL	Huawei,	noted	2019-10-03 20:12:15	2019-10-03 20:36:36
R2-1913573	Use of RSS for measurement improvements	Huawei,	not treated	2019-10-03 20:12:15	2019-10-03 20:36:36
R2-1913574	NR-U specific aspects for 2-step RACH	Qualcomm	not treated	2019-10-03 20:12:42	2019-10-04 05:55:52
R2-1913575	Running RRC CR for NR-based Access to Unlicensed Spectrum	Qualcomm Incorporated	revised	2019-10-03 20:16:38	2019-10-18 11:48:05
R2-1913576	Running Idle/Inactive mode CR for NR-based Access to Unlicensed Spectrum	Qualcomm	revised	2019-10-03 20:18:18	2019-10-18 11:48:05
R2-1913577	Clarification on SRB3 usage	ZTE	not treated	2019-10-03 20:21:37	2019-10-04 00:10:05
R2-1913578	Correction of RRC procedure upon expiry of DataInactivityTimer	Qualcomm	not pursued	2019-10-03 20:21:53	2019-10-04 03:06:58
R2-1913579	Draft LS on RRC indication to NAS upon expiry of DataInactivityTimer	Qualcomm	not treated	2019-10-03 20:24:22	2019-10-04 04:02:28
R2-1913580	Methods of Paging in GEO Satellite-Based 5G Networks	HUGHES	not treated	2019-10-03 20:28:13	2019-10-04 03:27:46
R2-1913581	On uplink enhancements for NTN	Ericsson	not treated	2019-10-03 20:36:30	2019-10-03 22:58:41
R2-1913582	DRX adaptions for NTN	Ericsson	not treated	2019-10-03 20:36:30	2019-10-03 22:58:41
R2-1913583	Remaining aspects on Random access for NTN	Ericsson	not treated	2019-10-03 20:36:30	2019-10-03 22:58:41
R2-1913584	Remaining aspects on RLC and PDCP	Ericsson	not treated	2019-10-03 20:36:30	2019-10-03 22:58:41
R2-1913585	Satellite identifier in 3GPP NTN Control Plane	THALES	noted	2019-10-03 20:38:47	2019-10-03 20:46:07
R2-1913586	Remaining issues regarding UE assistance	Samsun	noted	2019-10-03 20:47:45	2019-10-03 23:27:11
R2-1913587	Correction of UE assistance information	Samsun	not treated	2019-10-03 20:47:45	2019-10-03 23:27:11
R2-1913588	Correction of UE assistance information	Samsung,	revised	2019-10-03 20:47:45	2019-10-04 12:37:17
R2-1913589	Clarification regarding QoS handling in MRDC with 5G CN	Samsung, ZTE	revised	2019-10-03 20:47:45	2019-10-03 23:27:11
R2-1913590	CHO configuration/ execution, remaining aspects	Samsung	not treated	2019-10-03 20:47:45	2019-10-03 23:27:11
R2-1913591	Introducing condition for SN (re-)configurations	Samsung	not treated	2019-10-03 20:47:45	2019-10-04 06:07:30
R2-1913592	Capability coordination for DAPS, required UE capability details and signalling	Samsung	not treated	2019-10-03 20:47:45	2019-10-04 12:37:17
R2-1913593	Angle of Departure UE positioning technique	Nokia, Nokia	not treated	2019-10-03 21:26:55	2019-10-04 03:27:48

R2-1913594	On-demand and dynamic PRS configuration for DL-TDOA	Nokia, Nokia	not treated	2019-10-03 21:28:21	2019-10-04 03:28:08
R2-1913595	PC5 groupcast handling	Qualcomm Incorporated	not treated	2019-10-03 21:38:32	2019-10-04 01:45:44
R2-1913596	RRC Framework for handling MN failure indication and recovery over SRB3	Intel Corporat	not treated	2019-10-03 21:40:08	2019-10-04 02:54:09
R2-1913597	Pre-configured UL Resources Design Considerations	Sierra Wireless, S.A., Sony	not treated	2019-10-03 21:41:04	2019-10-03 22:03:09
R2-1913598	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm	not treated	2019-10-03 21:43:46	2019-10-04 06:50:57
R2-1913599	[Draft] Reply LS on Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm	not treated	2019-10-03 21:43:46	2019-10-04 06:50:57
R2-1913600	Remaining aspects from [106#61] D-PUR Request, (re)configuration and release mechanism	Qualcomm Incorpor	not treated	2019-10-03 21:46:08	2019-10-04 06:55:47
R2-1913601	Introduction of Rel-16 eMTC enhancements	Qualcomm Incorporated	revised	2019-10-03 21:54:08	2019-10-08 18:07:58
R2-1913602	Addressing Editor's Notes and FFSes in RRC running CR	Qualcomm	noted	2019-10-03 21:56:38	2019-10-08 18:07:57
R2-1913603	Conditional measurement configuration for LEO	InterDigit	not treated	2019-10-03 22:08:02	2019-10-03 22:20:54
R2-1913604	Summary of Email Discussion [107_62] TP Mobility (InterDigital)	InterDigital	noted	2019-10-03 22:08:02	2019-10-08 22:33:01
R2-1913605	TP on NTN Mobility Issues and Solutions	InterDigit	revised	2019-10-03 22:08:02	2019-10-08 22:33:01
R2-1913606	Further considerations for the WUS	InterDigital	not treated	2019-10-03 22:08:02	2019-10-03 22:20:15
R2-1913607	Discussion on the SN modification trigger	Huawei, HiSilicon	noted	2019-10-03 22:43:59	2019-10-03 23:06:04
R2-1913608	Draft reply LS on full configuration during SN Modification procedure	Huawei, HiSilicon	revised	2019-10-03 22:44:00	2019-10-03 23:06:04
R2-1913609	Further issues of not up-to-date SN configuration at	Huawei,	not treated	2019-10-03 22:44:00	2019-10-03 23:06:04
R2-1913610	Exchanging used IDs of SN terminated DRBs	Huawei,	not treated	2019-10-03 22:44:00	2019-10-03 23:06:04
R2-1913611	Exchanging used IDs of SN terminated DRBs	Huawei, HiSilicon	not treated	2019-10-03 22:44:07	2019-10-03 23:06:04
R2-1913612	Sending FailureInformation message on SRB3	Huawei,	not treated	2019-10-03 22:44:08	2019-10-03 23:06:04
R2-1913613	Clarification on SRB3 release	Huawei, HiSilicon	merged	2019-10-03 22:44:09	2019-10-03 23:06:04
R2-1913614	sk-counter presence in	Huawei,	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913615	Idle/inactive NR measurements in LTE and in NR	Huawei, HiSilicon	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913616	UE capabilities for DC and CA enhancements	Huawei, HiSilicon	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913617	Handling of primaryPath when fast MCG link recovery via split SRB1 fails	Huawei, HiSilicon	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913618	Discussion on dormancy-like behaviour	Huawei, HiSilicon	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913619	RAN2 specification impacts of multi-TRP transmission	Huawei, HiSilicon	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913620	MAC CE signalling enhancement for TCI indication of single-PDCCH based multi-TRP transmission	Huawei, HiSilicon	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913621	Beam failure recovery for SCell	Huawei, HiSilicon	not treated	2019-10-03 22:44:10	2019-10-03 23:06:04
R2-1913622	Configured Grant enhancements for TSC traffic	Sequans Commu	noted	2019-10-03 22:53:48	2019-10-03 23:10:57

R2-1913623	BSR operation with CA packet duplication	Sequans Commu	noted	2019-10-03 22:53:49	2019-10-03 23:10:57
R2-1913624	Handling of collisions with a CG	Sequans Commu	noted	2019-10-03 22:53:49	2019-10-03 23:10:57
R2-1913625	Enhanced rescheduling for dropped CG	Sequans Commu	noted	2019-10-03 22:53:49	2019-10-03 23:10:57
R2-1913626	On Inter-RAT assistance information for NB-IoT and LTE(-eMTC)	Sequans Commu	not treated	2019-10-03 22:53:49	2019-10-10 17:23:28
R2-1913627	NB-IoT UE Specific DRX Support	Sequans Commu	not treated	2019-10-03 22:53:49	2019-10-10 17:23:28
R2-1913628	IAB with NSA operation	Sequans Commu	noted	2019-10-03 22:53:49	2019-10-10 17:23:28
R2-1913629	Support for LTE deployment at IAB node sites	Sequans Commu	not treated	2019-10-03 22:53:49	2019-10-03 23:10:57
R2-1913630	F1-U Flow Control and Reordering Issues	Sequans Commu	not treated	2019-10-03 22:53:49	2019-10-03 23:10:57
R2-1913631	Queue Management vs Flow Control for Congestion Handling	Sequans Commu	not treated	2019-10-03 22:53:49	2019-10-03 23:10:57
R2-1913632	Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC	Huawei, HiSilicon	revised	2019-10-03 22:54:31	2019-10-03 23:06:04
R2-1913633	Report of email discussion [107#40][NR/NPN] SIB1 design (Qualcomm)	Qualcomm	not treated	2019-10-03 23:06:22	2019-10-04 03:15:32
R2-1913634	Suitable and acceptable NPN cells	Qualcomm Incorpor	not treated	2019-10-03 23:07:42	2019-10-04 03:19:03
R2-1913635	Support for NPN HRNN broadcast	Qualcomm	not treated	2019-10-03 23:08:30	2019-10-04 03:21:01
R2-1913636	[DRAFT] LS on granularity of periodicity and burst arrival time in TSCAI	Qualcomm	revised	2019-10-03 23:11:11	2019-10-04 03:34:58
R2-1913637	TSCAI Encoding: Granularity of burst arrival time and periodicity	Qualcomm	not treated	2019-10-03 23:12:07	2019-10-04 03:27:09
R2-1913638	MAC CE structure for PDCP duplication enhancement	Qualcomm	not treated	2019-10-03 23:12:57	2019-10-04 03:36:22
R2-1913639	Value of UE-based PDCP duplication	Qualcomm	not treated	2019-10-03 23:14:00	2019-10-04 03:37:20
R2-1913640	PDCP duplication enhancements and RLC AM	Qualcomm	not treated	2019-10-03 23:14:48	2019-10-04 03:33:01
R2-1913641	Views on handling of PDUs and data of deprioritized grants	Qualcomm	noted	2019-10-03 23:15:30	2019-10-04 03:39:26
R2-1913642	LCP restriction enhancements for Industrial IoT	Qualcomm	noted	2019-10-03 23:16:12	2019-10-04 03:40:26
R2-1913643	Reference timing delivery determination by RAN	Qualcomm	noted	2019-10-03 23:16:52	2019-10-04 03:41:58
R2-1913644	Principles for EHC header design	Qualcomm	not treated	2019-10-03 23:17:32	2019-10-04 03:44:13
R2-1913645	Discussion of RAN1 LS on propagation delay compensation and way forward	Qualcomm	not treated	2019-10-03 23:18:14	2019-10-04 03:45:20
R2-1913646	More granularity for PDCP discardTimer	Qualcomm	not treated	2019-10-03 23:19:24	2019-10-04 03:46:19
R2-1913647	Extended MAC CE ID	Qualcomm	not treated	2019-10-03 23:20:27	2019-10-04 03:48:26
R2-1913648	Draft LS on signalling of reference timing delivery determination information	Qualcomm	not treated	2019-10-03 23:21:43	2019-10-04 03:49:38
R2-1913649	Remaining Issues on Persistent LBT Failures in NRU	Charter Commu	not treated	2019-10-03 23:27:56	2019-10-04 05:05:10
R2-1913650	Considerations on T312 enhancements for fast RLF recovery in NR	Potevio	not treated	2019-10-03 23:28:11	2019-10-03 23:39:30

R2-1913651	Paging Monitoring in NR-U	Charter Commu	not treated	2019-10-03 23:29:51	2019-10-04 03:23:07
R2-1913652	On NR-U Operation in DFS Channels	Charter Commu	revised	2019-10-03 23:31:28	2019-10-04 03:23:08
R2-1913653	System Information Transmission Enhancements in NR-U	Charter Commu	not treated	2019-10-03 23:32:37	2019-10-04 03:23:08
R2-1913654	Consideration of preemptive BSR in IAB	Kyocera	not treated	2019-10-03 23:36:09	2019-10-04 03:09:15
R2-1913655	Further discussion on Backhaul RLF handling	Kyocera	not treated	2019-10-03 23:37:58	2019-10-04 03:09:15
R2-1913656	Inter-node interaction for Conditional PScell	CATT	not treated	2019-10-03 23:41:40	2019-10-03 23:44:51
R2-1913657	Draft LS on Conditional PSCell addition_change	CATT	not treated	2019-10-03 23:41:40	2019-10-03 23:44:51
R2-1913658	Logged MDT for NR-DC and EN-DC	Kyocera	not treated	2019-10-03 23:45:00	2019-10-04 03:09:15
R2-1913659	Recovery due to LBT failures	Kyocera	noted	2019-10-03 23:48:57	2019-10-04 03:09:48
R2-1913660	PC5-RRC state considerations	Kyocera	not treated	2019-10-03 23:54:35	2019-10-04 03:09:48
R2-1913661	PC5 L2/L3 protocols for unicast and groupcast	Kyocera	not treated	2019-10-03 23:56:04	2019-10-04 03:09:48
R2-1913662	Some Considerations on intra-UE data-data prioritization	China Telecom	not treated	2019-10-04 00:01:12	2019-10-04 00:02:25
R2-1913663	channelBWs parameter and legacy channel bandwidths	Sprint Corporation	noted	2019-10-04 00:02:10	2019-10-04 00:55:45
R2-1913664	LCP restrictions for configured grant	Intel	not treated	2019-10-04 00:03:50	2019-10-04 05:27:33
R2-1913665	SL RLF handling	Qualcomm Incorpor	not treated	2019-10-04 00:11:22	2019-10-04 04:50:44
R2-1913666	Access restrictions (barring) in IAB	Sharp	not treated	2019-10-04 00:13:43	2019-10-04 00:20:18
R2-1913667	Skipping supportedBandCombinationList of n90	KDDI	revised	2019-10-04 00:14:34	2019-10-04 04:44:25
R2-1913668	Validity of CHO configurations based on security configuration	Sharp	not treated	2019-10-04 00:15:22	2019-10-04 02:51:05
R2-1913669	NE-DC dynamic power sharing capability	Qualcomm	not treated	2019-10-04 00:22:37	2019-10-04 01:43:56
R2-1913670	NE-DC dynamic power sharing capability	Qualcomm Incorporated	not treated	2019-10-04 00:22:40	2019-10-04 01:43:56
R2-1913671	Clarification on essential system information acquisition	Qualcomm	not treated	2019-10-04 00:22:41	2019-10-04 01:43:56
R2-1913672	Security Algorithms for all Radio Bearer in NR-DC	Qualcomm	revised	2019-10-04 00:22:42	2019-10-04 01:43:56
R2-1913673	Correction on the Msg3 based on demand system	Huawei,	agreed	2019-10-04 00:23:23	2019-10-04 03:35:33
R2-1913674	Enhancement on BSR format for the one LCG case	Huawei, HiSilicon	not treated	2019-10-04 00:23:25	2019-10-04 03:35:33
R2-1913675	Discussion on a configuration mismatch between a UE and a target gNB	KDDI Corporat	not treated	2019-10-04 00:42:12	2019-10-04 00:43:27
R2-1913676	Discussion of Guarantee PDCP Duplication	III	not treated	2019-10-04 00:46:48	2019-10-04 04:34:11
R2-1913677	LTE Mobility Robustness Enhancements for DAPS eMBB HO	Qualcomm	not treated	2019-10-04 00:49:34	2019-10-04 02:48:59
R2-1913678	Clarification on informative timer table	Huawei,	not treated	2019-10-04 00:58:02	2019-10-04 05:26:30
R2-1913679	DL data delivery for Msg4 fallback case	LG Electroni	not treated	2019-10-04 00:59:25	2019-10-04 05:52:14
R2-1913680	Draft LS on MT data delivery in MT EDT	LG Electroni	not treated	2019-10-04 00:59:25	2019-10-04 05:52:14
R2-1913681	FFS issues on D-PUR	LG	not treated	2019-10-04 00:59:25	2019-10-04 05:52:14
R2-1913682	Discussion on D-PUR request and TA validity	LG	not treated	2019-10-04 00:59:25	2019-10-04 05:52:14
R2-1913683	Paging response usign D-PUR	LG	not treated	2019-10-04 00:59:25	2019-10-04 05:52:14
R2-1913684	Support for S-PUR	LG	not treated	2019-10-04 00:59:25	2019-10-04 05:52:14
R2-1913685	Clarification for aggregated bandwidth for overheating	Huawei, HiSilicon	revised	2019-10-04 00:59:36	2019-10-04 06:52:53
R2-1913686	Correction on procedural text for	Huawei,	not pursued	2019-10-04 00:59:37	2019-10-04 06:52:53
R2-1913687	Clarification on the feature set report in EUTRAN	Huawei,	agreed	2019-10-04 00:59:38	2019-10-04 06:52:53
R2-1913688	Corrections on PDCCH blind decoding in NR-DC	Huawei, HiSilicon	not treated	2019-10-04 00:59:39	2019-10-04 06:52:53

R2-1913689	Signalling design for overheating reporting in (NG)EN-DC scenario	Huawei, Huawei Device, China Unicom, MediaTe	noted	2019-10-04 00:59:40	2019-10-04 06:52:53
R2-1913690	36.331 Draft CR for addressing overheating issue in EN-DC scenario - Option 1	Huawei, Huawei	not treated	2019-10-04 00:59:40	2019-10-04 06:52:53
R2-1913691	38.331 Draft CR for addressing overheating issue in EN-DC sceanrio - Option 1	Huawei, Huawei	not treated	2019-10-04 00:59:40	2019-10-04 06:52:53
R2-1913692	36.331 Draft CR for addressing overheating issue in EN-DC scenario - Option 2	Huawei, Huawei	not treated	2019-10-04 00:59:40	2019-10-04 06:52:53
R2-1913693	37.340 Draft CR for addressing overheating issue in EN-DC scenario - Option 2	Huawei, Huawei	not treated	2019-10-04 00:59:40	2019-10-04 06:52:53
R2-1913694	38.331 Draft CR for addressing overheating issue in EN-DC scenario - Option 2	Huawei, Huawei	not treated	2019-10-04 00:59:40	2019-10-04 06:52:53
R2-1913695	CR on UE capability for SRS-Tx switch	Huawei, HiSilicon	not treated	2019-10-04 00:59:40	2019-10-04 06:52:53
R2-1913696	Summary on email discussion 107#05 BWCS for inter-ENDC BC with intra-ENDC BC	Huawei, HiSilicon	noted	2019-10-04 00:59:41	2019-10-10 08:22:26
R2-1913697	Clarification on description for mandatory capability without capability signalling	Huawei, HiSilicon	not pursued	2019-10-04 00:59:41	2019-10-04 06:52:53
R2-1913698	Running CR to 36 331 for NR V2X	Huawei,	not treated	2019-10-04 01:01:23	2019-10-12 10:49:38
R2-1913699	TP on NR V2X for TR 37.985 RAN2 parts	Huawei,	revised	2019-10-04 01:01:23	2019-10-12 10:49:38
R2-1913700	Discussion about mode coexistence for NR	Huawei,	not treated	2019-10-04 01:01:23	2019-10-04 01:51:33
R2-1913701	Discussion on HARQ support for NR sidelink	Huawei, HiSilicon	noted	2019-10-04 01:01:23	2019-10-04 01:51:33
R2-1913702	Discussion on Sidelink Configured Grant support	Huawei, HiSilicon	not treated	2019-10-04 01:01:23	2019-10-04 01:51:33
R2-1913703	Further details of UE assistance information procedure for NR SL	Huawei, HiSilicon	not treated	2019-10-04 01:01:23	2019-10-04 01:51:33
R2-1913704	Further discussion on inter-RAT resource allocation	Huawei, HiSilicon	noted	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913705	Identifier assignment to enable Option2 groupcast HARQ	Huawei, HiSilicon	not treated	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913706	Discussion on related aspects of system information	Huawei, HiSilicon	not treated	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913707	Discussion on remaining issues of SR and BSR for SL Mode 1	Huawei, HiSilicon	not treated	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913708	Further details of Uu RRC procedures for sidelink	Huawei,	not treated	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913709	Further discussion on NR SL and NR UL prioritization	Huawei, HiSilicon	not treated	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913710	Relationship between PC5-RRC connection and PC5-S connection	Huawei, HiSilicon	noted	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913711	Remaining issue on sidelink LCP procedure	Huawei, HiSilicon	noted	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913712	Remaining issues on SLRB configuration	Huawei,	not treated	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913713	Support of RLC AM for Sidelink unicast	Huawei, HiSilicon	not treated	2019-10-04 01:01:24	2019-10-04 01:51:33
R2-1913714	Introduction of cross link interfernce management	Huawei, HiSilicon	endorsed	2019-10-04 01:01:24	2019-10-04 01:52:34
R2-1913715	Leftover issues on CLI	Huawei, HiSilicon	not treated	2019-10-04 01:01:24	2019-10-04 01:52:34
R2-1913716	Introduction of wideband PRG size	Huawei,	endorsed	2019-10-04 01:03:29	2019-10-04 01:52:34
R2-1913717	Introduction of wideband PRG size	Huawei,	endorsed	2019-10-04 01:03:29	2019-10-04 01:52:34
R2-1913718	Discussion on UDC reconfiguration for RRC connection reestablishment case	Huawei, HiSilicon	revised	2019-10-04 01:03:29	2019-10-04 01:52:34
R2-1913719	UDC reconfiguration for RRC connection re-establishment case	Huawei, HiSilicon	postponed	2019-10-04 01:03:29	2019-10-04 01:52:34
R2-1913720	UDC reconfiguration for RRC connection re-establishment case	Huawei, HiSilicon	postponed	2019-10-04 01:03:29	2019-10-04 01:52:34

R2-1913721	Discussion on providing CAG ID to AS during resume procedure	Huawei, HiSilicon	not treated	2019-10-04 01:06:29	2019-10-04 01:12:58
R2-1913722	draft Reply LS to CTI on providing CAG ID to AS during resume procedure	Huawei, HiSilicon	not treated	2019-10-04 01:06:29	2019-10-04 01:12:58
R2-1913723	Open issue of uplink MDBV enforcement	Huawei, HiSilicon	not treated	2019-10-04 01:09:14	2019-10-04 01:14:34
R2-1913724	Postponed discussions on potential improvements for delay critical QoS flows	Huawei, HiSilicon	noted	2019-10-04 01:09:14	2019-10-04 01:14:34
R2-1913725	Draft Reply LS on potential improvements for delay critical QoS flows	Huawei, HiSilicon	revised	2019-10-04 01:09:14	2019-10-04 01:14:34
R2-1913726	Draft CR for 36.323 on supporting DAPS handover	Huawei, HiSilicon, Mediatek Inc.	not treated	2019-10-04 01:15:16	2019-10-04 05:24:36
R2-1913727	Draft CR for 38.323 on supporting DAPS handover	Huawei, HiSilicon,	not treated	2019-10-04 01:15:16	2019-10-04 05:24:36
R2-1913728	Draft LS on UL data forwarding and COUNT initialization	Huawei, HiSilicon, Mediatek Inc.	not treated	2019-10-04 01:15:16	2019-10-04 05:24:36
R2-1913729	Corrections on the reconfiguration with sync	Huawei,	withdrawn	2019-10-04 01:21:24	2019-10-04 03:35:33
R2-1913730	Corrections on the PDCP duplication (de)activation	Huawei,	not treated	2019-10-04 01:21:27	2019-10-04 03:35:33
R2-1913731	Corrections on the condition of PDCP for split SRB	Huawei,	not treated	2019-10-04 01:21:29	2019-10-04 03:35:33
R2-1913732	Discussion on SFTD measurement based on	Huawei,	noted	2019-10-04 01:24:22	2019-10-04 02:00:33
R2-1913733	[draft] Reply LS to RAN1 on SFTD measurement	Huawei,	revised	2019-10-04 01:24:22	2019-10-04 02:00:33
R2-1913734	Discussion on adding CSI-RS inter-node message	Huawei, HiSilicon, China	not treated	2019-10-04 01:24:22	2019-10-04 02:00:33
R2-1913735	DRX configuration coordination in (NG)EN-DC	Huawei, HiSilicon	not treated	2019-10-04 01:24:22	2019-10-04 02:00:33
R2-1913736	CR to 36.331 on CGI information	Huawei, HiSilicon	not pursued	2019-10-04 01:24:22	2019-10-04 02:00:33
R2-1913737	CR to 38.331 on CGI information	Huawei, HiSilicon	agreed	2019-10-04 01:24:23	2019-10-04 02:00:33
R2-1913738	L2 impacts on supporting IIoT traffic	NTT	not treated	2019-10-04 01:25:34	2019-10-04 05:33:57
R2-1913739	[DRAFT] Reply LS to SA3 on FBS detection	Huawei,	revised	2019-10-04 01:28:14	2019-10-04 05:53:11
R2-1913740	Discussion on potential RAN2 impact to support false base station detection	Huawei, HiSilicon	noted	2019-10-04 01:28:14	2019-10-04 05:53:11
R2-1913741	HO and redirection from NR to LTE due to EPS fallback	Huawei, HiSilicon	not treated	2019-10-04 01:28:14	2019-10-04 05:53:11
R2-1913742	NR group specific cell configuration	Huawei, HiSilicon	not treated	2019-10-04 01:28:14	2019-10-04 05:53:11
R2-1913743	RAN2 impact to support cross-carrier scheduling with different numerologies	Huawei, HiSilicon	not treated	2019-10-04 01:28:14	2019-10-04 05:53:11
R2-1913744	Clarification on RAN2 impact to support DL HARQ timing for dual UL EN-DC	Huawei, HiSilicon	not treated	2019-10-04 01:28:14	2019-10-04 05:53:11
R2-1913745	Other recovery mechanisms for MCG fast recovery	Huawei, HiSilicon	not treated	2019-10-04 01:28:14	2019-10-04 05:53:11
R2-1913746	Recovery for deprioritized data transmission	NTT	noted	2019-10-04 01:31:34	2019-10-04 05:33:57
R2-1913747	Remaining issues on CLI	LG Electronics Inc	noted	2019-10-04 01:34:20	2019-10-04 05:54:33
R2-1913748	draft CR on CLI for TS38 331_v3_Alt1	LG Electronics Inc	not treated	2019-10-04 01:34:20	2019-10-04 05:54:33
R2-1913749	draft CR on CLI for TS38 331_v3_Alt2	LG Electronics Inc	revised	2019-10-04 01:34:21	2019-10-04 05:54:33
R2-1913750	Cell (re)selection after consecutive UL LBT failures	LG	not treated	2019-10-04 01:34:22	2019-10-04 05:54:33
R2-1913751	Remaining issues on camping on non-best cell	LG	not treated	2019-10-04 01:34:22	2019-10-04 05:54:33
R2-1913752	RLMRLF in NR-U	LG	not treated	2019-10-04 01:34:22	2019-10-04 05:54:33
R2-1913753	RSSI and channel occupancy measurements for serving frequency	LG Electroni	not treated	2019-10-04 01:34:22	2019-10-04 05:54:33

R2-1913754	SI change indicaiton in RRC_CONNECTED	LG	not treated	2019-10-04 01:34:22	2019-10-04 05:54:33
R2-1913755	Discussion on per beam number of active UEs	NTT	not treated	2019-10-04 01:39:58	2019-10-04 06:48:31
R2-1913756	MAC PDU format of Success RAR	ETRI	not treated	2019-10-04 01:46:04	2019-10-04 03:22:48
R2-1913757	RRC release after EDT for User Plane CIoT EPS optimization	Ericsson	not treated	2019-10-04 01:57:28	2019-10-04 02:21:27
R2-1913758	RRC release after EDT for User Plane CIoT EPS optimization	Ericsson	reserved	2019-10-04 02:04:04	
R2-1913759	Redundant retransmission in PDCP duplication	LG Electroni	not treated	2019-10-04 02:09:48	2019-10-04 02:14:00
R2-1913760	Handling of RLC stuck problem with PDCP	LG	withdrawn	2019-10-04 02:09:48	2019-10-04 02:14:00
R2-1913761	MAC CE format for PDCP duplication	LG	not treated	2019-10-04 02:09:48	2019-10-04 02:14:00
R2-1913762	ON Duration adaptation	LG Electroni	withdrawn	2019-10-04 02:09:48	2019-10-04 02:14:00
R2-1913763	Reduced PDCCH monitoring in CA	LG Electroni	not treated	2019-10-04 02:09:48	2019-10-04 02:14:00
R2-1913764	On the consideration of routing for reporting pre-	ASUSTe	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913765	Discussion on traditional uplink and IAB uplink traffic for BSR triggering	ASUSTe K	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913766	SR configuration for pre-emptive BSR	ASUSTe	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913767	Discussion on SCCH configuration	ASUSTe K	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913768	Discussion on handling multiple SL communication	ASUSTe K	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913769	Discussion on resource allocation for sidelink HARQ ACK/NACK report	ASUSTe K	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913770	Discussion on sidelink RLM indication	ASUSTe	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913771	Discussion on requesting and releasing SLRB	ASUSTe	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913772	Discussion on association between sidelink data and resource allocation modes	ASUSTe K	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913773	DRX timer operation in multi-TB scheduling	ASUSTe K	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913774	Buffer status indicated by BSR in multi-TB scheduling	ASUSTe K	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913775	Remaining issues of D-PUR TA timer	ASUSTe	not treated	2019-10-04 02:10:19	2019-10-04 02:18:23
R2-1913776	Group WUS	Ericsson	not treated	2019-10-04 02:10:56	2019-10-04 02:21:27
R2-1913777	Discussion on UE location information in SCG failure report	NTT DOCOM	not treated	2019-10-04 02:13:05	2019-10-04 06:48:38
R2-1913778	Discussion on groupcast HARQ in NR SL	LG Electroni	not treated	2019-10-04 02:20:11	2019-10-04 04:56:49
R2-1913779	Discussion on HARQ enable and disable	LG Electroni	not treated	2019-10-04 02:20:11	2019-10-04 04:56:49
R2-1913780	Discussion on measurement and report in NR SL	LG Electroni	not treated	2019-10-04 02:20:11	2019-10-04 04:56:49
R2-1913781	Discussion on remaining issues of mode 1 operation	LG Electroni	not treated	2019-10-04 02:20:11	2019-10-04 04:56:49
R2-1913782	Discussion on SFTD measurement between NR PSCell and NR neighbour cells in EN-DC	Nokia, Nokia	not treated	2019-10-04 02:23:56	2019-10-04 05:08:31
R2-1913783	Correction on parameter description of beamManagementSSB-CSI-RS in 38.306	Huawei, HiSilicon	agreed	2019-10-04 02:27:31	2019-10-04 02:36:36
R2-1913784	Random access without UE location information	Huawei,	not treated	2019-10-04 02:49:15	2019-10-04 07:01:21
R2-1913785	Random access with UE location information	Huawei,	not treated	2019-10-04 02:49:19	2019-10-04 07:01:21
R2-1913786	RACH resource configuration and utilization in	Huawei,	not treated	2019-10-04 02:49:19	2019-10-04 07:01:21
R2-1913787	Further discussion on the impact of PDCCH-WUS	Huawei, HiSilicon	not treated	2019-10-04 02:49:19	2019-10-04 07:01:21
R2-1913788	Discussion on efficient RRC state transition	Huawei, HiSilicon	not treated	2019-10-04 02:49:19	2019-10-04 07:01:21
R2-1913789	Further discussion on the MIMO layer adaptation	Huawei,	not treated	2019-10-04 02:49:19	2019-10-04 07:01:21
R2-1913790	UE assistance information in MR-DC	Huawei, Huawei Device, CMCC,	noted	2019-10-04 02:49:19	2019-10-04 07:01:21
R2-1913791	Service continuity between terrestrial network (TN) and non-terrestrial network (NTN)	HUGHES	not treated	2019-10-04 03:04:08	2019-10-04 03:31:16

R2-1913792	Problems in Evaluation of CHO Execution Condition	ETRI	not treated	2019-10-04 03:30:37	2019-10-04 06:35:28
R2-1913793	Combination of CHO and RUDI Handover	ETRI	not treated	2019-10-04 03:30:47	2019-10-04 06:35:28
R2-1913794	Faster Handover Failure Recovery	ETRI	not treated	2019-10-04 03:30:47	2019-10-04 06:35:28
R2-1913795	PDCP/RLC Re-establishment in DAPS Handover	ETRI	not treated	2019-10-04 03:30:47	2019-10-04 06:35:28
R2-1913796	Data Forwarding Options and Interruption Time	ETRI	not treated	2019-10-04 03:30:47	2019-10-04 06:35:28
R2-1913797	Bye Message for RUDI Handover	ETRI	not treated	2019-10-04 03:30:47	2019-10-04 06:35:28
R2-1913798	Source Cell Release in DAPS Handover	ETRI	not treated	2019-10-04 03:30:47	2019-10-04 06:35:28
R2-1913799	Control plane management during/after DAPS HO	LG	not treated	2019-10-04 03:33:34	2019-10-04 04:02:02
R2-1913800	On the need of earlier packet forwarding	LG	not treated	2019-10-04 03:33:34	2019-10-04 04:02:02
R2-1913801	Access copntrol in IAB networks	LG	not treated	2019-10-04 03:33:34	2019-10-04 04:02:02
R2-1913802	F1AP over LTE	LG	noted	2019-10-04 03:33:34	2019-10-04 04:02:02
R2-1913803	Resolving open issues on BH RLF	LG	not treated	2019-10-04 03:33:34	2019-10-04 04:02:02
R2-1913804	Resue of CSG features for NPN cells	LG	not treated	2019-10-04 03:33:34	2019-10-04 04:02:02
R2-1913805	Handling of RLC stuck problem with PDCP duplication	LG Electroni	not treated	2019-10-04 03:34:00	2019-10-04 03:35:35
R2-1913806	ON Duration adaptation	LG Electroni	not treated	2019-10-04 03:34:00	2019-10-04 03:35:35
R2-1913807	Use of range parameter	MediaTe	not treated	2019-10-04 03:37:29	2019-10-04 03:43:21
R2-1913808	Remaining issues in SDAP layer	MediaTe k Inc.	not treated	2019-10-04 03:37:29	2019-10-04 03:43:21
R2-1913809	Inter-RAT BSR	MediaTe k Inc.	not treated	2019-10-04 03:37:29	2019-10-04 03:43:21
R2-1913810	Discussion on local decision make for routing	Samsun	not treated	2019-10-04 03:38:40	2019-10-04 04:07:06
R2-1913811	UL mapping configuration	Samsun	not treated	2019-10-04 03:38:40	2019-10-04 04:07:06
R2-1913812	Further discussions on bearer mapping configuration for CP and UP	Samsun g	not treated	2019-10-04 03:38:40	2019-10-04 04:07:06
R2-1913813	Upstream BH link RLF notification	Samsun	not treated	2019-10-04 03:38:40	2019-10-04 04:07:06
R2-1913814	Clarification on the using of RRCSetup	Huawei,	not treated	2019-10-04 03:43:31	2019-10-04 03:50:28
R2-1913815	LCID space extension and MAC format	LG	not treated	2019-10-04 03:44:01	2019-10-04 04:57:08
R2-1913816	Consideration on LCG space extension	LG	not treated	2019-10-04 03:44:01	2019-10-04 04:57:08
R2-1913817	LCG based UL grant	LG	not treated	2019-10-04 03:44:01	2019-10-04 04:57:08
R2-1913818	BSR MAC CE format for pre-BSR	LG Electroni	not treated	2019-10-04 03:44:01	2019-10-04 04:57:08
R2-1913819	Further details for DL flow control	LG Electroni	postponed	2019-10-04 03:44:02	2019-10-04 04:57:08
R2-1913820	Consideration on local route selection in IAB node	LG	not treated	2019-10-04 03:44:02	2019-10-04 04:57:08
R2-1913821	BAP layer configuration for data forwarding	LG	not treated	2019-10-04 03:44:02	2019-10-04 04:57:08
R2-1913822	Way forward for CP bearer mapping	LG	not treated	2019-10-04 03:44:02	2019-10-04 04:57:08
R2-1913823	Retransmission of an RLC SDU with a poll after discard procedure	LG Electroni	not treated	2019-10-04 03:44:02	2019-10-04 04:57:08
R2-1913824	Running CR to 36.321 on 5G V2X with NR sidelink	LG	not treated	2019-10-04 03:54:34	2019-10-11 10:28:00
R2-1913825	Running CR to 38.321 on 5G V2X with NR sidelink	LG	not treated	2019-10-04 03:54:34	2019-10-11 10:28:00
R2-1913826	Layer-1 and Layer 2 Identifiers for NR Sidelink	LG Electroni	noted	2019-10-04 03:54:34	2019-10-04 04:15:17
R2-1913827	Proposed LS on Layer-1 and Layer 2 Identifiers for NR Sidelink	LG Electroni	revised	2019-10-04 03:54:34	2019-10-04 04:15:17
R2-1913828	Delivery of PC5-S Signaling and PC5-RRC messages	LG Electroni	noted	2019-10-04 03:54:34	2019-10-04 04:15:17
R2-1913829	Proposed LS on PC5-S Signaling for NR Sidelink	LG	not treated	2019-10-04 03:54:34	2019-10-04 04:15:17
R2-1913830	PC5-RRC connection and procedures with PC5-S and Uu RRC	LG Electroni	not treated	2019-10-04 03:54:34	2019-10-04 04:15:17
R2-1913831	Report of email discussion [107#57][NB-IoT eMTC R16] WUS configuration	ZTE Corporation, Sanechips	not treated	2019-10-04 03:57:05	2019-10-06 09:00:33
R2-1913832	RRC release for User Plane EDT	III	not treated	2019-10-04 04:03:31	2019-10-04 04:08:23
R2-1913833	Procedures and MAC CE design for BFR for SCells	Qualcom m	not treated	2019-10-04 04:06:54	2019-10-04 05:50:23
R2-1913834	Clarification on measurement gap for LTE inter-RAT measurement in NR SA	MediaTe k Inc., Nokia	revised	2019-10-04 04:12:40	2019-10-04 06:34:05

R2-1913835	Discussion on early measurement configuration upon state transition	MediaTek Inc.	not treated	2019-10-04 04:17:41	2019-10-04 06:34:05
R2-1913836	Discussion on performing ROHC	LG	not treated	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913837	Need for Primary path	LG Electroni	not treated	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913838	Discussion on LCH-to-Cell restriction for PDCP	LG	noted	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913839	PDCP SN gap issue in fast MCG link recovery	LG Electroni	not treated	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913840	Handling of RLF for eMOB	LG	not treated	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913841	Discussion on PDCP impacts for eMOB/feMOB	LG	not treated	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913842	When to apply the target network configurations	LG	not treated	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913843	Dicussion on RUDI HO for UM DRB	LG	not treated	2019-10-04 04:21:36	2019-10-04 04:34:17
R2-1913844	Scheduling enhancement in NTN	LG	not treated	2019-10-04 04:21:37	2019-10-04 04:34:17
R2-1913845	Integrity verification and PDCP duplication	LG Electroni	not treated	2019-10-04 04:21:37	2019-10-04 04:34:17
R2-1913846	Extension of the LCID	LG Electroni	not treated	2019-10-04 04:21:37	2019-10-04 04:34:17
R2-1913847	Report of [107#81][NR TEI16] Need-for-Gaps signalling	MediaTek Inc.	not treated	2019-10-04 04:26:33	2019-10-04 06:34:05
R2-1913848	Discussion on de-prioritized MAC PDU on CG resource	LG Electroni	noted	2019-10-04 04:26:46	2019-10-04 05:49:39
R2-1913849	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet,	revised	2019-10-04 04:27:26	2019-10-04 05:06:18
R2-1913850	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet,	revised	2019-10-04 04:30:56	2019-10-04 05:06:18
R2-1913851	Correction to mobility from NR	Google	not pursued	2019-10-04 04:33:48	2019-10-04 06:06:36
R2-1913852	Discussion on multiple active CGs for NR-U	LG	noted	2019-10-04 04:34:15	2019-10-04 05:49:39
R2-1913853	CR on NeedForGap capability for each supported NR band before EN-DC configuration	Nokia, Nokia	not treated	2019-10-04 04:34:29	2019-10-04 05:08:31
R2-1913854	Discussion on contention resolution timer in NR-U	LG	not treated	2019-10-04 04:38:37	2019-10-04 05:49:39
R2-1913855	Discussion on L2 measurement in EN-DC	NTT	not treated	2019-10-04 04:41:12	2019-10-04 06:48:50
R2-1913856	Considerations on simultaneous configuration of	ITL	not treated	2019-10-04 04:42:52	2019-10-04 05:07:50
R2-1913857	Correction to mobility from E-UTRA	Google	not treated	2019-10-04 04:48:11	2019-10-04 06:06:36
R2-1913858	Discussion on MAC PDU overwritten issue	LG	not treated	2019-10-04 04:49:21	2019-10-04 05:49:39
R2-1913859	Discussion and Decision	LG	not treated	2019-10-04 04:53:45	2019-10-04 05:09:07
R2-1913860	Consideration of CHO Configuration Update	LG Electroni	not treated	2019-10-04 04:55:09	2019-10-04 06:07:44
R2-1913861	Draft LS on CHO Configuration Update	LG Electroni	not treated	2019-10-04 04:55:09	2019-10-04 06:07:44
R2-1913862	Consideration on Invalid Cell Handling in CHO	LG Electroni	not treated	2019-10-04 04:55:09	2019-10-04 06:07:44
R2-1913863	ReportConifg ID for CHO Condition	LG Electroni	not treated	2019-10-04 04:55:09	2019-10-04 06:07:44
R2-1913864	Handling Excess of UE Capability in DAPS HO	LG	not treated	2019-10-04 04:55:09	2019-10-04 06:07:44
R2-1913865	RLM Handling of Enhanced MBB HO	LG	not treated	2019-10-04 04:55:09	2019-10-04 06:07:44
R2-1913866	Signalling Delay in NTN	LG	not treated	2019-10-04 04:55:09	2019-10-04 06:07:44
R2-1913867	Consideration on Default SLRB	ITL	not treated	2019-10-04 04:55:29	2019-10-04 05:13:43
R2-1913868	Sidelink HARQ retransmission in mode 1	ITL	not treated	2019-10-04 04:57:17	2019-10-04 05:13:43
R2-1913869	Discussion on DRX operation associated with disabling HARQ feedback	LG Electroni	not treated	2019-10-04 04:57:28	2019-10-04 05:49:39
R2-1913870	RNTI design for msgB	LG	not treated	2019-10-04 04:57:40	2019-10-04 05:09:07
R2-1913871	Discussion on the flow control	ITL	not treated	2019-10-04 04:58:30	2019-10-04 05:13:43
R2-1913872	Remaining issues on 2-step random access	LG	not treated	2019-10-04 05:00:08	2019-10-04 05:09:07
R2-1913873	Remaining issue on NR SL QoS and SLRB	ITL	not treated	2019-10-04 05:01:07	2019-10-04 05:13:43
R2-1913874	MAC PDU formats for msgB	LG	not treated	2019-10-04 05:01:35	2019-10-04 05:49:39
R2-1913875	Need for RAPID MAC CE in payload of msgA	LG	not treated	2019-10-04 05:02:19	2019-10-04 05:09:07
R2-1913876	Common delay for initial access	ETRI	not treated	2019-10-04 05:03:26	2019-10-04 06:51:55
R2-1913877	Logical channel based RA type selection	LG	not treated	2019-10-04 05:04:16	2019-10-04 05:09:07
R2-1913878	MAC impacts of multiple CCAs in wide band	LG	not treated	2019-10-04 05:04:56	2019-10-04 05:49:39
R2-1913879	Consideration on 2-step CFRA	LG	not treated	2019-10-04 05:06:24	2019-10-04 05:09:07
R2-1913880	Draft LS on SCell BFR Operation	Apple	not treated	2019-10-04 05:06:38	2019-10-04 05:08:56

R2-1913881	Handling of new flow when the number of stored contexts are already equal to the MAX_CID	SHARP Corporat	not treated	2019-10-04 05:06:39	2019-10-04 06:52:04
R2-1913882	On RLC UM for RUDI HO	SHARP	not treated	2019-10-04 05:06:39	2019-10-04 06:52:04
R2-1913883	On voice fallback enhancement	SHARP Corporat	noted	2019-10-04 05:06:39	2019-10-04 06:52:56
R2-1913884	Remaining issue on PC5 RLM/RLF	LG	not treated	2019-10-04 05:12:39	2019-10-04 06:04:56
R2-1913885	Discussion on PC5 RRC Connection	LG	not treated	2019-10-04 05:12:39	2019-10-04 06:04:56
R2-1913886	Discussion on assistance information for resource allocation in NR SL	LG Electroni	not treated	2019-10-04 05:12:39	2019-10-04 06:04:56
R2-1913887	Running CR to 38.300 on 5G V2X with NR sidelink	LG Electronics Inc.	revised	2019-10-04 05:12:39	2019-10-04 06:04:56
R2-1913888	L4S support in 5G	Ericsson, Vodafone	noted	2019-10-04 05:12:42	2019-10-04 05:33:59
R2-1913889	New BSR trigger for EN-DC	Ericsson	not treated	2019-10-04 05:16:16	2019-10-04 05:33:59
R2-1913890	Clarification to CSI reporting in C-DRX	Qualcom	withdrawn	2019-10-04 05:18:17	
R2-1913891	Correction to PHR in dual connectivity	Qualcom m Inc, Nokia,	withdrawn	2019-10-04 05:18:19	
R2-1913892	Configuration aspects of wakeup signaling	Qualcom m Inc	withdrawn	2019-10-04 05:18:21	
R2-1913893	Cross cell group wakeup message in MR-DC	Qualcom m Inc,	withdrawn	2019-10-04 05:18:21	
R2-1913894	UE indication on expected data	Qualcom	withdrawn	2019-10-04 05:18:21	
R2-1913895	Backoff indication in multi-beam operation	Qualcom m Inc	withdrawn	2019-10-04 05:18:21	
R2-1913896	Enhancements to PHR in multi-beam operation	Qualcom m Inc	withdrawn	2019-10-04 05:18:21	
R2-1913897	Clarification to CSI reporting in C-DRX	Qualcom	revised	2019-10-04 05:23:33	2019-10-04 06:40:03
R2-1913898	Correction to PHR in dual connectivity	Qualcom m Inc, Nokia,	agreed	2019-10-04 05:23:35	2019-10-04 05:40:46
R2-1913899	Configuration aspects of wakeup signaling	Qualcom m Inc	revised	2019-10-04 05:23:36	2019-10-04 05:40:46
R2-1913900	Cross cell group wakeup message in MR-DC	Qualcom m Inc,	not treated	2019-10-04 05:23:36	2019-10-04 05:40:46
R2-1913901	UE indication on expected data	Qualcom	not treated	2019-10-04 05:23:36	2019-10-04 05:40:46
R2-1913902	Backoff indication in multi-beam operation	Qualcom m Inc	not treated	2019-10-04 05:23:36	2019-10-04 05:40:46
R2-1913903	Enhancements to PHR in multi-beam operation	Qualcom m Inc	not treated	2019-10-04 05:23:36	2019-10-04 05:40:46
R2-1913904	Discussion on Fast failure recovery alternatives to WA	Samsun g	not treated	2019-10-04 05:26:33	2019-10-04 06:36:53
R2-1913905	Discussion on Remaining issues related to T312	Samsun g	noted	2019-10-04 05:27:27	2019-10-04 06:36:53
R2-1913906	DISC_Resume_procedure_CAG_ID	Samsun g	revised	2019-10-04 05:28:24	2019-10-04 06:36:53
R2-1913907	L2 Throughput measurement	Samsun g	not treated	2019-10-04 05:29:09	2019-10-04 06:36:53
R2-1913908	Discussion on Performing CHO instaed of RRE in CHO	Samsun g, Nokia, Nokia Shanghai	not treated	2019-10-04 05:30:07	2019-10-04 06:36:53
R2-1913909	CHO UE behaviour upon transitioning to RRC_INACTIVE/RRC_IDLE	Samsun g	not treated	2019-10-04 05:30:52	2019-10-04 06:05:37
R2-1913910	Specification Impacts to specify Single Stack solution for NR	Samsun g	not treated	2019-10-04 05:31:32	2019-10-04 06:05:37
R2-1913911	Single stack eMOB solution for 1Rx NR Ues	Samsun g	noted	2019-10-04 05:32:13	2019-10-04 06:05:37
R2-1913912	Correction on common search space	Google	not pursued	2019-10-04 05:33:05	2019-10-04 07:00:10

R2-1913913	Further considerations on handling UL LBT failures	ETRI	not treated	2019-10-04 05:37:09	2019-10-04 05:42:26
R2-1913914	Clarification on criteria selection for 2-step RACH and 4-step RACH	Qualcomm	noted	2019-10-04 05:39:52	2019-10-04 05:50:23
R2-1913915	Further consideration on SCG resumption	LG Electroni	not treated	2019-10-04 05:51:57	2019-10-04 06:39:05
R2-1913916	Study on application of CHO mechanism to Conditional PSCell addition change	NTT DOCOM	not treated	2019-10-04 05:56:19	2019-10-04 06:28:43
R2-1913917	Considerations on satellite location sharing	ETRI	not treated	2019-10-04 05:57:15	2019-10-04 06:52:16
R2-1913918	Conditional resumption with validity check	LG Electroni	not treated	2019-10-04 06:02:07	2019-10-04 06:39:05
R2-1913919	Further consideration on capability reporting	LG	not treated	2019-10-04 06:04:45	2019-10-04 06:39:05
R2-1913920	Hop-by-Hop Flow control for IAB	Futurewei	not treated	2019-10-04 06:06:18	2019-10-04 06:09:12
R2-1913921	Discussion on UE behavior for stored SCG/SCell configuration	MediaTek Inc.	not treated	2019-10-04 06:10:37	2019-10-04 06:34:05
R2-1913922	Discussion on supporting SN terminated Split SRB for IAB CP in NSA deployments	Futurewei	not treated	2019-10-04 06:14:38	2019-10-18 11:48:05
R2-1913923	Discussion on fixed vs. steerable beams in NTN LEO	Nokia, Nokia	noted	2019-10-04 06:22:30	2019-10-04 07:13:00
R2-1913924	Pre-trigger based mobility for NTN LEO with fixed beams	Nokia, Nokia	not treated	2019-10-04 06:27:28	2019-10-04 06:55:06
R2-1913925	To agree on the remaining NTN-TN service continuity aspects	Nokia, Nokia	not treated	2019-10-04 06:30:22	2019-10-04 06:55:06
R2-1913926	UE positioning requirements in NTN	Nokia, Nokia	not treated	2019-10-04 06:33:33	2019-10-04 06:55:06
R2-1913927	Consideration on LEO mobility in NTN	CENC	not treated	2019-10-04 06:34:36	2019-10-04 07:19:23
R2-1913928	NR Paging Frame Calculation when	MediaTe	not treated	2019-10-04 06:34:50	2019-10-04 06:58:36
R2-1913929	Source RLM handling for RUDI HO with DAPS	SHARP	not treated	2019-10-04 06:35:36	2019-10-04 06:50:32
R2-1913930	Considerations on the use of satellite Id in NTN	Nokia, Nokia	noted	2019-10-04 06:36:25	2019-10-04 06:55:06
R2-1913931	Report of email discussion [107#58][R16 NB-IoT/eMTC] RRC messages for D-PUR	Huawei	noted	2019-10-04 07:31:28	2019-10-18 11:48:05
R2-1913932	Clarification on PUR release upon missing 'm' consecutive occasions	Gemalto N.V., Qualcom	not treated	2019-10-04 07:36:40	2019-10-04 08:43:31
R2-1913933	Transmission in preconfigured resources	Gemalto N.V.	not treated	2019-10-04 07:39:15	2019-10-04 08:43:31
R2-1913934	Periodicity and burst arrival encoding in TSCAI	Nokia, Nokia	noted	2019-10-04 15:15:05	2019-10-07 08:42:43
R2-1913935	Security Algorithms for all Radio Bearer in SA	Qualcomm	revised	2019-10-04 19:29:28	2019-10-13 13:14:27
R2-1913936	Clarification to CSI reporting in C-DRX	Qualcom	revised	2019-10-04 19:33:46	2019-10-04 19:46:37
R2-1913937	CR of TS 36.305 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc.,	endorsed	2019-10-05 09:15:44	2019-10-08 07:46:22
R2-1913938	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc.,	revised	2019-10-05 09:18:06	2019-10-08 07:46:22
R2-1913939	CR of TS 36.331 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc.,	endorsed	2019-10-05 09:20:23	2019-10-08 07:46:22
R2-1913940	Further considerations on RRM relaxation about reporting and coexistence with early	LG Electroni	not treated	2019-10-05 13:52:22	2019-10-07 02:24:33
R2-1913941	Left issues on MAC for NR-V2X	OPPO	not treated	2019-10-06 08:47:27	2019-10-07 11:30:09
R2-1913942	Introduction of dormancy behavior in NR	OPPO	not treated	2019-10-06 13:04:55	2019-10-06 13:22:13
R2-1913943	Simultaneous use of mode 1 and mode 2	KT Corp.	not treated	2019-10-07 08:00:26	2019-10-07 08:15:36

R2-1913944	CR to 38.331 on configuration of rach-ConfigCommon in initial UL BWP for RRC	Qualcomm	revised	2019-10-07 08:03:35	2019-10-08 00:45:04
R2-1913945	Running CR on on-demand SI procedure in RRC_CONNECTED	Ericsson	not treated	2019-10-07 15:02:22	2019-10-10 10:07:24
R2-1913946	Draft Reply LS on Sending CAG ID in NAS layer	Qualcomm	not treated	2019-10-07 17:08:31	2019-10-07 18:04:59
R2-1913947	Configuration aspects of wakeup signaling	Qualcomm Inc	not treated	2019-10-07 18:30:57	2019-10-07 21:22:43
R2-1913948	Report of 107#73 NR V2X SDAP(vivo)	vivo	not treated	2019-10-08 07:43:44	2019-10-11 10:28:00
R2-1913949	Some open issues for TS 37.320 to support NR MDT	CMCC	not treated	2019-10-08 08:46:55	2019-10-08 09:51:30
R2-1913950	Running TS 37.320 CR	CMCC, Nokia	endorsed	2019-10-08 08:49:29	2019-10-08 10:09:11
R2-1913951	Impact of non-Numeric K1 Value to NR-U DRX	Qualcomm	not treated	2019-10-08 22:05:58	2019-10-18 11:48:05
R2-1913952	Email discussion summary of [107#55][IIOT] CG/SPS for TSC	OPPO	noted	2019-10-09 05:57:33	2019-10-10 09:15:48
R2-1913953	Report of email discussion [107#64][NTN] Cell selection&reselection	LG Electroni	revised	2019-10-09 06:17:56	2019-10-10 07:44:08
R2-1913954	Draft LS on F1 over LTE	KDDI Corporat	revised	2019-10-09 07:20:05	2019-10-18 11:48:05
R2-1913955	[107#80][NR IIOT] Summary on Deprioritized	CATT	noted	2019-10-09 07:35:58	2019-10-09 10:33:32
R2-1913956	Correction on PRACH re-transmission for SRS carrier switching	Huawei, HiSilicon, MediaTe	not treated	2019-10-09 07:42:42	2019-10-12 10:49:38
R2-1913957	CR to 38.331 on configuration of rach-ConfigCommon in initial UL BWP for RRC	Qualcomm	postponed	2019-10-09 08:42:54	2019-10-09 10:00:43
R2-1913958	Correction to AS security key update	Ericsson	revised	2019-10-09 14:10:04	2019-10-10 10:07:24
R2-1913959	Transmission of CAG ID during Resume	Samsun	not treated	2019-10-10 07:54:54	2019-10-11 12:23:23
R2-1913960	CR to 36.331 on support of F1AP over LTE for IAB	AT&T,	not treated	2019-10-10 08:14:34	2019-10-10 21:22:37
R2-1913961	CR to 38.331 on support of F1AP over LTE for IAB	AT&T,	not treated	2019-10-10 08:17:26	2019-10-10 21:22:37
R2-1913962	Propagation delay compensation for accurate reference timing	Huawei, HiSilicon, China	not treated	2019-10-10 08:29:26	2019-10-12 10:49:38
R2-1913963	Remaining issues of reference time delivery	Huawei, HiSilicon, China	noted	2019-10-10 08:31:13	2019-10-12 10:49:38
R2-1913964	Importing consequences if not approved from RAN1 and RAN4 excel files	Nokia, Nokia Shanghai	not treated	2019-10-10 08:41:46	2019-10-10 09:50:26
R2-1913965	On FR2 CA fall-backs	Nokia, Nokia	not treated	2019-10-10 08:43:06	2019-10-10 09:50:26
R2-1913966	Discussion on priority misalignment issue	OPPO, Apple	noted	2019-10-10 11:30:07	2019-10-11 00:48:50
R2-1913967	Extended PO and early termination for page	Ericsson	not treated	2019-10-10 15:57:09	2019-10-11 13:21:28
R2-1913968	Cell (re)selection for NR-U	Ericsson	noted	2019-10-10 15:58:45	2019-10-11 13:21:28
R2-1913969	[107#61][NR/NTN] Rapporteur Running TP	THALES	agreed	2019-10-11 09:36:46	2019-10-11 10:28:02
R2-1913970	Reconfiguration with sync for NE-DC	Google	not pursued	2019-10-11 09:54:06	2019-10-11 15:04:40
R2-1913971	Handover in (NG)EN-DC	Google	not treated	2019-10-11 09:58:05	2019-10-11 15:04:40
R2-1913972	Update LS on Release-with-Redirect in 2-step resume procedure (C1-196902; contact: OPPO)	CT1	noted	2019-10-13 15:27:34	2019-10-13 15:39:45
R2-1913973	LS Reply on maximum value of MDBV (C3-194330; contact: Nokia)	CT3	not treated	2019-10-13 15:38:36	2019-10-13 15:39:45
R2-1913974	Handling of fallbacks for combined contiguous and non-contiguous CA in FR2	Apple	not treated	2019-10-22 20:15:03	2019-10-22 20:18:06

R2-1913975	Further consideration on HARQ configuration in NTN	CMCC, Huawei,	revised	2019-10-22 20:15:03	2019-10-22 20:18:06
R2-1913976	Clarification of NR-DC synchronization	ZTE	agreed	2019-10-22 20:15:03	2019-10-22 20:18:06
R2-1913977	[DRAFT] [Reply LS to RAN3]	Huawei	withdrawn	2019-10-22 20:15:06	
R2-1913978	Clarification on measurement gap for LTE inter-RAT measurement in NR SA	MediaTek Inc.,	agreed	2019-10-22 20:15:06	2019-10-22 20:18:06
R2-1913979	SMTC setting in MR-DC PSCell change	Nokia, Nokia	agreed	2019-10-22 20:15:07	2019-10-22 20:18:06
R2-1913980	Correction on sending Failure Information via SRB3	Ericsson, ZTE Corporat	agreed	2019-10-22 20:15:08	2019-10-22 20:18:06
R2-1913981	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia	agreed	2019-10-22 20:15:09	2019-10-22 20:18:06
R2-1913982	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nokia	agreed	2019-10-22 20:15:10	2019-10-22 20:18:06
R2-1913983	Missing QCI to CAPC mapping	Nokia, Nokia	agreed	2019-10-22 20:15:11	2019-10-22 20:18:06
R2-1913984	Correction to SIB5 acquisition for idle mode measurements	Ericsson	agreed	2019-10-22 20:15:13	2019-10-22 20:18:06
R2-1913985	Correction on inter-frequency neighbour cell measurements	Ericsson	agreed	2019-10-22 20:15:14	2019-10-22 20:18:06
R2-1913986	Correction to the handling of stored AS context upon CN type change	Huawei, HiSilicon	postponed	2019-10-22 20:15:15	2019-10-22 20:18:06
R2-1913987	Result of offline discussion 101 on RSSI and channel occupancy measurement in LAA	Qualcomm	withdrawn	2019-10-22 20:15:16	
R2-1913988	Discussion on UDC reconfiguration for RRC connection reestablishment case	Huawei, HiSilicon	noted	2019-10-22 20:15:16	2019-10-22 20:18:06
R2-1913989	Correction on H1 and H2 events	Samsung	agreed	2019-10-22 20:15:17	2019-10-22 20:18:06
R2-1913990	Clarification of e-mail discussion for QoE	Ericsson	postponed	2019-10-22 20:15:18	
R2-1913991	[Draft] LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO	Qualcomm	revised	2019-10-22 20:15:18	2019-10-22 20:18:06
R2-1913992	[DRAFT] LS on PDCP agreements	Huawei, HiSilicon,	revised	2019-10-22 20:15:18	2019-10-22 20:18:06
R2-1913993	[Draft] LS for DAPS Handover UE capabilities	Intel Corporation	revised	2019-10-22 20:15:18	2019-10-22 20:18:06
R2-1913994	Result of offline discussion 109 on RAN2 agreements for interruption reduction feature name	Huawei	noted	2019-10-22 20:15:18	2019-10-22 20:18:06
R2-1913995	Running CR for the introduction of NR mobility enhancement	Intel Corporation	available	2019-10-22 20:15:18	2019-11-01 16:06:21
R2-1913996	LS on uplink TDM pattern for LTE DAPS based enhanced make-before-break HO	RAN2	approved	2019-10-22 20:15:20	2019-10-22 20:18:06
R2-1913997	LS on UE feature list format for Release-16 UE capability	RAN2	approved	2019-10-22 20:15:20	2019-10-25 14:24:44
R2-1913998	NR_IAB running CR for 38300	Qualcomm Inc (Rapport	available	2019-10-22 20:15:20	2019-11-01 16:52:29
R2-1913999	LS to RAN1&4 on UE capabilities on DAPS HO	Intel Corporation	available	2019-10-22 20:15:20	2019-10-30 00:18:11
R2-1914000	Running CR to 38.300 on 5G V2X with NR sidelink	LG Electronics Inc.	endorsed	2019-10-22 20:37:53	2019-10-31 06:49:02
R2-1914001	Running RRC CR for NR-based Access to Unlicensed Spectrum	Qualcomm Incorpor	endorsed	2019-10-22 20:37:53	2019-11-04 19:01:57
R2-1914002	Running CR for NR-based Access to Unlicensed Spectrum	Qualcomm Incorpor	endorsed	2019-10-22 20:37:53	2019-11-04 19:01:57

R2-1914003	Running Idle/Inactive mode CR for NR-based Access to Unlicensed Spectrum	Qualcomm Incorpor	**endorsed**	2019-10-22 20:37:53	2019-11-06 09:06:51
R2-1914004	Running CR for 36.300 for CA/DC Enhancements	Ericsson	**endorsed**	2019-10-22 20:37:53	2019-10-28 22:11:26
R2-1914005	Running CR for 38.300 for CA/DC Enhancements	Ericsson LM	**endorsed**	2019-10-22 20:37:53	2019-10-28 22:11:26
R2-1914006	TS 38.340 (BAP), v0.0.0	Huawei	**endorsed**	2019-10-22 20:37:53	2019-10-30 13:24:01
R2-1914007	Running CR for introduction of even further mobility enhancement in E-UTRAN	China Telecom	**available**	2019-10-22 20:37:53	2019-11-04 08:14:32
R2-1914008	TS 38.340 (BAP), v0.1.0	Huawei	**endorsed**	2019-10-22 20:37:53	2019-10-30 13:23:59
R2-1914009	Stage-2 running CR for support of NR Industrial IoT WI	Nokia (Rapporteur)	**available**	2019-10-22 20:37:54	2019-11-01 15:12:03
R2-1914010	Running CR to 38.331 on Integrated Access and Backhaul for NR	Ericsson	revised	2019-10-22 20:37:54	2019-11-06 17:06:16
R2-1914011	[DRAFT] LS on multi PDCCH-based multi-TRP	Ericsson	revised	2019-10-22 20:37:54	2019-10-22 20:48:09
R2-1914012	draft CR on CLI for TS38 331_v3_Alt2	LG Electronics Inc	**not treated**	2019-10-22 20:37:54	2019-10-22 20:48:09
R2-1914013	LS For Exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI	Nokia, Nokia Shanghai	revised	2019-10-22 20:37:55	2019-10-22 20:48:09
R2-1914014	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, HiSilicon	approved	2019-10-22 20:37:55	2019-10-22 20:48:09
R2-1914015	[DRAFT] LS on multi PDCCH-based multi-TRP	Ericsson	revised	2019-10-22 20:37:55	2019-10-22 20:48:09
R2-1914016	[DRAFT] LS on No support of delta signalling	MediaTek	revised	2019-10-22 20:37:55	2019-10-22 20:48:09
R2-1914017	[DRAFT] LS Radio Capability Signalling Identity on X2/Xn interfaces	Nokia	revised	2019-10-22 20:37:55	2019-10-22 20:48:09
R2-1914018	Introduction of UECapabilityInformation segmentation in 36.331	MediaTek Inc., CATT, Ericsson, Spreadtrum	**endorsed**	2019-10-22 20:37:55	2019-10-22 20:48:09
R2-1914019	Introduction of UECapabilityInformation	ZTE	**endorsed**	2019-10-22 20:37:56	2019-10-22 20:48:09
R2-1914020	LS on multi PDCCH-based and single PDCCH-based multi-TRP operation	RAN2	approved	2019-10-22 20:37:56	2019-10-22 20:48:09
R2-1914021	LS For Exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI	RAN2	approved	2019-10-22 20:37:57	2019-10-22 20:48:09
R2-1914022	LS on No support of delta signalling	RAN2	approved	2019-10-22 20:37:57	2019-10-22 20:48:09
R2-1914023	LS Radio Capability Signalling Identity on X2/Xn interfaces	RAN2	approved	2019-10-22 20:37:57	2019-10-22 20:48:09
R2-1914024	Summary of email discussion on LS to RAN3 on RAN2 agreements	Huawei, HiSilicon, Mediatek	**noted**	2019-10-22 20:37:58	2019-11-04 08:14:32

R2-1914025	LS on RAN2 agreements on LTE and NR mobility enhancements	RAN2	approved	2019-10-22 20:37:58	2019-11-04 08:14:32
R2-1914026	Running MAC CR for NR-U	Ericsson	endorsed	2019-10-22 20:37:58	2019-11-05 13:24:22
R2-1914027	Running CR to 38.331 on Integrated Access and Backhaul for NR	Ericsson	available	2019-10-22 20:37:58	2019-11-06 19:11:22
R2-1914028	(reserved)	Sergio's	reserved	2019-10-22 20:37:58	
R2-1914029	(reserved)	Sergio's	reserved	2019-10-22 20:37:58	
R2-1914030	(reserved)	Sergio's	reserved	2019-10-22 20:37:58	
R2-1914031	(reserved)	Sergio's	reserved	2019-10-22 20:37:58	
R2-1914032	(reserved)	Sergio's	reserved	2019-10-22 20:37:58	
R2-1914033	(reserved)	Sergio's	reserved	2019-10-22 20:37:58	
R2-1914034	(reserved)	Sergio's	reserved	2019-10-22 20:37:59	
R2-1914035	(reserved)	Sergio's	reserved	2019-10-22 20:37:59	
R2-1914036	Introduction of Rel-16 eMTC enhancements	Intel Corporation	endorsed	2019-10-22 20:37:59	2019-11-05 13:20:38
R2-1914037	Introduction of additional enhancements for eMTC	Qualcomm Incorporated	endorsed	2019-10-22 20:37:59	2019-11-04 13:06:17
R2-1914038	Introduction of Rel-16 eMTC enhancements	Qualcomm Incorporated	endorsed	2019-10-22 20:37:59	2019-11-04 19:01:57
R2-1914039	Report of offline #301: Discussion on whether I-RNTI is adopted for UP CIoT 5GS Optimisation	LGE	not treated	2019-10-22 20:37:59	2019-10-22 20:48:10
R2-1914040	[DRAFT] LS on RAN2 agreements for 5GC CIoT	Qualcomm	revised	2019-10-22 20:37:59	2019-10-22 20:48:10
R2-1914041	Summary of Offline discussion #303: RRC_INACTIVE for eMTC UEs connected to 5GC	Huawei, HiSilicon	noted	2019-10-22 20:37:59	2019-10-22 20:48:10
R2-1914042	Running CR for 36.304 -Rel-16 eMTC Enhancements	Nokia, Nokia Shanghai Bell	revised	2019-10-22 20:37:59	2019-10-22 20:48:10
R2-1914043	Clarification on UP-EDT	Huawei, HiSilicon	postponed	2019-10-22 20:37:59	2019-10-22 20:48:10
R2-1914044	[DRAFT] LS on RAN2 agreements for 5GC CIoT	Qualcomm	revised	2019-10-22 20:38:01	2019-10-22 20:48:10
R2-1914045	LS on RAN2 agreements for 5GC CIoT	RAN2	approved	2019-10-22 20:38:01	2019-10-22 20:48:10
R2-1914046	Running CR for 36.304 -Rel-16 eMTC Enhancements	Nokia, Nokia Shanghai	revised	2019-10-22 20:38:01	2019-10-23 15:35:39
R2-1914047	[36.321 running CR]	Ericsson	endorsed	2019-10-22 20:38:01	2019-11-05 13:20:38
R2-1914048	[Report from Email [107bis#65][eMTC R16] UE identifier pros and cons (LG)]	LGE	reserved	2019-10-22 20:38:02	
R2-1914049	Running CR for 36.304 -Rel-16 eMTC Enhancements	Nokia, Nokia Shanghai	revised	2019-10-22 20:38:02	2019-11-04 08:14:32
R2-1914050	Running CR for 36.304 -Rel-16 eMTC Enhancements	Nokia, Nokia Shanghai	endorsed	2019-10-22 20:38:02	2019-11-04 19:01:57
R2-1914051	[DRAFT] LS to RAN1 on 2-step RACH	ZTE	revised	2019-10-22 20:38:02	2019-10-22 20:48:10
R2-1914052	Summary of discussion on rebudiling and fallback	Nokia	noted	2019-10-22 20:38:02	2019-10-22 20:48:10
R2-1914053	[DRAFT] LS on SFN LSB indication in msg2/msgB	Qualcomm	revised	2019-10-22 20:38:02	2019-10-22 20:48:10

R2-1914054	Summary of discussion on UL LBT	InterDigit	noted	2019-10-22 20:38:02	2019-10-22 20:48:10
R2-1914055	Clarification on satellite beam and PCI mapping	THALES,	agreed	2019-10-22 20:38:02	2019-10-22 20:48:10
R2-1914056	DRX HARQ RTT enhancements for NTN	Nomor Researc	agreed	2019-10-22 20:38:03	2019-10-22 20:48:10
R2-1914057	LS to RAN1 on WUS for short DRX cycle	vivo	revised	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914058	Offline #506 Release assistance	Ericsson	noted	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914059	Summary of offline discussion on UE assistance	CATT	noted	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914060	LS to RAN1 on WUS for short DRX cycle	RAN2	approved	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914061	LS to RAN1 on question related to CSI/SRS reporting	vivo	revised	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914062	TP editorial corrections	Nomor	noted	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914063	On NR-U Operation in DFS Channels	Charter Commu	noted	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914064	LS on SFN LSB indication in msg2/msgB	RAN2	approved	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914065	(reserved)	Diana's	reserved	2019-10-22 20:38:04	
R2-1914066	[DRAFT] LS on PHR reporting for NR-U	Lenovo	revised	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914067	[DRAFT] LS on differentiating between MSG2 and	ZTE	revised	2019-10-22 20:38:04	2019-10-22 20:48:10
R2-1914068	LS on PHR reporting for NR-U	RAN2	approved	2019-10-22 20:38:05	2019-10-22 20:48:10
R2-1914069	TP on RACH capacity evaluation and procedures	ZTE Corporation, Sanechip	agreed	2019-10-22 20:38:05	2019-10-22 20:48:10
R2-1914070	Report of email discussion [107#64][NTN] Cell selection&reselection	LG Electroni	agreed	2019-10-22 20:38:05	2019-10-22 20:48:10
R2-1914071	CR of TS 36.355 for introducing NavIC in LTE	Reliance Jio, MediaTek Inc.,	endorsed	2019-10-22 20:38:06	2019-10-22 20:48:10
R2-1914072	Corrections for Positioning Architecture	Ericsson	agreed	2019-10-22 20:38:07	2019-10-22 20:48:10
R2-1914073	[RAN2#107bis Offline-402] Converge on details of SSR Correction Points definition	u-blox AG	noted	2019-10-22 20:38:09	2019-10-22 20:48:10
R2-1914074	Sensor Provide Location Information Elements	Polaris	endorsed	2019-10-22 20:38:09	2019-10-22 20:48:10
R2-1914075	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet,	endorsed	2019-10-22 20:38:10	2019-10-22 20:48:10
R2-1914076	Broadcast of TBS assistance data	NextNav, AT&T, FirstNet,	endorsed	2019-10-22 20:38:13	2019-10-22 20:48:10
R2-1914077	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914078	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914079	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914080	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914081	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914082	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914083	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914084	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914085	(reserved)	Nathan's	reserved	2019-10-22 20:38:15	
R2-1914086	[DRAFT] Reply LS on PDCP end user throughput measurements	CMCC	revised	2019-10-22 20:38:16	2019-10-22 20:48:10
R2-1914087	Reply LS on RACH Optimization and Mobility Robustness Optimization	RAN2	approved	2019-10-22 20:38:16	2019-10-22 20:48:10
R2-1914088	(reserved)	HuNan's	reserved	2019-10-22 20:38:16	
R2-1914089	Reply LS on PDCP end user throughput	RAN2	approved	2019-10-22 20:38:16	2019-10-22 20:48:10
R2-1914090	Report from session on SON/MDT	Session	approved	2019-10-22 20:39:40	2019-10-22 20:48:12
R2-1914091	Correction on T322	Nokia, Nokia	agreed	2019-10-22 20:38:16	2019-10-22 20:48:10

R2-1914092	RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC	Document	revised	2019-10-22 20:38:17	2019-10-25 14:24:44
R2-1914093	Introduction of additional enhancements for NB-IoT	Qualcomm	endorsed	2019-10-22 20:38:17	2019-11-04 13:06:17
R2-1914094	Introduction of additional enhancements for NB-IoT	Huawei	endorsed	2019-10-22 20:38:17	2019-11-04 19:01:57
R2-1914095	Report of Offline discussion #703 (Qualcomm) For alignment of eMTC and NB-IoT 36.331 CR	Qualcomm	noted	2019-10-22 20:38:17	2019-10-22 20:48:10
R2-1914096	Report from offline #704	Qualcomm	noted	2019-10-22 20:38:17	2019-10-22 20:48:10
R2-1914097	Clarification of PDCCH monitoring period with non-zero DRX-startoffset for NB-IoT	NTT DOCOMO INC.	not treated	2019-10-22 20:38:17	2019-10-22 20:48:10
R2-1914098	Summary of offline #706	Qualcomm Incorporated	noted	2019-10-22 20:38:19	2019-10-22 20:48:10
R2-1914099	Running CR on 36.321 for NB-IoT	Ericsson	endorsed	2019-10-22 20:38:19	2019-11-06 09:07:49
R2-1914100	[Running CR on 36.304]	Nokia	reserved	2019-10-22 20:38:19	
R2-1914101	Introduction of additional enhancements for NB-IoT in TS 36.331	Huawei	endorsed	2019-10-22 20:38:19	2019-11-05 13:20:38
R2-1914102	RAN2 agreements for Rel-16 additional enhancements for NB-IoT and MTC	Document Rapporteur	available	2019-10-22 20:38:19	2019-10-28 22:11:26
R2-1914103	(reserved)	Brian's	reserved	2019-10-22 20:38:19	
R2-1914104	(reserved)	Brian's	reserved	2019-10-22 20:38:19	
R2-1914105	(reserved)	Brian's	reserved	2019-10-22 20:38:19	
R2-1914106	(reserved)	Brian's	reserved	2019-10-22 20:38:19	
R2-1914107	(reserved)	Brian's	reserved	2019-10-22 20:38:19	
R2-1914108	(reserved)	Brian's	reserved	2019-10-22 20:38:19	
R2-1914109	(reserved)	Brian's	reserved	2019-10-22 20:38:19	
R2-1914110	(reserved)	Brian's	reserved	2019-10-22 20:38:20	
R2-1914111	38 323 running CR	CATT	endorsed	2019-10-22 20:38:20	2019-10-22 20:48:10
R2-1914112	Running CR to 37324 for 5G_V2X_NRSL	vivo	revised	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914113	Running CR for 38.322 for NR V2X	Ericsson	revised	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914114	Running CR to 38.300 on 5G V2X with NR sidelink	LG	not treated	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914115	(running)36.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporat	not treated	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914116	(running)38.304CR on cell selection(reselection) for NR V2X UE	ZTE Corporation, Sanechips	not treated	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914117	TP on NR V2X for TR 37.985 RAN2 parts	Huawei,	endorsed	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914118	[DRAFT] LS on SL RLF handling	Ericsson	revised	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914119	Summary of RAN2#107bis Offline-807	vivo	not treated	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914120	Proposed LS on Layer-1 and Layer 2 Identifiers for NR Sidelink	LG Electroni	revised	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914121	Clarification regarding QoS handling in MRDC with 5G CN	Samsung, ZTE	agreed	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914122	PDCP version in EN-DC	Ericsson	agreed	2019-10-22 20:38:20	2019-10-22 20:48:11
R2-1914123	Remaining issues for correction on the condition of RBTermChange	Ericsson	not treated	2019-10-22 20:38:22	2019-10-22 20:48:11
R2-1914124	Correction to field conditions in NE-DC	Ericsson	agreed	2019-10-22 20:38:23	2019-10-22 20:48:11

R2-1914125	Correction for the establishment of LTE RLC bearers for (NG)EN-DC and NE-DC	Huawei, HiSilicon	agreed	2019-10-22 20:38:25	2019-10-22 20:48:11
R2-1914126	Correction to AS security key update	Ericsson	reserved	2019-10-22 20:38:26	
R2-1914127	Presence and absence of TAC in NR cell	Ericsson	agreed	2019-10-22 20:38:28	2019-10-22 20:48:11
R2-1914128	Configuration limitation for RRCRelease message	OPPO	agreed	2019-10-22 20:38:29	2019-10-22 20:48:11
R2-1914129	KgNB derivation upon mobility	Qualcomm	agreed	2019-10-22 20:38:30	2019-10-22 20:48:11
R2-1914130	Security Algorithms for Radio Bearers	Qualcomm	revised	2019-10-22 20:38:33	2019-10-22 20:48:11
R2-1914131	Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility	Vice Chairma	approved	2019-10-22 20:38:34	2019-10-22 20:48:11
R2-1914132	Report from Break-Out Session on SRVCC, CLI, PRN, eMIMO, RACS	Vice Chairma	approved	2019-10-22 20:38:34	2019-10-22 20:48:11
R2-1914133	Report eMTC breakout session	Session chair	approved	2019-10-22 20:38:34	2019-10-22 20:48:11
R2-1914134	Session minutes for NR-U, Power Savings, NTN and 2-step RACH	Session chair	approved	2019-10-22 20:38:34	2019-10-22 20:48:11
R2-1914135	Report from session on Rel-15 and 16 LTE and NR positioning	Session chair	approved	2019-10-22 20:38:34	2019-10-22 20:48:11
R2-1914136	Report from session on SON/MDT	Session	revised	2019-10-22 20:38:34	
R2-1914137	Report NB-IoT breakout session	Session chair	approved	2019-10-22 20:38:35	2019-10-22 20:48:11
R2-1914138	Report from session on LTE V2X and NR V2X	Session chair	approved	2019-10-22 20:38:35	2019-10-22 20:48:11
R2-1914139	Definition of NR standalone	Ericsson	postponed	2019-10-22 20:38:35	2019-10-22 20:48:11
R2-1914140	Clarification for aggregated bandwidth for overheating	Huawei, HiSilicon	postponed	2019-10-22 20:38:36	2019-10-22 20:48:11
R2-1914141	WF on flexible BSR	OPPO	noted	2019-10-22 20:38:37	2019-10-22 20:48:11
R2-1914142	[Offline-811] Support of SL RLC AM	Huawei, HiSilicon	not treated	2019-10-22 20:38:37	2019-10-22 20:48:11
R2-1914143	[DRAFT] LS on Handling Multiple Unicast Links	InterDigit	revised	2019-10-22 20:38:37	2019-10-22 20:48:11
R2-1914144	[DRAFT] LS on PC5-S Signaling and PC5-RRC connection for NR sidelink communication	LGE	revised	2019-10-22 20:38:37	2019-10-22 20:48:11
R2-1914145	(reserved)	Kyeongin	reserved	2019-10-22 20:38:37	
R2-1914146	Running CR for 38.322 for NR V2X	Ericsson	endorsed	2019-10-22 20:38:37	2019-10-22 20:48:11
R2-1914147	LS on Layer 2 Identifiers for NR Sidelink communication	RAN2	approved	2019-10-22 20:38:38	2019-10-22 20:48:11
R2-1914148	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914149	LS on SL RLF handling	RAN2	approved	2019-10-22 20:38:38	2019-10-22 20:48:11
R2-1914150	LS on Handling Multiple Unicast Links with Peer	RAN2	approved	2019-10-22 20:38:38	2019-10-22 20:48:11
R2-1914151	LS on PC5-S Signaling and PC5-RRC connection for NR sidelink communication	RAN2	approved	2019-10-22 20:38:38	2019-10-22 20:48:11
R2-1914152	Running CR to 37324 for 5G_V2X_NRSL	vivo (Rapporteur)	available	2019-10-22 20:38:38	2019-11-01 15:12:03
R2-1914153	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914154	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914155	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914156	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914157	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914158	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914159	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914160	(reserved)	Kyeongin	reserved	2019-10-22 20:38:38	
R2-1914161	Correction of UE assistance information	Samsun	postponed	2019-10-22 20:38:38	2019-10-22 20:48:11
R2-1914162	[draft] Reply LS to RAN1 on SFTD measurement	Huawei,	revised	2019-10-22 20:38:39	2019-10-22 20:48:11
R2-1914163	Work plan for Rel-16 UE Capability feature list	Intel	not treated	2019-10-22 20:38:39	2019-10-22 20:48:11
R2-1914164	Draft reply LS on full configuration during SN Modification procedure	Huawei, HiSilicon	revised	2019-10-22 20:38:39	2019-10-22 20:48:11
R2-1914165	NTN_RAN2_107bis_offline1_outcomes	Thales	noted	2019-10-22 20:38:39	2019-10-22 20:48:11
R2-1914166	NTN_RAN2_107bis_offline2_outcomes	Thales	noted	2019-10-22 20:38:39	2019-10-22 20:48:11

R2-1914167	Correction to power limitations in (NG)EN-DC	Ericsson	postponed	2019-10-22 20:38:39	2019-10-22 20:48:11
R2-1914168	LS on CLI measurement reporting range (R4-1911416; contact: LGE)	RAN4	not treated	2019-10-22 20:38:40	2019-10-22 20:48:11
R2-1914169	Correction to Pcompensation for FR2	Huawei	agreed	2019-10-22 20:38:40	2019-10-22 20:48:11
R2-1914170	[DRAFT] Reply LS on FR2 Pmax	Huawei	revised	2019-10-22 20:38:43	2019-10-22 20:48:12
R2-1914171	IAB routing and bearer mapping config	Qualcomm Incorpor	not treated	2019-10-22 20:38:43	2019-10-22 20:48:12
R2-1914172	Correction of SRB3 handling at full configuration	Ericsson	agreed	2019-10-22 20:38:43	2019-10-22 20:48:12
R2-1914173	Miscellaneous correction for late drop	Ericsson	agreed	2019-10-22 20:38:45	2019-10-22 20:48:12
R2-1914174	Discussion on phase of the LTE CHO procedure	China Telecom	not treated	2019-10-22 20:38:46	2019-10-22 20:48:12
R2-1914175	Clarification to CSI reporting in C-DRX	Qualcom	agreed	2019-10-22 20:38:46	2019-10-22 20:48:12
R2-1914176	Discussion on QoS flow in SLRB	Apple	not treated	2019-10-22 20:38:48	2019-10-22 20:48:12
R2-1914177	Reply LS to LS on maximum value of MDBV (C4-194314; contact: Nokia)	CT4	noted	2019-10-22 20:38:48	2019-10-22 20:48:12
R2-1914178	LS on NID structure and length (C4-194332;	CT4	not treated	2019-10-22 20:38:48	2019-10-22 20:48:12
R2-1914179	[R2#107bis-offline-30] IAB LS on F1 over LTE	KDDI	noted	2019-10-22 20:38:48	2019-10-22 20:48:12
R2-1914180	Correction on ambiguity of UE FDD/TDD FR1/FR2 capabilities	ZTE Corporation, Sanechip	not treated	2019-10-22 20:38:48	2019-10-22 20:48:12
R2-1914181	CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331)	Huawei, HiSilicon	postponed	2019-10-22 20:38:51	
R2-1914182	BWCS for inter-ENDC BC with intra-ENDC BC	Huawei,	postponed	2019-10-22 20:38:53	
R2-1914183	LS on PDCCH-based Power Saving Signal/Channel carrying indication of UE wakeup before DRX ON (R1-1911475; contact; CATT)	RAN1	noted	2019-10-22 20:38:56	2019-10-22 20:48:12
R2-1914184	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAICT, CMCC, China Telecom, China	endorsed	2019-10-22 20:38:56	2019-10-22 20:48:12
R2-1914185	[DRAFT] LS to SA2 on reference time delivery	Ericsson	revised	2019-10-22 20:38:57	2019-10-22 20:48:12
R2-1914186	[RAN2#107bis Offline-031]: IAB routing and bearer mapping config	Qualcomm Inc	noted	2019-10-22 20:38:57	2019-10-22 20:48:12
R2-1914187	[DRAFT] LS to RAN1 on LCP restriction for	Qualcom	revised	2019-10-22 20:38:57	2019-10-22 20:48:12
R2-1914188	Running CR for 38.331 on CA/DC Enhancements	Ericsson	endorsed	2019-10-22 20:38:57	2019-10-22 20:48:12
R2-1914189	Running CR for 36.331 for CA/DC Enhancements	Ericsson	endorsed	2019-10-22 20:38:57	2019-10-22 20:48:12
R2-1914190	Corrections to power limitations in NE-DC	Ericsson	merged	2019-10-22 20:38:57	2019-10-22 20:48:12
R2-1914191	LS on differentiating between MSG2 and MSGB	RAN2	approved	2019-10-22 20:38:58	2019-10-22 20:48:12
R2-1914192	LS on UE adaptation to maximum number of MIMO layers (R1-1911528; contact: vivo)	RAN1	noted	2019-10-22 20:38:58	2019-10-22 20:48:12
R2-1914193	Miscellaneous corrections on UE capability fields	Intel Corporat	agreed	2019-10-22 20:38:59	2019-10-22 20:48:12
R2-1914194	TP on NTN Mobility Issues and Solutions	InterDigit	agreed	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914195	Ephemeris data	Ericsson	not treated	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914196	Report of email discussion [107#63][NR/NTN]	Ericsson	agreed	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914197	Further consideration on HARQ configuration in NTN	CMCC, Huawei,	noted	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914198	TP on HARQ configuration in NTN	CMCC, Nomor Research GmbH, Huawei, HiSilicon	agreed	2019-10-22 20:39:00	2019-10-22 20:48:12

R2-1914199	TP on tracking area management in NTN	ZTE Corporation, Sanechip	merged	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914200	LS to RAN1 on CSI/SRS reporting	RAN2	approved	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914201	Reply LS on potential improvements for delay critical QoS flows	RAN2	approved	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914202	[DRAFT] Reply LS to SA3 on FBS detection	Huawei,	revised	2019-10-22 20:39:00	2019-10-22 20:48:12
R2-1914203	Inclusion of 90MHz UE Bandwidth	Vodafone	agreed	2019-10-22 20:39:01	2019-10-22 20:48:12
R2-1914204	[CR on adding CSI-RS inter-node message]	Huawei	reserved	2019-10-22 20:39:02	
R2-1914205	Skipping supportedBandCombinationList of n90	KDDI	postponed	2019-10-22 20:39:03	2019-10-22 20:48:12
R2-1914206	LS on NR IAB case-1 timing (R1-1911548; contact:	RAN1	not treated	2019-10-22 20:39:05	2019-10-22 20:48:12
R2-1914207	Reply LS on single PDCCH-based multi-TRP operation (R1-1911550; contact: Huawei)	RAN1	noted	2019-10-22 20:39:05	2019-10-22 20:48:12
R2-1914208	Reply LS on MAC CE design for SCell BFR (R1-1911587; contact: Apple)	RAN1	noted	2019-10-22 20:39:05	2019-10-22 20:48:12
R2-1914209	Correction on the frequency indication in SIB2	Huawei, HiSilicon	agreed	2019-10-22 20:39:05	2019-10-22 20:48:12
R2-1914210	[DRAFT] LS on direct SCell activation in RRC resume message	Qualcomm	revised	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914211	Report of offline discussion 020 on Correction of UE assistance information	Samsung	noted	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914212	Report of offline discussion 040 on Signaling options for early measurement configuration	Samsung	noted	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914213	LS to SA2 on reference time delivery	RAN2	approved	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914214	LCP restriction for Dynamic Grant	RAN2	approved	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914215	[DRAFT] LS on granularity of periodicity and burst arrival time in TSCAI	Qualcomm	revised	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914216	[DRAFT] LS on direct SCell activation in RRC resume message	Qualcomm	revised	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914217	LS on direct Scell activation in RRC resume message	RAN2	revised	2019-10-22 20:39:07	2019-10-22 20:48:12
R2-1914218	Reply LS on full configuration during SN Modification procedure	RAN2	revised	2019-10-22 20:39:08	2019-10-22 20:48:12
R2-1914219	Clarifying the alignment of capability filtering across LTE and NR in MR-DC	Nokia, Nokia	agreed	2019-10-22 20:39:08	2019-10-22 20:48:12
R2-1914220	[DRAFT] LS on BCS reporting for EN-DC BC	Huawei	revised	2019-10-22 20:39:09	2019-10-22 20:48:12
R2-1914221	Reply LS to RAN1 on SFTD measurement	RAN2	approved	2019-10-22 20:39:09	2019-10-22 20:48:12
R2-1914222	Reply LS on FR2 Pmax	RAN2	approved	2019-10-22 20:39:09	2019-10-22 20:48:12
R2-1914223	Granularity of periodicity and burst arrival time in	RAN2	approved	2019-10-22 20:39:09	2019-10-25 14:24:44
R2-1914224	Reply LS to SA3 on FBS detection	RAN2	approved	2019-10-22 20:39:09	2019-10-22 20:48:12
R2-1914225	Security Algorithms for Radio Bearers	Qualcomm	agreed	2019-10-22 20:39:09	2019-10-22 20:48:12
R2-1914226	LS on BCS reporting for EN-DC B	RAN2	approved	2019-10-22 20:39:11	2019-10-22 20:48:12
R2-1914227	LS on direct Scell activation in RRC resume message	RAN2	approved	2019-10-22 20:39:11	2019-10-22 23:56:28
R2-1914228	Reply LS on full configuration during SN Modification procedure	RAN2	approved	2019-10-22 20:39:11	2019-10-22 23:56:28

APPENDIX I

Tdoc	Title	Source	TDoc Status	Reservation date	Uploaded	CR revisior	CR categor	TSG CR Pa	Reply to	LS_To	LS_Cc	Original LS	Reply in
R2-1914300	Agenda for RAN2#108	Chairman	approved	11/4/2019	11/8/2019								
R2-1914301	RAN2#107bis Meeting Report	MCC	approved	11/4/2019	11/17/2019								
R2-1914302	LS on channel quality report for LTE-MTC (R1-1911386; con	RAN1	noted	11/4/2019	11/4/2019					RAN2, RAN4		R1-1911386	
R2-1914303	LS on support of high peak data rate for Cat-M1 UEs in HD-	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911398	
R2-1914304	LS on PUR transmission for NB-IoT/eMTC (R1-1911399; con	RAN1	noted	11/4/2019	11/6/2019				R2-190819	RAN2	RAN4	R1-1911399	
R2-1914305	LS on PDCCH-based Power Saving Signal/Channel carrying i	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911475	
R2-1914306	LS on NR IAB case-1 timing (R1-1911548; contact: ZTE)	RAN1	noted	11/4/2019	11/6/2019					RAN2	RAN4	R1-1911548	
R2-1914307	LS on UE higher layer signalling for cross-slot scheduling (R	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911586	
R2-1914308	LS on simultaneous TCI state activation and spatial relation	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911617	
R2-1914309	LS on SCell BFR (R1-1911619; contact: Apple)	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911619	
R2-1914310	LS on SRS for NR Positioning (R1-1911634; contact: Intel)	RAN1	noted	11/4/2019	11/6/2019					RAN2, RAN	RAN4	R1-1911634	
R2-1914311	Reply to LS on differentiating between MSG2 and MSGB (R	RAN1	noted	11/4/2019	11/6/2019				R2-191419	RAN2	RAN3, RAN	R1-1911656	
R2-1914312	LS on UE power saving terminology and text proposal to 38	RAN1	revised	11/4/2019	11/6/2019					RAN2		R1-1911667	
R2-1914313	Reply LS on propagation delay compensation for reference	RAN1	noted	11/4/2019	11/6/2019				R2-190816	RAN2		R1-1911693	
R2-1914314	LS on signalling of sidelink RSRP and CSI between UEs (R1-1	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911698	
R2-1914315	Reply LS on SL RLM/RLF (R1-1911699; contact: InterDigital)	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911699	
R2-1914316	Reply LS on additional PDCCH monitoring occasions for pag	RAN1	noted	11/4/2019	11/6/2019				R2-191186	RAN2		R1-1911705	
R2-1914317	LS on NR V2X synchronization procedures (R1-1911718; co	RAN1	noted	11/4/2019	11/6/2019					RAN2	RAN4	R1-1911718	
R2-1914318	Reply LS on UL-SL prioritization (R1-1911720; contact: OPP	RAN1	noted	11/4/2019	11/6/2019				R2-191167	RAN2, RAN4		R1-1911720	
R2-1914319	Reply to LS on RAN2 agreements related to 2-step RACH (R	RAN1	noted	11/4/2019	11/6/2019				R2-191186	RAN2		R1-1911739	
R2-1914320	Reply LS on ambiguity of UE L1 FDD/TDD FR1/FR2 capabiliti	RAN1	noted	11/4/2019	11/6/2019				R2-191185	RAN2		R1-1911741	
R2-1914321	LS on Rel-16 LTE and NR parameter lists (R1-1911745; cont	RAN1	noted	11/4/2019	11/6/2019					RAN2, RAN3		R1-1911745	
R2-1914322	LS on additional high layer information for sidelink physical	RAN1	noted	11/4/2019	11/6/2019					RAN2		R1-1911746	
R2-1914323	LS on aspects of Mission Critical Services over 5MBS (S6-19	SA6	noted	11/4/2019	11/6/2019					SA, RAN, S	SA1	S6-192003	
R2-1914324	LS Reply on maximum value of MDBV (C3-194330; contact:	CT3	noted	11/4/2019	11/6/2019				S2-190795	SA2	RAN1, RAN	C3-194330	
R2-1914325	LS on CLI measurement reporting range (R4-1911416; cont	RAN4	withdrawn	11/4/2019	11/6/2019					RAN2		R4-1911416	
R2-1914326	LS on NID structure and length (C4-194332; contact: Ericsso	CT4	available	11/4/2019	11/6/2019					RAN2, RAN	SA2	C4-194332	
R2-1914327	LS on NR IAB case-1 timing (R1-1911548; contact: ZTE)	RAN1	withdrawn	11/4/2019	11/6/2019					RAN2	RAN4	R1-1911548	
R2-1914328	LS to SA3 on False Base Station Detection (R3-196256; cont	RAN3	noted	11/4/2019	11/6/2019				S3-193175	SA3	RAN2	R3-196256	
R2-1914329	LS on PRACH configuration conflict detection (R3-196270; c	RAN3	noted	11/4/2019	11/6/2019					RAN1, RAN2		R3-196270	
R2-1914330	LS on resource coordination between NG-RAN nodes for NI	RAN3	noted	11/4/2019	11/6/2019					RAN2		R3-196280	
R2-1914331	LS on IP assignment in IAB network (R3-196284; contact: Sa	RAN3	noted	11/4/2019	11/6/2019					RAN2		R3-196284	
R2-1914332	Reply LS on CSI-RS configuration transfer (R3-196288; cont	RAN3	noted	11/4/2019	11/6/2019				R2-191185	RAN2	RAN1	R3-196288	
R2-1914333	LS on CLI measurement reporting range (R4-1911416; cont	RAN4	noted	11/4/2019	11/6/2019					RAN2		R4-1911416	
R2-1914334	Reply LS on definition for SFTD measurement (R4-1912704;	RAN4	noted	11/4/2019	11/6/2019				R1-190981	RAN1	RAN2	R4-1912704	
R2-1914335	Reply LS on SFTD measurement (R4-1912705; contact: Inte	RAN4	noted	11/4/2019	11/6/2019				R2-19117C	RAN2	RAN1	R4-1912705	
R2-1914336	LS on NR Mobility Enhancements (R4-1912707; contact: Int	RAN4	noted	11/4/2019	11/6/2019					RAN2		R4-1912707	
R2-1914337	LS Response on the feasibility of time synchronization accu	RAN4	noted	11/4/2019	11/6/2019				R1-19099C	RAN1, RAN	RAN5	R4-1912743	
R2-1914338	Reply LS on second SMTC periodicity in idle mode (R4-1912	RAN4	noted	11/4/2019	11/6/2019				R2-191184	RAN2	RAN1	R4-1912744	
R2-1914339	LS on thresholds for serving cell RSRP change based TA vali	RAN4	noted	11/4/2019	11/6/2019					RAN2	RAN1	R4-1912782	
R2-1914340	LS on sidelink synchronization under multiple synchronizati	RAN4	noted	11/4/2019	11/6/2019					RAN2	RAN1	R4-1912826	
R2-1914341	LS reply on NR V2X cross-RAT configuration (R4-1912874; c	RAN4	noted	11/4/2019	11/6/2019				R2-191168	RAN2	RAN1	R4-1912874	
R2-1914342	LS on sync raster for NR V2X (R4-1913063; contact: Vivo, CA	RAN4	noted	11/4/2019	11/6/2019					RAN1, RAN2		R4-1913063	
R2-1914343	Reply LS on mapping between LTE V2X PPPP and NR V2X pr	SA2	noted	11/4/2019	11/6/2019				R1-190987	RAN1	RAN2	S2-1909987	
R2-1914344	Reply LS on LS on the IAB-indication to core network (S2-19	SA2	noted	11/4/2019	11/6/2019				R3-194787	RAN3	RAN2, SA3	S2-1910281	
R2-1914345	LS on IAB terminology update (S2-1910349; contact: Nokia)	SA2	noted	11/4/2019	11/6/2019					RAN2, RAN	RAN, SA	S2-1910349	
R2-1914346	Reply LS on assistance indication for WUS (S2-1910549; cor	SA2	noted	11/4/2019	11/6/2019				R2-191158	RAN2, CT1, RAN3		S2-1910549	
R2-1914347	Reply LS on LTE-M identification in 5GC (S2-1910644; conta	SA2	noted	11/4/2019	11/6/2019					RAN2, RAN	RAN	S2-191064	R2-190154

R2-1914348	Reply LS on LS on maximum value of MDBV (S2-1910663; c	SA2	noted	11/4/2019	11/6/2019			R3-194553	RAN3, CT4	RAN1, RAN	S2-1910663
R2-1914349	LS Reply on Handling of multiple PLMN-assigned capability	SA2	noted	11/4/2019	11/6/2019			R2-191185	RAN2		S2-1910680
R2-1914350	Reply LS on Sidelink HARQ Feedback for Groupcast (S2-191	SA2	noted	11/4/2019	11/6/2019			R1-190987	RAN1, RAN2		S2-1910771
R2-1914351	Reply LS on NID structure and length (S2-1910784; contact:	SA2	noted	11/4/2019	11/6/2019			C4-194332	RAN2, RAN	CT3	S2-1910784
R2-1914352	LS on dependencies on AS design for mobility management	SA2	available	11/4/2019	11/6/2019				RAN2, RAN	CT1	S2-1910786
R2-1914353	LS on system level design assumptions for satellite in 5GS (S	SA2	available	11/4/2019	11/6/2019				RAN2, RAN	CT1	S2-1910787
R2-1914354	Reply LS on RRC Connection Reestablishment for CP for NB	SA2	noted	11/4/2019	11/6/2019			S3-192394	RAN2, CT4	CT1, RAN3	S2-1910789
R2-1914355	Reply LS on clarifications on Private Networks (S2-1910803	SA2	noted	11/4/2019	11/6/2019			R3-194786	RAN3, SA1	RAN2	S2-1910803
R2-1914356	Reply LS on Mobile-terminated Early Data Transmission (S2	SA2	noted	11/4/2019	11/6/2019				RAN2, RAN	SA	S2-1910804
R2-1914357	LS on PC5S and PC5 RRC unicast message protection (S3-19	SA3	noted	11/4/2019	11/6/2019				RAN2, SA2,	CT1	S3-193802
R2-1914358	Reply on QoE Measurement Collection (S4-191234; contact	SA4	noted	11/4/2019	11/6/2019			S5-195659	SA5	CT1, RAN2	S4-191234
R2-1914359	LS on energy efficiency (S5-196771; contact: Orange)	SA5	noted	11/4/2019	11/6/2019				RAN3	RAN2, SA	S5-196771
R2-1914360	LS on UE power saving terminology and text proposal to 38	RAN1	noted	11/4/2019	11/12/2019				RAN2		R1-1911667
R2-1914361	Discussion on RAN2 impacts of async CA	Qualcomm	noted	11/5/2019	11/8/2019						
R2-1914362	CR to 38.331 on support of cross-carrier scheduling with dif	Qualcomm	noted	11/5/2019	11/8/2019	F					
R2-1914363	Remaining issues of dormancy behaviour	Qualcomm	available	11/5/2019	11/8/2019						
R2-1914364	Further discussion on suspension of SCG	Qualcomm	available	11/5/2019	11/8/2019						
R2-1914365	Remaining Issues on RACH Procedure in NR-U	vivo	available	11/5/2019	11/8/2019						
R2-1914366	Issues on the Autonomous BWP Switching in NR-U	vivo	available	11/5/2019	11/8/2019						
R2-1914367	Remaining Issues of UL LBT Failure	vivo	available	11/5/2019	11/8/2019						
R2-1914368	LBT Impacts on 2-step RACH	vivo	available	11/5/2019	11/8/2019						
R2-1914369	CAPC Restriction to SRB Multiplexing Using Configured Gra	vivo	available	11/5/2019	11/8/2019						
R2-1914370	Further Consideration on RAR reception in NR-U	vivo	available	11/5/2019	11/8/2019						R2-190147
R2-1914371	Support of Multiple Active SPS	vivo	noted	11/5/2019	11/8/2019						
R2-1914372	Further Discussion on the Whitelist in NR-U	vivo	noted	11/5/2019	11/8/2019						
R2-1914373	Differentiation Between Msg2 and MsgB by MsgB-RNTI	vivo	noted	11/5/2019	11/8/2019						
R2-1914374	Discussion on the 2-step CFRA	vivo	available	11/5/2019	11/8/2019						
R2-1914375	Contention Resolution of 2-step RACH Triggered by Uplink	vivo	available	11/5/2019	11/8/2019						R2-190123
R2-1914376	Remaining Issues on MsgA Transmission and Fallback	vivo	noted	11/5/2019	11/8/2019						
R2-1914377	Resource Selection for 2-step RACH	vivo	available	11/5/2019	11/8/2019						
R2-1914378	Discussion on the BFR-initiated 2-step RACH	vivo	available	11/5/2019	11/8/2019						
R2-1914379	UE capability of Rel-16 DCCA enhancement	Qualcomm	available	11/5/2019	11/8/2019						
R2-1914380	Remaining issues of NR early measurements	Qualcomm	noted	11/5/2019	11/8/2019						R2-190017
R2-1914381	Discussion on fast SCell activation based on Aperiodic TRS (	Qualcomm	available	11/5/2019	11/8/2019						
R2-1914382	Remaining issues of Scell BFR	CATT	noted	11/5/2019	11/8/2019						
R2-1914383	On Remaining Open Issues of IAB BH RLF	CATT	available	11/5/2019	11/8/2019						
R2-1914384	On Hop-by-Hop Flow control for IAB BH	CATT	noted	11/5/2019	11/8/2019						
R2-1914385	On Remaining Open Issues of IAB Routing	CATT	available	11/5/2019	11/8/2019						
R2-1914386	Cell restriction for CA duplication	OPPO	available	11/5/2019	11/8/2019						
R2-1914387	Draft CR for MAC CE format to indicate up to two TCI states	OPPO	available	11/5/2019	11/8/2019						
R2-1914388	Remaining open issues for 2-step RACH	OPPO	available	11/5/2019	11/8/2019						
R2-1914389	Draft TP for msgB MAC PDU format	OPPO	available	11/5/2019	11/8/2019	B					
R2-1914390	Remaining issues on 2-step RACH configuration without 4-s	OPPO	available	11/5/2019	11/8/2019						
R2-1914391	Contention resolution for 2-step RACH in C-RNTI MAC CE ca	OPPO	noted	11/5/2019	11/8/2019						
R2-1914392	Contention free 2-step RACH	OPPO	available	11/5/2019	11/8/2019						
R2-1914393	Text proposal on power saving impacts on TS 37.340	OPPO	available	11/5/2019	11/8/2019	B					
R2-1914394	Remaining issues on PDCCH-based WUS	OPPO	available	11/5/2019	11/8/2019						
R2-1914395	Impacts of power saivng signalling on CSI reporting	OPPO	available	11/5/2019	11/8/2019						
R2-1914396	[Draft] LS on preamble group for 2-step RACH	OPPO	available	11/5/2019	11/8/2019				RAN1		

R2-1914397 RRM relaxation for power saving	OPPO	available	11/5/2019	11/8/2019	
R2-1914398 Text proposal for NR-U impacts on TS 37.340	OPPO	reserved	11/5/2019		B
R2-1914399 LBT aware UL BWP selection for RACH in NR-U	OPPO	available	11/5/2019	11/8/2019	
R2-1914400 Remaining issues on consistent uplink LBT failure for NR-U	OPPO	noted	11/5/2019	11/8/2019	
R2-1914401 2-step RACH for NR-U	OPPO	available	11/5/2019	11/8/2019	
R2-1914402 DRX procedure enhancements due to LBT impacts	OPPO	available	11/5/2019	11/8/2019	
R2-1914403 Remaining issues on NR-U configured grant	OPPO	noted	11/5/2019	11/8/2019	
R2-1914404 CAPC for CG when SRB is multiplexed	OPPO	noted	11/5/2019	11/8/2019	
R2-1914405 Discussion RAN1 LS on supporting multiple frequency dom	OPPO	noted	11/5/2019	11/8/2019	
R2-1914406 Stopping criteria for paging monitoring	OPPO	available	11/5/2019	11/8/2019	
R2-1914407 Discussion on SSB measurement configuration with UE mol	China Unic	available	11/5/2019	11/5/2019	
R2-1914408 Open Issues of Reference Timing Delivery	CATT	noted	11/5/2019	11/8/2019	
R2-1914409 Remaining Issues of Multiple SPS/CG Configurations	CATT	available	11/5/2019	11/8/2019	
R2-1914410 Discussion on Ethernet Header Compression	CATT	available	11/5/2019	11/8/2019	
R2-1914411 Intra-UE prioritization framework considering RAN1/RAN2	CATT	available	11/5/2019	11/8/2019	
R2-1914412 Handling of Dropped MAC PDU	CATT	noted	11/5/2019	11/8/2019	
R2-1914413 MAC PDU Priority Determination	CATT	available	11/5/2019	11/8/2019	
R2-1914414 Equal-priority Handling	CATT	available	11/5/2019	11/8/2019	
R2-1914415 The Prioritization between MAC CEs and UL Data	CATT	available	11/5/2019	11/8/2019	
R2-1914416 Primary Path and Initial State for PDCP Duplication	CATT	noted	11/5/2019	11/8/2019	
R2-1914417 Discussion on Duplication MAC CE	CATT	available	11/5/2019	11/8/2019	
R2-1914418 LCH-to-Cell Restriction in Rel-16	CATT	available	11/5/2019	11/8/2019	
R2-1914419 Discussion on UE based Duplication Activation/Deactivatio	CATT	available	11/5/2019	11/8/2019	
R2-1914420 MAC upgrade for SR dropping in PHY	CATT, Qua	available	11/5/2019	11/8/2019	
R2-1914421 On the remaining open issues of 2-step RACH	CATT	noted	11/5/2019	11/8/2019	
R2-1914422 Load Balancing between RACH Types	CATT, OPP	noted	11/5/2019	11/8/2019	
R2-1914423 Consideration on msgB-RNTI	CATT	available	11/5/2019	11/8/2019	
R2-1914424 RA Type Selection between Legacy CFRA and 2-step CBRA	CATT	available	11/5/2019	11/8/2019	
R2-1914425 Remaining issues on early measurement	CATT	available	11/5/2019	11/8/2019	
R2-1914426 Remaining Issues for Extending RAR Window	Samsung E	noted	11/5/2019	11/7/2019	
R2-1914427 CAPC Aspects for Scheduling SRB in Configured Grant	Samsung E	noted	11/5/2019	11/7/2019	
R2-1914428 Signaling Multiple UL grants for Msg3 Transmission in NR-U	Samsung E	noted	11/5/2019	11/7/2019	
R2-1914429 Draft RRC CR_Supporting RAR Window Size larger than 10n	Samsung E	available	11/5/2019	11/7/2019	
R2-1914430 Report of Email discussion 107bis#76- MSG B Format Desig	Samsung E	noted	11/5/2019	11/8/2019	
R2-1914431 MAC TP_MSGB Format Design	Samsung E	endorsed	11/5/2019	11/8/2019	
R2-1914432 Legacy CFRA and Selection between 2 step and 4 step RA	Samsung E	noted	11/5/2019	11/7/2019	
R2-1914433 2 Step RACH_RNTI for Receiving Network Response	Samsung E	noted	11/5/2019	11/7/2019	
R2-1914434 2 Step RA_RACH Configuration	Samsung E	available	11/5/2019	11/7/2019	
R2-1914435 Open issues for supporting 2 step CFRA	Samsung E	available	11/5/2019	11/7/2019	
R2-1914436 Impact of Mode 1 Resource Allocation on Uu BWP Operatic	Samsung E	available	11/5/2019	11/7/2019	
R2-1914437 RRC Connection Initiation Trigger for V2X Sidelink Commun	Samsung E	noted	11/5/2019	11/7/2019	
R2-1914438 RAN2 Aspects of SCell BFR	Samsung E	available	11/5/2019	11/7/2019	
R2-1914439 Open Issues for Cell Selection and Reselection of NPN cell	CATT	available	11/5/2019	11/8/2019	
R2-1914440 Discussion on Connected mode aspects for NPN	CATT	available	11/5/2019	11/8/2019	
R2-1914441 RLM / RLF procedure in NR V2X Sidelink	CATT	available	11/5/2019	11/8/2019	
R2-1914442 Resource (Re-) selection function in NR V2X Sidelink	CATT	available	11/5/2019	11/8/2019	
R2-1914443 Remaining Issues on SL HARQ	CATT	noted	11/5/2019	11/8/2019	
R2-1914444 Remaining Issues on PDCP	CATT	noted	11/5/2019	11/8/2019	
R2-1914445 Resource allocation mode configuration	CATT	available	11/5/2019	11/8/2019	

R2-1914446 Leftover Issues on LCP	CATT	available	11/5/2019	11/8/2019				
R2-1914447 Leftover Issues for Sidelink Configured Grant	CATT	available	11/5/2019	11/8/2019				
R2-1914448 Remaining Issues for Prioritization	CATT	available	11/5/2019	11/8/2019				
R2-1914449 UE Behavior Clarification during UE States Transition	CATT	revised	11/5/2019	11/8/2019				
R2-1914450 Open Issues for the Bi-directional SLRB	CATT	available	11/5/2019	11/8/2019				
R2-1914451 Discussion on inter-RAT Cell Selection/Reselection	CATT	available	11/5/2019	11/8/2019				
R2-1914452 Left Issues of SL BSR/SR	CATT	available	11/5/2019	11/8/2019				
R2-1914453 Congestion control for NR SL	CATT	available	11/5/2019	11/8/2019				
R2-1914454 Type 1 Sidelink Configured Grant Validity Time	CATT	available	11/5/2019	11/8/2019				
R2-1914455 Re-consideration on PLMN-wide Filter	CATT	noted	11/5/2019	11/8/2019				
R2-1914456 Draft LS on PLMN-wide Filter	CATT	available	11/5/2019	11/8/2019			SA2, RAN3	
R2-1914457 Proposal about the configurations of validity area for early	China Unic	available	11/5/2019	11/5/2019				
R2-1914458 Discussion for early measurement configuration for 2-step	China Unic	available	11/5/2019	11/5/2019				
R2-1914459 Discussion on SL capability signaling for Uu-RRC and PC5-RI	OPPO	available	11/5/2019	11/8/2019				
R2-1914460 Discussion on SL-related Uu-RRC messages	OPPO	available	11/5/2019	11/8/2019				
R2-1914461 Left issues on HARQ for NR-V2X	OPPO	noted	11/5/2019	11/8/2019				
R2-1914462 Left issues on CSI report for NR-V2X	OPPO	noted	11/5/2019	11/8/2019				
R2-1914463 Left issues on UL-SL prioritization for NR-V2X	OPPO	available	11/5/2019	11/8/2019				
R2-1914464 Left issues on PC5-S impact on AS-layer	OPPO	noted	11/5/2019	11/8/2019				
R2-1914465 SL RSRP measurement report via PC5-RRC	OPPO	available	11/5/2019	11/8/2019				
R2-1914466 Left issues on failure case handling for NR V2X	OPPO	noted	11/5/2019	11/8/2019				
R2-1914467 Left issues on SLRB configuration	OPPO	available	11/5/2019	11/8/2019				
R2-1914468 Signaling design for RAT-Dependent positioning methods	CATT	available	11/5/2019	11/8/2019				
R2-1914469 Broadcast Positioning Procedure in Connected Mode	CATT	revised	11/5/2019	11/8/2019				
R2-1914470 Open Issues of Broadcast Positioning Assistance data	CATT	noted	11/5/2019	11/8/2019				
R2-1914471 Introduction of B1C signal in BDS system in A-GNSS	CATT, CAIC	revised	11/5/2019	11/8/2019	B			
R2-1914472 Discussion on WUS assistance indication LS from SA2 and R	NTT DOCO	noted	11/5/2019	11/8/2019				
R2-1914473 [DRAFT] Reply LS on assistance indication for WUS	NTT DOCO	available	11/5/2019	11/8/2019			SA2, CT1, RAN3	S2-1910549
R2-1914474 CE Mode Threshold Adjustments for non-BL and BL UE	NTT DOCO	available	11/5/2019	11/8/2019				
R2-1914475 Report of email discussion [107bis#88][NB-IoT R15]	NTT DOCO	noted	11/5/2019	11/8/2019				
R2-1914476 Support of inter-RAT HO from SA to EN-DC in Rel-16	China Tele	withdrawn	11/5/2019					
R2-1914477 Support of inter-RAT HO from SA to EN-DC in Rel-16	China Tele	withdrawn	11/5/2019					
R2-1914478 Support of inter-RAT HO from SA to EN-DC in Rel-16	China Tele	withdrawn	11/5/2019					
R2-1914479 Support of inter-RAT HO from SA to EN-DC in Rel-16	China Tele	withdrawn	11/5/2019					
R2-1914480 Support of inter-RAT HO from SA to EN-DC in Rel-16	China Tele	withdrawn	11/5/2019					
R2-1914481 Support of inter-RAT HO from SA to EN-DC in Rel-16	China Tele	reserved	11/5/2019					
R2-1914482 Clarification of PDCCH monitoring when not fully aligned w	NTT DOCO	revised	11/5/2019	11/13/2019	F			
R2-1914483 Further Considerations on Capability Coordination for DAPS	CATT	available	11/5/2019	11/8/2019				
R2-1914484 UDC Impacts of DAPS	CATT	available	11/5/2019	11/8/2019				
R2-1914485 Remaining CP Issues of DAPS	CATT	available	11/5/2019	11/8/2019				
R2-1914486 Consideration on WA or MCG Fast Recovery Upon RLF	CATT	available	11/5/2019	11/8/2019				
R2-1914487 Further Discussions on Cell Evaluation for CHO Cell Selectio	CATT	available	11/5/2019	11/8/2019				
R2-1914488 Coexistence of Simultaneous Connectivity and CHO	CATT	available	11/5/2019	11/8/2019				
R2-1914489 Remaining Issues of CHO Configuration	CATT	available	11/5/2019	11/8/2019				
R2-1914490 Considerations on IAB multi connectivity	KDDI Corp	noted	11/5/2019	11/7/2019				
R2-1914491 Discussion on a configuration mismatch between a UE and	KDDI Corp	available	11/5/2019	11/7/2019				
R2-1914492 Discussion on reselection between NPNs and public netwo	KDDI Corp	available	11/5/2019	11/7/2019				
R2-1914493 Open Issues on NPN for UE in Inactive	CATT	available	11/5/2019	11/8/2019				
R2-1914494 Feeder link switch	CATT	revised	11/5/2019	11/8/2019				

R2-1914495 Measurement Initiation Issue for NTN System	CATT	revised	11/5/2019	11/8/2019			
R2-1914496 Discussion on Location Report	CATT	available	11/5/2019	11/8/2019			
R2-1914497 Consideration on the SPS/CG for NTN	CATT	available	11/5/2019	11/8/2019			
R2-1914498 TP on Random Access procedure	CATT	revised	11/5/2019	11/8/2019		F	
R2-1914499 Leftover Issues for RACH Report Optimization	CATT	available	11/5/2019	11/8/2019			
R2-1914500 Configuration of Out-of-coverage Logging	CATT	available	11/5/2019	11/8/2019			
R2-1914501 Recording and Reporting of CEF	CATT	available	11/5/2019	11/8/2019			
R2-1914502 Failure Indication about SCG	CATT	available	11/5/2019	11/8/2019			
R2-1914503 Statistic of UL Delay Measurement in UE	CATT	available	11/5/2019	11/8/2019			
R2-1914504 Uncertainty of L2 Measurement Result Related to URLLC	CATT	available	11/5/2019	11/8/2019			
R2-1914505 Consideration on Successful HO Report	CATT	available	11/5/2019	11/8/2019			
R2-1914506 Supporting of Handover Type Indication in RLF Report	CATT	available	11/5/2019	11/8/2019			
R2-1914507 Report on Email Discussion 107b#85 NRMDT Mobility Histo	CATT	noted	11/5/2019	11/8/2019			
R2-1914508 Discussion on PRACH coordination	CATT	revised	11/5/2019	11/8/2019			
R2-1914509 Reply LS on PRACH configuration conflict detection	CATT	available	11/5/2019	11/8/2019			RAN3 RAN1
R2-1914510 FDD and TDD Timing Alignment for Dual Connectivity	Vodafone	noted	11/5/2019	11/7/2019			
R2-1914511 Support of inter-RAT HO from SA to EN-DC in Rel-16	China Tele	noted	11/5/2019	11/5/2019			
R2-1914512 Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-1(	China Tele	revised	11/5/2019	11/5/2019		B	
R2-1914513 Consecutive Conditional Handover	Apple Inc.	available	11/5/2019	11/8/2019			
R2-1914514 Remaining Issues for IAB Routing	Futurewei	available	11/5/2019	11/8/2019			
R2-1914515 PDCP SN continuity support for RLC UM bearers	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914516 Source connection handling during MBB HO	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914517 CHO SN addition/change handling	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914518 CHO SN addition/change failure handling	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914519 Support per DRB MBB HO configuration	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914520 Running Stage-2 CR for NR-U	Qualcomm	endorsed	11/6/2019	11/8/2019			
R2-1914521 Running RRC CR for NR-U	Qualcomm	endorsed	11/6/2019	11/8/2019			
R2-1914522 RAN2 work plan for UE Power Saving WI	CATT (rapp	noted	11/6/2019	11/8/2019			
R2-1914523 [107bis#69][PowerSaving] Running CR 38.300 (CATT)	CATT (rapp	endorsed	11/6/2019	11/9/2019			
R2-1914524 Remaining issues of PDCCH-WUS	CATT	noted	11/6/2019	11/8/2019			
R2-1914525 Impacts of PDCCH-WUS on RRC	CATT	revised	11/6/2019	11/8/2019			
R2-1914526 Remaining issues on UE assistance for power saving	CATT	available	11/6/2019	11/8/2019			
R2-1914527 Reusing overheating fields for SCell assistance information	CATT, App	available	11/6/2019	11/8/2019			
R2-1914528 Measurement Configuration in Inactive Mode and MR-DC	CATT	available	11/6/2019	11/8/2019			
R2-1914529 Considerations on cell reselection for early measurement r(	CATT	available	11/6/2019	11/8/2019			
R2-1914530 Temporary RS utilization for SCell and SpCell	CATT	available	11/6/2019	11/8/2019			
R2-1914531 Consideration on Dormant SCG State	CATT	available	11/6/2019	11/8/2019			
R2-1914532 Signalling enhancement for Inactive state	CATT	available	11/6/2019	11/8/2019			
R2-1914533 Bearer type negotiation	CATT	available	11/6/2019	11/8/2019			
R2-1914534 Corrections on CG-Config	CATT	agreed	11/6/2019	11/8/2019	1	F	
R2-1914535 Consideration on mode1 resource allocation	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914536 Discussion on UL and SL prioritisation	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914537 Discussion on SL CSI and RSRP report	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914538 Consideration on NR V2X CBR	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914539 Left issues for MAC in NR V2X	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914540 Discussion on left issue in NR V2X UP	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914541 Discussion on NR V2X system information acquisition	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914542 Discussion on remaining issues on SLRB parameters	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914543 Consideration on sidelink RLM management	ZTE Corpo	available	11/6/2019	11/8/2019			

R2-1914544 Consideration on exceptional resource pool	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914545 Consideration on NR V2X cross RAT support	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914546 Handling of SLRB when UE RRC states transition	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914547 Further discussion on RLC AM and UM for NR V2X unicast	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914548 Discussion on NR V2X groupcast feedback options	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914549 Discussion the missing of UE coverage status description in	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914550 Running Idle/Inactive CR for NR-U	Qualcomm	endorsed		11/6/2019	11/8/2019			
R2-1914551 Fast Scell activation in sTAG	OPPO	available		11/6/2019	11/8/2019			
R2-1914552 Introduction of dormancy behavior in NR	OPPO	available		11/6/2019	11/8/2019			
R2-1914553 Open issues for early measurement	OPPO	available		11/6/2019	11/8/2019			
R2-1914554 Open issues for CLI measurment	OPPO	available		11/6/2019	11/8/2019			
R2-1914555 UE assistance information reporting for RRC_INACTIVE UE	OPPO	available		11/6/2019	11/8/2019			
R2-1914556 Security algorithom update in RRC reestablishment messag	OPPO,Hua	available		11/6/2019	11/8/2019			
R2-1914557 Correction on RRC Reestablishment procedure	OPPO	available		11/6/2019	11/8/2019		F	
R2-1914558 Correction Release cause for RRC signalling only connectior	OPPO	available		11/6/2019	11/8/2019		F	
R2-1914559 Correction on split PDU session	OPPO	not pursued		11/6/2019	11/8/2019		F	
R2-1914560 Discussion on Cached Data Handling for INACTIVE UE	OPPO	available		11/6/2019	11/8/2019			
R2-1914561 (running)36.304CR on cell selection(reselection) for NR V2>	ZTE Corpo	endorsed		11/6/2019	11/13/2019		B	
R2-1914562 (running)38.304CR on cell selection(reselection) for NR V2>	ZTE Corpo	endorsed		11/6/2019	11/13/2019			
R2-1914563 CR on NR V2X UE coverage status description in TS 36.304	ZTE Corpo	available		11/6/2019	11/8/2019		B	
R2-1914564 CR on NR V2X UE coverage status description in TS 38.304	ZTE Corpo	available		11/6/2019	11/8/2019		B	
R2-1914565 Discussion on DL/UL PRS based positioning	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914566 Modification to Multi-cell power control	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914567 Discussion on ECID positioning in NR	ZTE Corpo	available		11/6/2019	11/8/2019			
R2-1914568 Draft LS on configuration exchange for CLI measurement	OPPO	available		11/6/2019	11/8/2019			RAN3
R2-1914569 Draft LS on early measurement configuration during 2 step	OPPO	available		11/6/2019	11/8/2019			RAN3
R2-1914570 Correction of cell reselection parameters for multi-beam o	Qualcomm	revised		11/6/2019	11/8/2019	1	F	
R2-1914571 Correction on field description of cellReselectionInfoComm	Qualcomm	agreed		11/6/2019	11/8/2019	1	F	
R2-1914572 Handling of UL LBT failures	Intel Corpo	available		11/6/2019	11/8/2019			
R2-1914573 Channel Access Priority selection and multiplexing for Conf	Intel Corpo	available		11/6/2019	11/8/2019			
R2-1914574 Multiple Active Configured Grants for NR-u	Intel Corpo	available		11/6/2019	11/8/2019			
R2-1914575 SCell Dormancy operation in NR	Intel Corpo	noted		11/6/2019	11/8/2019			
R2-1914576 Practical scoping of SCG suspension operation in NR	Intel Corpo	noted		11/6/2019	11/8/2019			
R2-1914577 Miscellaneous corrections on UE capability fields	Intel Corpo	revised		11/6/2019	11/8/2019	2	F	
R2-1914578 Clarification on the restriction of maximum SRS resource se	Intel Corpo	agreed		11/6/2019	11/8/2019	1	F	
R2-1914579 Signaling Support for Frame Based Equipment for NR-u	Intel Corpo	noted		11/6/2019	11/8/2019			
R2-1914580 Measurement gap capability information for Rel-16 UE	Intel Corpo	available		11/6/2019	11/8/2019			
R2-1914581 Work plan for Rel-16 UE Capability feature list	Intel Corpo	revised		11/6/2019	11/8/2019			
R2-1914582 CAPC for RACH and PUCCH in NR-U	MediaTek	available		11/6/2019	11/7/2019			
R2-1914583 On Restrictions in Multiplexing of High and Low Priority LCI	MediaTek	available		11/6/2019	11/7/2019			
R2-1914584 Including RSSI and Channel Occupancy in NR-U UE Capabilit	MediaTek	available		11/6/2019	11/7/2019			
R2-1914585 Conditional HO with L2 packet duplication in NR NTN	MediaTek	available		11/6/2019	11/7/2019			
R2-1914586 Improving Cell Reselection using Next Cell Information in LI	MediaTek	available		11/6/2019	11/7/2019			
R2-1914587 Configuring Threshold-based Soft Handover in LEO NTN	MediaTek	available		11/6/2019	11/7/2019			
R2-1914588 Synchronized Handover without Random Access in LEO NTI	MediaTek	available		11/6/2019	11/18/2019			
R2-1914589 On Increasing Number of HARQ Processes in NTN	MediaTek	available		11/6/2019	11/7/2019			
R2-1914590 UE CLI Measurements for Multiconnectivity	Nokia, Nok	available		11/6/2019	11/8/2019			
R2-1914591 Remaning Issues for UE-CLI	Nokia, Nok	available		11/6/2019	11/8/2019			
R2-1914592 On Release of source cell in DAPS Handover	Nokia, Nok	noted		11/6/2019	11/8/2019			

R2-1914593 Running CR for 36.304 for Rel-16 NB-IoT Enhancements	Nokia, Nok	available	11/6/2019	11/8/2019				
R2-1914594 GWUS Configuration and Resource mapping	Nokia, Nok	available	11/6/2019	11/8/2019				
R2-1914595 Remaining Issues for PUR	Nokia, Nok	available	11/6/2019	11/8/2019				
R2-1914596 PUR for control plane solution	Nokia, Nok	available	11/6/2019	11/8/2019				
R2-1914597 RNA Configuration	Nokia (Rap	not pursued	11/6/2019	11/8/2019		F		
R2-1914598 NPN Work Plan	Nokia, Chi	noted	11/6/2019	11/8/2019				
R2-1914599 NPN Stage 2 Draft CR	Nokia (Rap	revised	11/6/2019	11/7/2019		B		
R2-1914600 LS on Emergency Services in SNPN	Nokia (Rap	noted	11/6/2019	11/8/2019			SA2	
R2-1914601 Split Threshold for DC and NR-U	Nokia, Nok	noted	11/6/2019	11/8/2019				
R2-1914602 QoS Flow Handling	Nokia, Nok	available	11/6/2019	11/8/2019				
R2-1914603 MDBV Enforcement	Nokia, Inte	available	11/6/2019	11/8/2019				
R2-1914604 Notification for Alternative QoS profiles	Nokia, Nok	postponed	11/6/2019	11/8/2019				
R2-1914605 LS on Notification for Alternative QoS profiles	Nokia, Nok	postponed	11/6/2019	11/8/2019			SA2	RAN3
R2-1914606 HARQ process ID for deprioritized configured grants	III	available	11/6/2019	11/8/2019				
R2-1914607 Support the change between normal PDCP entity and DAPS	Mediatek I	noted	11/6/2019	11/8/2019				
R2-1914608 Draft CR for 38.323 to support the change between normal	Mediatek I	available	11/6/2019	11/8/2019		B		
R2-1914609 Draft CR for 36.323 to support the change between normal	Mediatek I	available	11/6/2019	11/8/2019		B		
R2-1914610 RLC UM handling during DAPS HO	MediaTek	noted	11/6/2019	11/8/2019				
R2-1914611 RLC Impacts analysis with DAPS during HO	Mediatek I	noted	11/6/2019	11/8/2019				
R2-1914612 QoS Flow to DRB Remapping during DAPS HO	Mediatek I	noted	11/6/2019	11/8/2019				
R2-1914613 draft CR to 37.324 to support QoS flow remapping during D	Mediatek I	available	11/6/2019	11/8/2019		B		
R2-1914614 Correction on reestablishRLC	CATT	available	11/6/2019	11/8/2019	1	F		
R2-1914615 DRX ambiguous period enhancements for NTN	Asia Pacifi	available	11/6/2019	11/8/2019				
R2-1914616 Discussion on SCell BFR procedure	Asia Pacifi	available	11/6/2019	11/8/2019				
R2-1914617 Discussion on 2-step RACH for BFR	Asia Pacifi	available	11/6/2019	11/8/2019				
R2-1914618 QoS in NR V2X	Fraunhofe	available	11/6/2019	11/7/2019				
R2-1914619 PDCP status reporting in target cell at DAPS handover	Ericsson	available	11/6/2019	11/7/2019				
R2-1914620 RLC retransmissions to source during DAPS HO	Ericsson	withdrawn	11/6/2019	11/7/2019				
R2-1914621 Specification impact from RLC-UM DAPS support	Ericsson	withdrawn	11/6/2019	11/7/2019				
R2-1914622 Release of source cell at DAPS handover	Ericsson	available	11/6/2019	11/7/2019				
R2-1914623 Fallback to source cell during DAPS handover	Ericsson	available	11/6/2019	11/7/2019				
R2-1914624 On the configuration of DAPS handover per DRB	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914625 Capability coordination for DAPS handover	Ericsson	available	11/6/2019	11/7/2019				
R2-1914626 Cell Selection and Reselection aspects of NPN	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914627 Connected mode aspects of NPN	Ericsson	available	11/6/2019	11/7/2019				
R2-1914628 SIB1 design for NPN	Ericsson	available	11/6/2019	11/7/2019				
R2-1914629 On skipping supportedBandCombinations for band n90	Ericsson	noted	11/6/2019	11/8/2019				
R2-1914630 CR to 38.304 on dedicated cell reselection priorities	Ericsson	merged	11/6/2019	11/7/2019		F		
R2-1914631 Dummify one of the cellReservedForOperatorUse-CRS-flags	Ericsson	withdrawn	11/6/2019			F		
R2-1914632 [107bis#66][NR/NTN] Running TP (Thales)	THALES	revised	11/6/2019	11/7/2019				
R2-1914633 Inputs to TR 38.821 recommendations	THALES, N	revised	11/6/2019	11/7/2019				
R2-1914634 Remaining open issues for CHO	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914635 Handling of a HO command while UE is monitoring CHO	Ericsson	available	11/6/2019	11/7/2019				
R2-1914636 Suspend/Release while monitoring CHO in NR	Ericsson	available	11/6/2019	11/7/2019				
R2-1914637 Conditional PSCell addition/change	Ericsson	available	11/6/2019	11/7/2019				
R2-1914638 TP for 38.331 on CHO	Ericsson	available	11/6/2019	11/7/2019		B		
R2-1914639 Further details on CHO failure handling	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914640 Running CR for Introduction of Even futher Mobility enhan	Ericsson	endorsed	11/6/2019	11/7/2019				
R2-1914641 Discussion on incoming LSes for QoE measurement collecti	Ericsson	noted	11/6/2019	11/7/2019				

R2-1914642 Additions to QoE measurement collection	Ericsson	available	11/6/2019	11/7/2019		C			
R2-1914643 Draft reply LS on QoE Measurement Collection	Ericsson	revised	11/6/2019	11/7/2019			R2-191206	SA5	CT1, RAN3 S5-195659
R2-1914644 UE capabilities for SRVCC from 5G to 3G	Ericsson	available	11/6/2019	11/7/2019					
R2-1914645 Introduction of SRVCC from 5G to 3G	Ericsson	revised	11/6/2019	11/7/2019		B			
R2-1914646 Running CR for introduction of SRVCC from 5G to 3G	Ericsson	endorsed	11/6/2019	11/7/2019		B			
R2-1914647 Remaining issues on Paging	Ericsson	available	11/6/2019	11/7/2019					
R2-1914648 RRM in NR-U	Ericsson	available	11/6/2019	11/8/2019					
R2-1914649 Correction on T322	Nokia, Nok	agreed	11/6/2019	11/7/2019	2	F			
R2-1914650 Correction on T322	Nokia, Nok	agreed	11/6/2019	11/7/2019	1	A			
R2-1914651 On combined RRC procedures	Nokia, Nok	available	11/6/2019	11/7/2019					
R2-1914652 RRC processing delays for combined procedures	Nokia, Nok	available	11/6/2019	11/7/2019	1	F			
R2-1914653 Remaining issues of SL Prioritization	MediaTek	revised	11/6/2019	11/8/2019					
R2-1914654 Remaining issues of SL LCP	MediaTek	available	11/6/2019	11/8/2019					
R2-1914655 On SL configured grant	MediaTek	available	11/6/2019	11/8/2019					
R2-1914656 Support of simultaneous mode 1 and mode 2	MediaTek	available	11/6/2019	11/8/2019					
R2-1914657 RRM Measurements for Mobility in NR-U	Fraunhofe	available	11/6/2019	11/7/2019					
R2-1914658 Implicit Indication of LBT Failures in RRM Measurements	Fraunhofe	available	11/6/2019	11/7/2019					
R2-1914659 Multiple Frequency Domain Monitoring Occasions	Fraunhofe	available	11/6/2019	11/7/2019					
R2-1914660 Introduction of a second SMTC per frequency carrier in idle	Orange, AT	endorsed	11/6/2019	11/7/2019	2	B			
R2-1914661 Introduction of a second SMTC for inter-RAT cell reselectio	Orange, AT	endorsed	11/6/2019	11/7/2019	1	B			
R2-1914662 Correction on frequency indication in SIB1 and SIB2	Huawei, Hi	agreed	11/6/2019	11/7/2019	2	F			
R2-1914663 Correction on parameter description of beamManagement	Huawei, Hi	postponed	11/6/2019	11/7/2019	1	F			
R2-1914664 Clarification on gap sharing configuration handling at handi	Huawei, Hi	postponed	11/6/2019	11/7/2019		F			
R2-1914665 CR to 38.306 on DRX-based intra-frequency SFTD measurer	Huawei, Hi	revised	11/6/2019	11/7/2019		F			
R2-1914666 CR to 38.331 on DRX-based intra-frequency SFTD measurer	Huawei, Hi	revised	11/6/2019	11/7/2019		F			
R2-1914667 CR to 38.331 on CGI information	Huawei, Hi	agreed	11/6/2019	11/7/2019	1	F			
R2-1914668 Report of [107bis#50][NR TEI16] Adding CSI-RS information	Huawei, Hi	noted	11/6/2019	11/8/2019					
R2-1914669 CR to 38.331 on CSI-RS inter-node message	Huawei, Hi	endorsed	11/6/2019	11/8/2019		C			
R2-1914670 Reply LS on CSI-RS configuration transfer	Huawei, Hi	revised	11/6/2019	11/8/2019			R2-191433	RAN3	
R2-1914671 Support of releasing UL configuration	Huawei, Hi	endorsed	11/6/2019	11/7/2019	2	F			
R2-1914672 DRX configuration coordination in (NG)EN-DC	Huawei, Hi	available	11/6/2019	11/7/2019					
R2-1914673 On the support of NG-based (i.e. via CN) handover based u	Huawei, Hi	available	11/6/2019	11/7/2019					
R2-1914674 MAC CE signaling enhancement for TCI indication of single-	Huawei, Hi	available	11/6/2019	11/7/2019					
R2-1914675 RRC signalling for MIMO enhancements	Huawei, Hi	reserved	11/6/2019						
R2-1914676 MAC CE signaling for multi-beam enhancement	Huawei, Hi	available	11/6/2019	11/7/2019					
R2-1914677 NR-DC power control	Huawei, Hi	noted	11/6/2019	11/8/2019					
R2-1914678 Idle/inactive NR measurements in LTE and in NR	Huawei, Hi	available	11/6/2019	11/8/2019					
R2-1914679 MAC impact to support the efficient and low latency SCell c	Huawei, Hi	available	11/6/2019	11/8/2019					
R2-1914680 CG fast recovery via alternative UL	Huawei, Hi	available	11/6/2019	11/8/2019					
R2-1914681 Remaining issues on fast MCG link recovery	Huawei, Hi	noted	11/6/2019	11/8/2019					
R2-1914682 RAN2 impact to support cross-carrier scheduling with diffe	Huawei, Hi	noted	11/6/2019	11/8/2019					
R2-1914683 Clarification on RAN2 impact to support DL HARQ timing fo	Huawei, Hi	available	11/6/2019	11/8/2019					
R2-1914684 UE capabilities for DC and CA enhancements	Huawei, Hi	available	11/6/2019	11/8/2019					
R2-1914685 Correction on PUCCH transform precoding	vivo, Nokia	agreed	11/6/2019	11/8/2019		F			
R2-1914686 Cell re-selection during RRC connection resume	vivo	available	11/6/2019	11/8/2019		F			
R2-1914687 Correction on beamSwitchTiming values of 224 and 336	vivo, Huaw	endorsed	11/6/2019	11/8/2019		F			
R2-1914688 Introduction of NR IDC solution	vivo	available	11/6/2019	11/8/2019		F			
R2-1914689 38.304 Running CR on UE Power saving in NR	vivo	available	11/6/2019	11/8/2019		B			
R2-1914690 Left issues and RRC parameters for PDCCH-WUS	vivo	available	11/6/2019	11/8/2019					

R2-1914691 WUS impact upon BWP switching	vivo	withdrawn	11/6/2019		
R2-1914692 UE assistance information for power saving	vivo	available	11/6/2019	11/8/2019	
R2-1914693 Network controlled RRM measurement relaxation and crite	vivo	available	11/6/2019	11/8/2019	
R2-1914694 UE Power Consumption Reduction in RRM Measurement	vivo	available	11/6/2019	11/8/2019	
R2-1914695 Running 36.321 CR for LTE feMob	vivo (rappo	endorsed	11/6/2019	11/8/2019	B
R2-1914696 Running 38.321 CR for NR mobility enh.	vivo (rappo	endorsed	11/6/2019	11/8/2019	B
R2-1914697 RRC remaining issues for conditional handover configuratio	vivo	available	11/6/2019	11/8/2019	
R2-1914698 Discussion on CHO release	vivo	available	11/6/2019	11/8/2019	
R2-1914699 Discussion on the number of prepared cells for CHO	vivo	available	11/6/2019	11/8/2019	
R2-1914700 Discussion on the timer design for CHO	vivo	available	11/6/2019	11/8/2019	
R2-1914701 Discussion on simultaneous connectivity in CHO	vivo	available	11/6/2019	11/8/2019	
R2-1914702 Discussion on the DC configuration in conditional handover	vivo	available	11/6/2019	11/8/2019	
R2-1914703 Remaining issue of conditional PSCell addition and change	vivo	available	11/6/2019	11/8/2019	
R2-1914704 Failure handling of the non-DAPS DRB	vivo	available	11/6/2019	11/8/2019	
R2-1914705 Remaining PDCP issues of DAPS handover	vivo	available	11/6/2019	11/8/2019	
R2-1914706 SRB handling of DAPS failure	vivo	available	11/6/2019	11/8/2019	
R2-1914707 Clarification on the RLC handling of DAPS handover	vivo	noted	11/6/2019	11/8/2019	
R2-1914708 Discussion on the signaling procedures of the DAPS HO	vivo	available	11/6/2019	11/8/2019	
R2-1914709 Discussion on the mTRP modelling	vivo	available	11/6/2019	11/8/2019	
R2-1914710 Email discussion summy on eMIMO MAC CE	vivo (rappo	noted	11/6/2019	11/8/2019	
R2-1914711 Discussion on eMIMO MAC CE	vivo	revised	11/6/2019	11/8/2019	
R2-1914712 Remaining issue of SCell BFR	vivo	available	11/6/2019	11/8/2019	
R2-1914713 New MAC CE for indicating spatial resource for PUCCH resc	Ericsson	available	11/6/2019	11/8/2019	B
R2-1914714 Miscellaneous corrections	Lenovo, M	agreed	11/6/2019	11/7/2019	F
R2-1914715 Miscellaneous corrections	Lenovo, M	revised	11/6/2019	11/7/2019	F
R2-1914716 Running RRC CR for Introduction of NR eMIMO	Ericsson	revised	11/6/2019	11/15/2019	B
R2-1914717 Issue of D-PUR reconfiguration and release for CP solution	ZTE Corpo	available	11/6/2019	11/8/2019	
R2-1914718 PUCCH MAC CE and SRS MAC CE	Ericsson	available	11/6/2019	11/8/2019	
R2-1914719 CHO for NTN LEO	Ericsson	revised	11/6/2019	11/13/2019	
R2-1914720 Remaining issues for D-PUR in IDLE	ZTE Corpo	available	11/6/2019	11/8/2019	
R2-1914721 Input to TR38.821 on NGSO constellation greater than 600	HUGHES N	agreed	11/6/2019	11/7/2019	
R2-1914722 Remaining issues of supporting short eDRX for eMTC conne	ZTE Corpo	noted	11/6/2019	11/8/2019	
R2-1914723 Consideration on UE ID of PO calculation for NB-IoT connec	ZTE Corpo	noted	11/6/2019	11/8/2019	
R2-1914724 Reduced User Data Interruption for NTN	Ericsson	available	11/6/2019	11/13/2019	
R2-1914725 Remaining issues for accurate reference timing delivery in T	ZTE Corpo	available	11/6/2019	11/8/2019	
R2-1914726 Stop monitoring the paging in NR-U	PANASONI	available	11/6/2019	11/7/2019	
R2-1914727 Running stage 2 CR on positioning ([107bis#78][NR Pos])	Intel Corpo	revised	11/6/2019	11/8/2019	
R2-1914728 LPP CR Capturing RAN1 parameters for positioning ([107bis	Intel Corpo	available	11/6/2019	11/8/2019	
R2-1914729 Support of NR dependent positioning methods	Intel Corpo	noted	11/6/2019	11/8/2019	
R2-1914730 Assistance data for UE based DL only positioning	Intel Corpo	available	11/6/2019	11/8/2019	
R2-1914731 UE capability on positioning	Intel Corpo	noted	11/6/2019	11/8/2019	
R2-1914732 Access Control for SNPN and CAG	Intel Corpo	available	11/6/2019	11/8/2019	
R2-1914733 Parent Selection at IAB nodes during Initial Setup	Intel Corpo	available	11/6/2019	11/8/2019	
R2-1914734 Multi-route support in IAB	Intel Corpo	available	11/6/2019	11/8/2019	
R2-1914735 Flow control in IAB - remaining issues	Intel Corpo	noted	11/6/2019	11/8/2019	
R2-1914736 Uplink latency reduction	Intel Corpo	available	11/6/2019	11/8/2019	
R2-1914737 Further discussion on Backhaul RLF handling	Intel Corpo	available	11/6/2019	11/8/2019	
R2-1914738 Handling of Fairness in IAB	Intel Corpo	noted	11/6/2019	11/8/2019	
R2-1914739 Conditional Handover for Non-Terrestrial Networks	Intel Corpo	available	11/6/2019	11/8/2019	

R2-1914740	Support of multiple SPS and CG configurations	Intel Corpc	noted	11/6/2019	11/8/2019				
R2-1914741	Details for Ethernet header compression solution	Intel Corpc	noted	11/6/2019	11/8/2019				
R2-1914742	PDCP duplication with multiple RLC entities	Intel Corpc	available	11/6/2019	11/8/2019				
R2-1914743	UE based PDCP duplication activation/deactivation	Intel Corpc	available	11/6/2019	11/8/2019				
R2-1914744	Security requirement for UE capability enquiry for NR	Intel Corpc	agreed	11/6/2019	11/8/2019	2	C		
R2-1914745	Security requirement for UE capability enquiry for LTE	Intel Corpc	postponed	11/6/2019	11/8/2019	2	C		
R2-1914746	Restoring RoHC/SDAP during Resume	Intel	revised	11/6/2019	11/8/2019		F		
R2-1914747	Parent Selection at UEs during Initial Setup	Intel Corpc	available	11/6/2019	11/8/2019				
R2-1914748	Remaining issues for reference time delivery	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914749	On downlink delay compensation	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914750	On support of non-integer multiple of CG/SPS periodicities	Ericsson	available	11/6/2019	11/7/2019				
R2-1914751	SPS and CG remaining config aspects	Ericsson	available	11/6/2019	11/7/2019				
R2-1914752	SPS and CG remaining MAC aspects	Ericsson	available	11/6/2019	11/7/2019				
R2-1914753	Reliability aspects in LCP restriction enhancement	Ericsson	available	11/6/2019	11/7/2019				
R2-1914754	Miscellaneous issues with L2 impacts	Ericsson	available	11/6/2019	11/7/2019				
R2-1914755	Ethernet header compression	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914756	On EHC feedback	Ericsson	available	11/6/2019	11/7/2019				
R2-1914757	Handling of de-prioritized MAC PDUs	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914758	Main functions of intra-UE data-data prioritization	Ericsson	available	11/6/2019	11/7/2019				
R2-1914759	Intra-UE control-data – SR over PUSCH	Ericsson	available	11/6/2019	11/7/2019				
R2-1914760	Configuration and RRC aspects of PDCP Duplication	Ericsson	noted	11/6/2019	11/7/2019				
R2-1914761	Open issues related to MAC CE for PDCP duplication	Ericsson	available	11/6/2019	11/7/2019				
R2-1914762	RRC running CR for NR IIoT	Ericsson	endorsed	11/6/2019	11/7/2019				
R2-1914763	Report of email discussion [107bis#67] [NR - NTN]	Ericsson	revised	11/6/2019	11/12/2019				
R2-1914764	CR of TS 36.355 for introducing NavIC in LTE	Reliance Ji	revised	11/6/2019	11/10/2019	2	B		
R2-1914765	CR of TS 36.331 for introducing NavIC in LTE	Reliance Ji	revised	11/6/2019	11/10/2019	1	B		
R2-1914766	CR of TS 36.305 for introducing NavIC in LTE	Reliance Ji	revised	11/6/2019	11/10/2019	1	B		
R2-1914767	Support for Indian Navigation Satellite System (NavIC)	Reliance Ji	available	11/6/2019	11/10/2019				
R2-1914768	Enhancements for low-latency IAB Uplink scheduling	Futurewei	available	11/6/2019	11/8/2019				
R2-1914769	NR-U specific aspects for 2-step RACH	Qualcomm	noted	11/6/2019	11/8/2019				
R2-1914770	Increased peak data rate for HD-FDD MTC UEs	Qualcomm	noted	11/6/2019	11/8/2019				
R2-1914771	[DRAFT] Rely LS on support of high peak data rate for Cat-M	Qualcomm	revised	11/6/2019	11/8/2019			R1-191139	RAN1
R2-1914772	DRX Active Time for NR-U	Qualcomm	available	11/6/2019	11/8/2019				
R2-1914773	MAC Scheduling Aspects of Multi-TTI Grant	Qualcomm	noted	11/6/2019	11/8/2019				
R2-1914774	UE impact of second SMTC periodicity	Qualcomm	noted	11/6/2019	11/8/2019				
R2-1914775	Remaining issues of reference time delivery	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914776	Prioritization issues for MAC CEs and PUSCH	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914777	Remaining issues for EHC	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914778	Support non-compressed packets transmission without cor	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914779	Solutions to mitigate the periodicity misalignment betweer	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914780	Remaining issues for CG/SPS configurations	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914781	New Confirmation MAC CE for multiple CG configurations	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914782	Discussion on mapping between LCH and CG configurations	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914783	UE autonomous transmission in a CG resource for deprioriti	Huawei, Hi	withdrawn	11/6/2019	11/7/2019				
R2-1914784	Network controlled activation/deactivation of PDCP duplica	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914785	Cell restriction for PDCP duplication with up to 4 legs	Huawei, Hi	available	11/6/2019	11/8/2019				
R2-1914786	Discussion on multiplexing of data	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914787	Discussion on DL LBT failure impact on RLF triggering	Huawei, Hi	available	11/6/2019	11/7/2019				
R2-1914788	Updates to reestablishment procedure	ZTE Corpo	available	11/6/2019	11/7/2019	3	C		

R2-1914789	Idle Mode cell reselection based on CN type supported	Qualcomm	noted	11/6/2019	11/8/2019			
R2-1914790	LBT aspects of 2-step RACH MSGA	ZTE Corpo	available	11/6/2019	11/7/2019			
R2-1914791	LBT failure report on SCell	ZTE Corpo	available	11/6/2019	11/7/2019			
R2-1914792	Multiple Msg1 transmission opportunities	ZTE Corpo	available	11/6/2019	11/7/2019			
R2-1914793	RAR MAC PDU design for NR-U	ZTE Corpo	available	11/6/2019	11/7/2019			
R2-1914794	Multiple configured grants	ZTE Corpo	available	11/6/2019	11/7/2019			
R2-1914795	Remaining issues of paging for NR-U	ZTE Corpo	available	11/6/2019	11/7/2019			
R2-1914796	Remaining open issues for 2-step CBRA	ZTE Corpo	noted	11/6/2019	11/7/2019			
R2-1914797	Consideration on the MsgB RA-RNTI calculation	ZTE Corpo	available	11/6/2019	11/7/2019			
R2-1914798	Running MAC CR for 2-step RACH	ZTE Corpo	endorsed	11/6/2019	11/7/2019		B	
R2-1914799	Summary of running MAC CR review issue list	ZTE Corpo	noted	11/6/2019	11/7/2019			
R2-1914800	Support of CFRA with 2-step RACH	ZTE Corpo	noted	11/6/2019	11/7/2019			
R2-1914801	UAC information change indication in 5GC	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914802	UE identity for CIoT/5GC UP Optimization and RRC indicatic	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914803	PTW support for RRC_INACTIVE state with short eDRX	Qualcomm	noted	11/6/2019	11/8/2019			
R2-1914804	UE capability co-ordination signalling aspects for DAPS HO	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914805	Mobility Robustness enhancement for combined CHO and	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914806	IAB workplan update	Qualcomm	noted	11/6/2019	11/7/2019			
R2-1914807	LTE DAPS handover UE RF chain requirements	Qualcomm	available	11/6/2019	11/8/2019			
R2-1914808	IAB BAP upstream routing	Qualcomm	available	11/6/2019	11/7/2019			
R2-1914809	TP to running NR_IAB CR to 38340 on BAP functional view	Qualcomm	available	11/6/2019	11/7/2019			
R2-1914810	Clarification on security key change and bearer terminatior	ZTE Corpo	agreed	11/6/2019	11/8/2019	1	F	
R2-1914811	Clarification of NR-DC synchronization	ZTE Corpo	agreed	11/6/2019	11/8/2019	1	F	
R2-1914812	Further issues on CHO configuration and execution	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914813	Discussion on CHO execution condition	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914814	Discussion on fast RLF recovery when applying CHO and fas	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914815	Discussion on combination of DAPS and CHO	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914816	Discussion on conditional PSCell addition and change	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914817	Discussion on release of source cell in DAPS HO	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914818	Remaing aspects of control plane handling in DAPS HO	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914819	Remaining issues on UE capability coordination	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914820	Remaining Issues on Early Measurements	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914821	Inter-RAT Operation	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914822	Scell dormancy behaviour	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914823	On SCG suspension	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914824	Maintaining SCG Configuration in Resume procedure	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914825	Further issues on MCG fast recovery	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914826	Configuration for MCG fast recovery	ZTE Corpo	available	11/6/2019	11/8/2019			
R2-1914827	IAB BAP layer control messages	Qualcomm	available	11/6/2019	11/7/2019			
R2-1914828	IAB scheduling support	Qualcomm	noted	11/6/2019	11/7/2019			
R2-1914829	[DRAFT] LS on IAB scheduling support	Qualcomm	available	11/6/2019	11/7/2019			RAN3
R2-1914830	IAB load reporting to IAB-donor CU-CP	Qualcomm	noted	11/6/2019	11/7/2019			
R2-1914831	IAB flow control feedback info	Qualcomm	revised	11/6/2019	11/7/2019			
R2-1914832	[107bis#53][NR LTE MobE] UE capability structure DAPS/RL	Intel Corpo	noted	11/6/2019	11/11/2019			
R2-1914833	RRC running CR for NR mobility on DAPS HO ([107bis#54])	Intel Corpo	endorsed	11/6/2019	11/8/2019		B	
R2-1914834	RRC running CR for NR mobility on CHO ([107bis#54])	Intel Corpo	endorsed	11/6/2019	11/8/2019		B	
R2-1914835	Summary of open issues on RRC running CR-DAPS ([107bis	Intel Corpo	noted	11/6/2019	11/8/2019			
R2-1914836	Control plane consideration for dual active protocol stack (	Intel Corpo	noted	11/6/2019	11/8/2019			
R2-1914837	Handling of CHO configuration and requirement (compliant	Intel Corpo	noted	11/6/2019	11/8/2019			

R2-1914838 SDAP and PDCP handling for DAPS HO	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914839 Handling of measurement configuration for execution conc	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914840 DAPS failure handling	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914841 UE Feature list for Rel-16 Mobility Enhancement	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914842 Other User Plane Stage-3 issues on 2-Step RACH	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914843 Remaining issues on PUSCH resource unit selection for 2-st	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914844 LBT impact on MsgA	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914845 PDCCH-WUS operation with CDRX	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914846 UE assistance for C-DRX, SCell and moving UE out of RRC_C	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914847 Relaxation of RRM measurements	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914848 Left issues on NR SL MAC design	Intel Corpc	noted	11/6/2019	11/8/2019		
R2-1914849 Considerations on SL RLM/RLF procedure	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914850 On HARQ feedback support for NR SL	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914851 Remaining issues on sidelink configured grant design	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914852 SL UE capability aspects	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914853 Cross-RAT scheduling for NR V2X SL	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914854 Discussion of the Working assumption on Measurement co	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914855 Summary of open issues on RRC running CR-CHO ([107bis#	Intel Corpc	noted	11/6/2019	11/8/2019		
R2-1914856 Remaning issues on the support of 5GCN connectivity	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914857 Use of extended DRX in RRC inactive state	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914858 Additional issues in D-PUR in RRC_IDLE	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914859 Non-BL UE operation in standalone deployment	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914860 Introduction of Rel-16 eMTC enhancements	Intel Corpc	available	11/6/2019	11/8/2019	B	
R2-1914861 Non-BL UE in normal and enhanced coverage	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914862 UE capability for 2-step RACH	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914863 Open issues on Configuration of MCG failure indication anc	Intel Corpc	available	11/6/2019	11/8/2019		
R2-1914864 Draft LS on Uplink LBT failure indication	Qualcomm	revised	11/6/2019	11/8/2019		RAN1
R2-1914865 Considerations for Geographical Zone Design for NR V2X	InterDigita	available	11/7/2019	11/8/2019		
R2-1914866 RAN2 Aspects of HARQ for NR V2X	InterDigita	available	11/7/2019	11/8/2019		
R2-1914867 Need for LCP Restriction on MCR	InterDigita	noted	11/7/2019	11/8/2019		
R2-1914868 Remaining Aspects of UL/SL Prioritization	InterDigita	available	11/7/2019	11/8/2019		
R2-1914869 Multiple SL Configured Grants and UE Assistance	InterDigita	available	11/7/2019	11/8/2019		
R2-1914870 RAN2 Aspects of CSI Reporting	InterDigita	noted	11/7/2019	11/8/2019		
R2-1914871 RLM/RLF for NR V2X	InterDigita	available	11/7/2019	11/8/2019		
R2-1914872 RAN2 Aspects of Simultaneous Configuration of Mode 1 an	InterDigita	available	11/7/2019	11/8/2019		
R2-1914873 Implementing Starvation Avoidance for NR V2X	InterDigita	noted	11/7/2019	11/8/2019		
R2-1914874 Handling the SCG Configuration in RRC Resume	InterDigita	available	11/7/2019	11/8/2019		
R2-1914875 Control Plane Aspects of DAPS HO	InterDigita	available	11/7/2019	11/8/2019		
R2-1914876 On Combining RUDI and CHO	InterDigita	available	11/7/2019	11/8/2019		
R2-1914877 Conditional PSCell addition/change	InterDigita	available	11/7/2019	11/8/2019		
R2-1914878 Intra-UE Prioritization for Overlapping PUSCHs	InterDigita	available	11/7/2019	11/7/2019		
R2-1914879 L2 aspects of priority level indication	InterDigita	noted	11/7/2019	11/7/2019		
R2-1914880 Intra UE Prioritization between SR and PUSCH	InterDigita	available	11/7/2019	11/7/2019		
R2-1914881 Paging Procedure in NR-U	InterDigita	noted	11/7/2019	11/7/2019		
R2-1914882 Handling UL LBT Failures	InterDigita	available	11/7/2019	11/7/2019		
R2-1914883 RLM and RLF for NR-U	InterDigita	available	11/7/2019	11/7/2019		
R2-1914884 PDCP security issue about duplicate detection	Samsung, I	available	11/7/2019	11/8/2019		
R2-1914885 Down-scoping of DAPS HO scenarios for NR	Qualcomm	noted	11/7/2019	11/8/2019		
R2-1914886 On Maximum Number of CHO Candidate Cells and Nodes	Charter Co	withdrawn	11/7/2019	11/7/2019		

R2-1914887 CR on PDCP security issue	Samsung, I	available	11/7/2019	11/8/2019	2	F	
R2-1914888 Compliance Check for CHO Target Cell Configurations	MediaTek	available	11/7/2019	11/8/2019			
R2-1914889 Measurement Report for Conditional Handover Procedures	MediaTek	available	11/7/2019	11/8/2019			
R2-1914890 Report of Email Discussion 107bis#68 Power Saving RRM M	MediaTek	noted	11/7/2019	11/8/2019			
R2-1914891 NR Paging Frame Calculation when SearchSpaceId is Zero	MediaTek	noted	11/7/2019	11/8/2019			
R2-1914892 CN Type Indication for Cell Reselection from NR to LTE	MediaTek	available	11/7/2019	11/8/2019			
R2-1914893 Discussion on RRC reestablishment initiated by failure of M	SHARP	available	11/7/2019	11/7/2019			
R2-1914894 Allow Delta Configuration of ParametersListFmt2 and Parar	MediaTek	revised	11/7/2019	11/8/2019		F	
R2-1914895 Support of dormancy SCG	OPPO	available	11/7/2019	11/8/2019			
R2-1914896 Draft LS on support of dormancy SCG	OPPO	available	11/7/2019	11/8/2019			RAN3
R2-1914897 PDCP Running CR for NR IIOT	PDCP Rapp	available	11/7/2019	11/7/2019			
R2-1914898 PDCP open issues for IIOT	PDCP Rapp	noted	11/7/2019	11/8/2019			
R2-1914899 Redundant retransmission in PDCP duplication	LG Electro	available	11/7/2019	11/8/2019			
R2-1914900 MAC CE format for PDCP duplication	LG Electro	available	11/7/2019	11/8/2019			
R2-1914901 Handling of RLC stuck problem with PDCP duplication	LG Electro	available	11/7/2019	11/8/2019			
R2-1914902 Reduced PDCCH monitoring in CA	LG Electro	available	11/7/2019	11/8/2019			
R2-1914903 ON Duration adaptation	LG Electro	available	11/7/2019	11/8/2019			
R2-1914904 Conditional presence on ue-CapabilityInfo and servCellInde	NTT DOCO	agreed	11/7/2019	11/8/2019		F	
R2-1914905 Measurement coordination on maxMeasIdentitiesSCG in M	ZTE Corpo	noted	11/7/2019	11/8/2019			
R2-1914906 Corrections on maxMeasIdentitiesSCG in MR-DC	ZTE Corpo	available	11/7/2019	11/8/2019	1	F	
R2-1914907 CR to introduce timer for DRX based SFTD measurement	ZTE Corpo	agreed	11/7/2019	11/8/2019	1	F	
R2-1914908 CR to INM on absence of gapPurpose	ZTE Corpo	agreed	11/7/2019	11/8/2019	1	F	
R2-1914909 Consideration on DRX coordination in ANR	ZTE Corpo	noted	11/7/2019	11/8/2019			
R2-1914910 Corrections on DRX coordination in ANR	ZTE Corpo	available	11/7/2019	11/8/2019	1	F	
R2-1914911 [107bis#34]Correction on ambiguity of UE FDD&TDD FR1&	ZTE Corpo	revised	11/7/2019	11/11/2019		F	
R2-1914912 Remaining issues for UTRAN measurement	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1914913 Discussion on measurement relaxation rule in time domain	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1914914 Report of [107#81][NR TEI16] Need-for-Gaps signalling	MediaTek	noted	11/7/2019	11/8/2019			
R2-1914915 Further discussion on NeedForGap	MediaTek	noted	11/7/2019	11/8/2019			
R2-1914916 Dual SMTC in IDLE mode	MediaTek	noted	11/7/2019	11/8/2019			
R2-1914917 Discussion on early measurement configuration upon state	MediaTek	noted	11/7/2019	11/8/2019			
R2-1914918 Remaining issues on BH RLF notification	vivo	available	11/7/2019	11/8/2019			
R2-1914919 [Draft] LS on BH RLF notification verification	vivo	available	11/7/2019	11/8/2019			SA3
R2-1914920 Discussion on IAB BH RLF report mechanism	vivo	available	11/7/2019	11/8/2019			
R2-1914921 Running CR to 37324 for 5G_V2X_NRSL	vivo (Rapp	noted	11/7/2019	11/8/2019			
R2-1914922 Left Issues on NR SL RLC and PDCP	vivo	noted	11/7/2019	11/8/2019			
R2-1914923 Left issues for UL SL prioritization	vivo	available	11/7/2019	11/8/2019			
R2-1914924 Remaining issues on HARQ support for NR Sidelink	vivo	available	11/7/2019	11/8/2019			
R2-1914925 Left LCP issues	vivo	available	11/7/2019	11/8/2019			
R2-1914926 CSI and RSRP reporting	vivo	available	11/7/2019	11/8/2019			
R2-1914927 Resource pool (re-)selection based on HARQ feedback	vivo	available	11/7/2019	11/8/2019			
R2-1914928 Discussion on SR and BSR	vivo	available	11/7/2019	11/8/2019			
R2-1914929 Discussion on Truncated Sidelink BSR	vivo	available	11/7/2019	11/8/2019			
R2-1914930 Remaining issues on sidelink configured grant	vivo	available	11/7/2019	11/8/2019			
R2-1914931 Remaining issues on PC5-RRC message exchange	vivo	available	11/7/2019	11/8/2019			
R2-1914932 Discussion on sideink radio link management without physi	vivo	available	11/7/2019	11/8/2019			
R2-1914933 Signaling procedure for QoS and SLRB management	vivo	available	11/7/2019	11/8/2019			
R2-1914934 Mode switch for QoS guarantee in NR V2X	vivo	available	11/7/2019	11/8/2019			
R2-1914935 Signaling content for QoS and SLRB management	vivo	available	11/7/2019	11/8/2019			

R2-1914936 Running CR to 37.340 for CA_DC enhancements	vivo, Ericss	endorsed	11/7/2019	11/8/2019			
R2-1914937 Power control for NR DC	vivo	noted	11/7/2019	11/8/2019			
R2-1914938 Remaining issues for Validity Area	vivo	available	11/7/2019	11/8/2019			
R2-1914939 Early Measurement Reporting for INACTIVE State	vivo	available	11/7/2019	11/8/2019			
R2-1914940 UE measurement behaviour regarding autonomous state t	vivo	available	11/7/2019	11/8/2019			
R2-1914941 IDC impact for early measurement	vivo	withdrawn	11/7/2019				
R2-1914942 Speed Up CA/DC setup during RRC Connection Re-establish	vivo	available	11/7/2019	11/8/2019			
R2-1914943 Dormancy-like behavior on SCell	vivo	available	11/7/2019	11/8/2019			
R2-1914944 UE behavior for suspended SCG	vivo	available	11/7/2019	11/8/2019			
R2-1914945 Remaining issues on MCG fast recovery	vivo	available	11/7/2019	11/8/2019			
R2-1914946 Remaining issues for Logged MDT	vivo	available	11/7/2019	11/8/2019			
R2-1914947 UE capability parameters for SON_MDT	vivo	available	11/7/2019	11/8/2019			
R2-1914948 Running CR to 38.306 for NR_SON_MDT	vivo	available	11/7/2019	11/8/2019			
R2-1914949 Autonomous Gap capability for CGI reporting	vivo, Ericss	noted	11/7/2019	11/8/2019			
R2-1914950 [Draft] Reply LS on autonomous gap capability	vivo	available	11/7/2019	11/8/2019			RAN4
R2-1914951 Discussion on Suspended SCG	MediaTek	available	11/7/2019	11/8/2019			
R2-1914952 Capability for early measurement reporting	MediaTek	available	11/7/2019	11/8/2019			
R2-1914953 Capability for fast DC/CA setup	MediaTek	available	11/7/2019	11/8/2019			
R2-1914954 UE Capability for NR-U Support	vivo	available	11/7/2019	11/8/2019			
R2-1914955 Clarification on measurement gap configuration in NR SA	MediaTek	agreed	11/7/2019	11/8/2019	2	F	
R2-1914956 Consideration on the Consumers of AMF service on Event E	BUPT	available	11/7/2019	11/7/2019			
R2-1914957 Enhancement to the Namf_Communication_ AMFStatusCh	BUPT	available	11/7/2019	11/7/2019			
R2-1914958 Clarification on the uplink skipping	vivo	noted	11/7/2019	11/8/2019			
R2-1914959 Propagation delay compensation for reference time	vivo	noted	11/7/2019	11/8/2019			
R2-1914960 Remaining issues for EHC	vivo	available	11/7/2019	11/8/2019			
R2-1914961 Discussion on LCID restriction	vivo	available	11/7/2019	11/8/2019			
R2-1914962 Discussion on the periodicity misalignment between TSC tr	vivo	available	11/7/2019	11/8/2019			
R2-1914963 Reference cell for the dedicated provisioning of timing info	vivo	noted	11/7/2019	11/8/2019			
R2-1914964 URLLC transmission within measurement gap	vivo	available	11/7/2019	11/8/2019			
R2-1914965 SPS and CG configuration issue on the partial overlapping T	vivo	available	11/7/2019	11/8/2019			
R2-1914966 Discussion on the MAC PDU recovery procedure	vivo	noted	11/7/2019	11/8/2019			
R2-1914967 Discussion on the support of DC+CA duplication	vivo	noted	11/7/2019	11/8/2019			
R2-1914968 Remaining issues for SR and PUSCH collision	vivo	available	11/7/2019	11/8/2019			
R2-1914969 Discussion on the UE handling for the equal priority of upli	vivo	available	11/7/2019	11/8/2019			
R2-1914970 Issue on the Namf_Communication_ AMFStatusChangeSub	BUPT	available	11/7/2019	11/7/2019			
R2-1914971 Issue on the Namf_Communication_AMFStatusChangeUnS	BUPT	available	11/7/2019	11/7/2019			
R2-1914972 Clarification on PSCell/SCell SI reception	MediaTek	not pursued	11/7/2019	11/8/2019		F	
R2-1914973 location based mobility enhancement	NEC	available	11/7/2019	11/8/2019			
R2-1914974 Service continuity between TN and NTN	NEC	revised	11/7/2019	11/8/2019			
R2-1914975 IAB backhaul RLF handling	NEC	available	11/7/2019	11/8/2019			
R2-1914976 Flow control in IAB	NEC	available	11/7/2019	11/8/2019			
R2-1914977 Consideration on E-CID in NR	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1914978 Discussion on sigalling design for NR DL positioning proced	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1914979 Considerations on UL procedures for NR positioning	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1914980 Further considerations on DL procedures for NR positioning	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1914981 Discussion on broadcasting of positioning assistance data	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1914982 Discussion on demand SI in connected mode for positioning	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1914983 Correction on the EUTRAN terminology	Huawei, Hi	agreed	11/7/2019	11/8/2019	1	F	
R2-1914984 CHO execution with multiple candidate cells before HOF	Futurewei	available	11/7/2019	11/8/2019			

R2-1914985	Remaining issues on procedure and signaling of CPAC	Futurewei	available	11/7/2019	11/8/2019				
R2-1914986	Handling of multiple candidate cells for CPAC	Futurewei	available	11/7/2019	11/8/2019				
R2-1914987	Discussion on PDCCH-WUS missing problems during BWP s	Xiaomi Cor	revised	11/7/2019	11/8/2019				
R2-1914988	Procedures on how the PDCCH-WUS works with C-DRX	Xiaomi Cor	available	11/7/2019	11/8/2019				
R2-1914989	Text Proposal for adding the Phase Bias Indicator to the SSF	Swift Navig	available	11/7/2019	11/7/2019		B		
R2-1914990	Some remaining issues on the CSI and SRS reporting	Xiaomi Cor	available	11/7/2019	11/8/2019				
R2-1914991	Timing of Key Derivation in Conditional Handover	Futurewei	available	11/7/2019	11/8/2019				
R2-1914992	Draft LS on the Timing of AS Key Derivation in Conditional H	Futurewei	available	11/7/2019	11/8/2019			SA2	RAN3
R2-1914993	Handling of Key Derivation in Conditional PSCell Addition/C	Futurewei	available	11/7/2019	11/8/2019				
R2-1914994	Adaptation of QoS Flow to DRB Mapping for MDBV Enforce	Futurewei	available	11/7/2019	11/8/2019				
R2-1914995	Reception of End-Marker upon QoS Flow Remapping	Futurewei	noted	11/7/2019	11/8/2019				
R2-1914996	Proposal for clarification and optimization of n90 UE capab	KDDI Corp	noted	11/7/2019	11/8/2019				
R2-1914997	Configuration of PDCP duplication with up to 4 RLC entities	Sharp	available	11/7/2019	11/7/2019				
R2-1914998	Discussion on sidelink SR trigger	Fujitsu	available	11/7/2019	11/8/2019				
R2-1914999	MAC CE structure for PDCP duplication activation/deactivat	Fujitsu	available	11/7/2019	11/8/2019				
R2-1915000	NW-based per-packet PDCP duplication	Fujitsu	available	11/7/2019	11/8/2019				
R2-1915001	Considerations on MsgB reception	Fujitsu	available	11/7/2019	11/8/2019				
R2-1915002	On open questions to 2-step CF-RACH	Fujitsu	available	11/7/2019	11/8/2019				
R2-1915003	SR_COUNTER initialization due to RRC reconfiguration	Fujitsu, LG	available	11/7/2019	11/8/2019				
R2-1915004	Deactivation of Primary Path	Sharp	available	11/7/2019	11/7/2019				
R2-1915005	RA Prioritization for MPS for 2-step RACH	Perspecta	revised	11/7/2019	11/7/2019				
R2-1915006	PRACH prioritization parameters for MPS and MCS	Perspecta	endorsed	11/7/2019	11/7/2019		B		
R2-1915007	PRACH prioritization procedure for MPS and MCS	Perspecta	endorsed	11/7/2019	11/7/2019		B		
R2-1915008	Discussion on RACH report	SHARP	available	11/7/2019	11/7/2019				
R2-1915009	Further discussion on RLF recovery in CHO	SHARP	available	11/7/2019	11/7/2019				
R2-1915010	Fast SN Activation in Handover to EN-DC	Qualcomm	available	11/7/2019	11/8/2019				
R2-1915011	Paging monitoring in NR-U	Qualcomm	noted	11/7/2019	11/8/2019				
R2-1915012	[Draft] LS on clarification and optimization of n90 UE Capat	KDDI Corp	noted	11/7/2019	11/8/2019			RAN4	
R2-1915013	Remaining issues on priority handling in NR V2X	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915014	[Draft] LS on priority indicaition in SCI	Spreadtrur	available	11/7/2019	11/8/2019			RAN1	
R2-1915015	LBT Failures Handling in Non-Connected State	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915016	Inconsecutive UL LBT Failures Handling	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915017	Handling of periodicity misalignment between CG and TSN	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915018	Equal priority handling for CG and CG collision	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915019	Consideration on selective PDCP duplication	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915020	Consideration on early measurement reporting	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915021	Early measurement in NR-U	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915022	Measurement report enhancement in conditional handove	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915023	RRC signaling size restriction in CHO	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915024	Remaining issues for Conditional PSCell Change	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915025	Clarification on NR suitable cell for NR re-establishment	Spreadtrur	not pursued	11/7/2019	11/8/2019		F		
R2-1915026	Enhancements of resuming MR-DC configuration with RRC	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915027	Left issues on LCP procedure	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915028	Consideration on activation and deactivation of PDCP dupli	Spreadtrur	available	11/7/2019	11/8/2019				
R2-1915029	Skipping supportedBandCombinationList of n90	KDDI Corp	not pursued	11/7/2019	11/8/2019	2	C		
R2-1915030	TB construction during LCP procedure	MediaTek	available	11/7/2019	11/8/2019				
R2-1915031	KgNB derivation upon mobility	Qualcomm	agreed	11/7/2019	11/7/2019	1	F		
R2-1915032	Summary of email discussion [107bis#46][NR TEI16] Voice f	Qualcomm	noted	11/7/2019	11/8/2019				
R2-1915033	Introduction of voice fallback indication	Qualcomm	endorsed	11/7/2019	11/8/2019	1	C		

R2-1915034 Introduction of voice fallback indication	Qualcomm	endorsed	11/7/2019	11/8/2019	1	C	
R2-1915035 [Draft] LS on RRC establishment cause value in EPS voice fa	Qualcomm	revised	11/7/2019	11/8/2019			CT1
R2-1915036 Discussion on RAN1 agreements related to PUR	Nokia Solu	available	11/7/2019	11/8/2019			
R2-1915037 Combination of CHO and RUDI Handover	ETRI	available	11/7/2019	11/8/2019			
R2-1915038 Faster Handover Failure Recovery	ETRI	available	11/7/2019	11/8/2019			
R2-1915039 Remaining FFSs on Data Forwarding for DAPS HO and CHO	ETRI	available	11/7/2019	11/8/2019			
R2-1915040 Bye Message for DAPS Handover	ETRI	available	11/7/2019	11/8/2019			
R2-1915041 Source Cell Release in DAPS Handover	ETRI	available	11/7/2019	11/8/2019			
R2-1915042 Further consideration on access control aspect	III	available	11/7/2019	11/8/2019			
R2-1915043 Mobility state in RLF	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915044 RACH Report	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915045 RACH Failure information	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915046 Management Based Logged MDT Configuration for RRC_IN	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915047 Clarification on PO calculation	Nokia, Nok	not pursued	11/7/2019	11/8/2019	1	F	
R2-1915048 Cross-RAT RLF report	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915049 Cross-system RLF report	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915050 Logged MDT Configuration and Reporting for MR-DC	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915051 CR on multiple SMTC for idle	Nokia, Nok	available	11/7/2019	11/8/2019	1	F	
R2-1915052 Fallback procedure for INACTIVE mode	Samsung	available	11/7/2019	11/8/2019			
R2-1915053 UE History Information	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915054 UE History Information	Qualcomm	reserved	11/7/2019				
R2-1915055 Discussion about Successful HO in MRO	Qualcomm	available	11/7/2019	11/8/2019			
R2-1915056 Open issues in DCCA WI	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915057 Wideband operation in NR-U	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915058 Paging in NR-U	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915059 early measurements and 2-step resume	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915060 Early measurement handling during reselection	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915061 UE capabilities for early measurements	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915062 Fast Scell Activation	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915063 Configuration of MCG failure recovery	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915064 CR on how to introduce x-scheduling with different numerc	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915065 Multiple SMTC for Idle	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915066 Unnecessary deciphering for duplicated PDUs	Samsung	available	11/7/2019	11/8/2019			
R2-1915067 CR on unnecessary deciphering for duplicated PDU	Samsung	available	11/7/2019	11/8/2019	2	F	
R2-1915068 Trigger Conditions for low-latency IAB Uplink Scheduling	ITRI	available	11/7/2019	11/8/2019			
R2-1915069 RA variables for 2-step RACH fallback procedure	ITRI	available	11/7/2019	11/8/2019			
R2-1915070 Msg1 transmission opportunities	ITRI	available	11/7/2019	11/8/2019			
R2-1915071 T312 mechanism for conditional handover	ITRI	available	11/7/2019	11/8/2019			
R2-1915072 Discussion on the paging opportunities overlapping for the	ITRI	available	11/7/2019	11/8/2019			
R2-1915073 Discussion on TAI list provisioning and TAU triggering	ITRI	available	11/7/2019	11/8/2019			
R2-1915074 Discussion on the information for parent node selection	ITRI	available	11/7/2019	11/8/2019			
R2-1915075 Feedback for EHC algorithm	Samsung	noted	11/7/2019	11/8/2019			
R2-1915076 Configuration limitation for RRCRelease message in R15	OPPO	agreed	11/7/2019	11/8/2019		F	
R2-1915077 SDAP control PDU handling in Rel-16 EHC	Samsung	available	11/7/2019	11/8/2019			
R2-1915078 Left issues on SDAP Rx behaviour on remapping	OPPO, Eric	noted	11/7/2019	11/8/2019			
R2-1915079 UE radio capability ID exchange over X2/Xn and S1/NG inte	ZTE Corpo	noted	11/7/2019	11/7/2019			
R2-1915080 Introduction of UE radio capability ID in inter-node RRC me	ZTE Corpo	available	11/7/2019	11/7/2019		B	
R2-1915081 TP on RACH capacity calculation based on typical cell size	ZTE Corpo	revised	11/7/2019	11/8/2019		B	
R2-1915082 Remaining issues in NTN-TN service continuity	ZTE Corpo	available	11/7/2019	11/7/2019			

R2-1915083	Location report to help apply country specific policies	ZTE Corpo	available	11/7/2019	11/7/2019		
R2-1915084	Satellite type differentiation	ZTE Corpo	revised	11/7/2019	11/7/2019		
R2-1915085	Consideration on ephemeris data handling	ZTE Corpo	available	11/7/2019	11/8/2019		
R2-1915086	Remaining issues in efficient state transition by UE assistan	ZTE Corpo	available	11/7/2019	11/7/2019		
R2-1915087	Remaining issues in C-DRX and Scell related UE assistance i	ZTE Corpo	available	11/7/2019	11/7/2019		
R2-1915088	Remaining issues on SI request procedure in RRC_CONNEC	ZTE Corpo	noted	11/7/2019	11/7/2019		
R2-1915089	Consideration on the PCI Range	ZTE Corpo	available	11/7/2019	11/8/2019		
R2-1915090	Overview of the Connected State Issues	ZTE Corpo	available	11/7/2019	11/8/2019		
R2-1915091	Consideration on the HRNN and Access control	ZTE Corpo	available	11/7/2019	11/8/2019		
R2-1915092	Scheduling enhancements for TSC network	OPPO	available	11/7/2019	11/8/2019		
R2-1915093	Discussion on confirmation MAC CE for TSC network	OPPO	available	11/7/2019	11/8/2019		
R2-1915094	Discussion on Ethernet Header Compression	OPPO	available	11/7/2019	11/8/2019		
R2-1915095	Consideration on UE autonomous retx for the deprioritized	OPPO	available	11/7/2019	11/8/2019		
R2-1915096	Issues on ignoring the received UL grant for deprioritized P	OPPO,Son	available	11/7/2019	11/8/2019		
R2-1915097	Intra-UE prioritization involving configured grant	OPPO	available	11/7/2019	11/8/2019		
R2-1915098	Discussion on SR cancelling on intra-UE prioritization involv	OPPO	available	11/7/2019	11/8/2019		
R2-1915099	Intra-UE prioritization between multiple SRs	OPPO	available	11/7/2019	11/8/2019		
R2-1915100	Discussion on data duplication enhancement in IIoT	OPPO	available	11/7/2019	11/8/2019		
R2-1915101	Discussion on UE-based data duplication enhancement	OPPO	available	11/7/2019	11/8/2019		
R2-1915102	Cell restriction for PDCP duplication in IIoT	OPPO	available	11/7/2019	11/8/2019		
R2-1915103	LBT impact to Multi-PUSCH scheduling	Lenovo, M	noted	11/7/2019	11/7/2019		
R2-1915104	Multiple active Configured Grants	Lenovo, M	available	11/7/2019	11/7/2019		
R2-1915105	UE behavior upon consistent LBT failure	Lenovo, M	available	11/7/2019	11/7/2019		
R2-1915106	SL HARQ protocol operation	Lenovo, M	available	11/7/2019	11/7/2019		
R2-1915107	SR trigger for NR SL	Lenovo, M	available	11/7/2019	11/7/2019		
R2-1915108	SL LCP procedure considering the MCR requirements	Lenovo, M	available	11/7/2019	11/7/2019		
R2-1915109	Details of SCell Beam Failure Recovery Procedure	Lenovo, M	available	11/7/2019	11/7/2019		
R2-1915110	Discussion on BAP configuration	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915111	Further consideration on bearer mapping	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915112	Consideration on routing in IAB	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915113	Discussion on re-routing in IAB network	ZTE, Sanec	noted	11/7/2019	11/8/2019		
R2-1915114	Further consideration on flow control in IAB	ZTE, Sanec	noted	11/7/2019	11/8/2019		
R2-1915115	Discussion on BAP control PDU	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915116	Discussion on low latency scheduling in IAB	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915117	Discussion on case-1 OTA timing alignment	ZTE, Sanec	noted	11/7/2019	11/8/2019		
R2-1915118	Consideration on the Extended LCID in IAB	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915119	Discussion on IAB BH RLF handling	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915120	Discussion on BH RLC channel configuration in IAB network	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915121	Discussion on IAB node connection setup	ZTE, Sanec	available	11/7/2019	11/8/2019		
R2-1915122	PDCP version in EN-DC	Ericsson	agreed	11/7/2019	11/7/2019	2	F
R2-1915123	Discussion on leftover issues of Inter-RAT measurement	Huawei, Hi	available	11/7/2019	11/8/2019		
R2-1915124	Discussion on SRVCC capability	Huawei, Hi	available	11/7/2019	11/8/2019		
R2-1915125	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, Hi	revised	11/7/2019	11/8/2019		B
R2-1915126	Consideration on UL low-latency scheduling	Lenovo, M	available	11/7/2019	11/8/2019		
R2-1915127	Pre-emptive BSR in multiple connection scenario	Lenovo, M	available	11/7/2019	11/8/2019		
R2-1915128	Cell selection for IAB RLF recovery	Lenovo, M	available	11/7/2019	11/8/2019		
R2-1915129	RLF notification to downstream IAB node	Lenovo, M	available	11/7/2019	11/8/2019		
R2-1915130	Remaining issues for failure handling	Lenovo, M	noted	11/7/2019	11/8/2019		
R2-1915131	Remaining issue for SL-BSR	Lenovo, M	available	11/7/2019	11/8/2019		

R2-1915132	Considerations on QoS based resource pool for NR V2X	Lenovo, M	available	11/7/2019	11/8/2019
R2-1915133	Remaining issue on support non-integer periodicity for TSN	Lenovo, M	available	11/7/2019	11/8/2019
R2-1915134	SLRB configuration for NR V2X UE	Lenovo, M	available	11/7/2019	11/8/2019
R2-1915135	Discussion on QoS management for NR V2X	Lenovo, M	available	11/7/2019	11/8/2019
R2-1915136	Paging probability information based UE grouping	Lenovo, M	available	11/7/2019	11/8/2019
R2-1915137	Consideration on WUS configuration	Lenovo, M	available	11/7/2019	11/8/2019
R2-1915138	Remaining issue on ANR reporting	Lenovo, M	available	11/7/2019	11/8/2019
R2-1915139	Solution for intra-UE prioritization	Huawei, Hi	available	11/7/2019	11/7/2019
R2-1915140	Remaining issues on 4-step RACH for NR-U	Huawei, Hi	noted	11/7/2019	11/7/2019
R2-1915141	Handling of UL LBT failure	Huawei, Hi	available	11/7/2019	11/8/2019
R2-1915142	Enhancement on two-step Random Access for NR-U	Huawei, Hi	available	11/7/2019	11/7/2019
R2-1915143	Discussion on PDU overwriting between CG and DG	Huawei, Hi	available	11/7/2019	11/7/2019
R2-1915144	Support of multiple active CGs for NRU	Huawei, Hi	available	11/7/2019	11/8/2019
R2-1915145	Impacts of Cross-COT HARQ feedback to BWP and Scell	Huawei, Hi	noted	11/7/2019	11/7/2019
R2-1915146	Handling MIB_SIB1 Acquisition Failure	Huawei, Hi	noted	11/7/2019	11/8/2019
R2-1915147	BSR and SR reporting in Cross RAT V2X operation	Lenovo, M	available	11/7/2019	11/7/2019
R2-1915148	Cross RAT SL Configuration	Lenovo, M	available	11/7/2019	11/7/2019
R2-1915149	HARQ feedback impact on RAN2	Lenovo, M	available	11/7/2019	11/7/2019
R2-1915150	RLM Procedure and RLF Recovery handling	Lenovo, M	available	11/7/2019	11/7/2019
R2-1915151	Transmitter UE behavior in Mode 1 and Mode 2	Lenovo, M	available	11/7/2019	11/7/2019
R2-1915152	SL and UL BWP Numerology Mismatch	Lenovo, M	available	11/7/2019	11/7/2019
R2-1915153	Failure handling for conditional PScell change and addition	OPPO	available	11/7/2019	11/8/2019
R2-1915154	SRB handling for DAPS handover	OPPO	available	11/7/2019	11/8/2019
R2-1915155	Further considerations on capability coordination	OPPO	available	11/7/2019	11/8/2019
R2-1915156	Clarification on HRNN reporting	OPPO	available	11/7/2019	11/8/2019
R2-1915157	SCell BFR MAC CE design	OPPO	available	11/7/2019	11/8/2019
R2-1915158	MAC CE design for eMIMO	OPPO	available	11/7/2019	11/8/2019
R2-1915159	Further considerations for T312-based mechanism	OPPO	available	11/7/2019	11/8/2019
R2-1915160	Compliance check for CHO configuration	OPPO	available	11/7/2019	11/8/2019
R2-1915161	CHO configuration handling upon source configuration upd	OPPO	available	11/7/2019	11/8/2019
R2-1915162	UE capabilities for DAPS HO	OPPO	available	11/7/2019	11/8/2019
R2-1915163	Recovery for deprioritized data transmission	NTT DOCO	available	11/7/2019	11/7/2019
R2-1915164	L2 impacts on supporting IIoT traffic	NTT DOCO	available	11/7/2019	11/7/2019
R2-1915165	(De)Prioritizing the Access for IAB Setup	Samsung	available	11/7/2019	11/8/2019
R2-1915166	Discussion on CG and SPS in NTN	OPPO	available	11/7/2019	11/8/2019
R2-1915167	Discussion on DRX operation in NTN	OPPO	available	11/7/2019	11/8/2019
R2-1915168	Discussion on time advance in NTN	OPPO	available	11/7/2019	11/8/2019
R2-1915169	Discussion on UL scheduling enhancement in NTN	OPPO	available	11/7/2019	11/8/2019
R2-1915170	Discussion on handover for NTN	OPPO	available	11/7/2019	11/8/2019
R2-1915171	NR RAT-Dependent Positioning Procedures	LG Electro	available	11/7/2019	11/7/2019
R2-1915172	On indicating LBT failure for NR-U	Samsung	available	11/7/2019	11/8/2019
R2-1915173	Resource Pool Configuration	LG Electro	available	11/7/2019	11/7/2019
R2-1915174	Considering valid PLMN being equivalent to the RPLMN in I	Samsung	noted	11/7/2019	11/8/2019
R2-1915175	NR V2X System Information Aspects	LG Electro	available	11/7/2019	11/7/2019
R2-1915176	SLRB Configuration in NR V2X	LG Electro	available	11/7/2019	11/7/2019
R2-1915177	Remaining issue on detecting UL LBT Failures	PANASONI	available	11/7/2019	11/7/2019
R2-1915178	Simultaneous Mode 1 and Mode 2 Configuration	LG Electro	available	11/7/2019	11/7/2019
R2-1915179	Impact of disabling HARQ on DRX	PANASONI	available	11/7/2019	11/7/2019
R2-1915180	[Draft] Response LS on additional high layer information fo	LG Electro	withdrawn	11/7/2019	RAN1

R2-1915181 Consideration on dormancy behavior	LG Electroı	available	11/7/2019	11/8/2019
R2-1915182 Consideration on UE assistance information	LG Electroı	available	11/7/2019	11/8/2019
R2-1915183 Remaining issues on PDCCH-WUS	LG Electroı	available	11/7/2019	11/8/2019
R2-1915184 Temporary RS for fast SCell activation	LG Electroı	available	11/7/2019	11/8/2019
R2-1915185 RLM for NR-U	Samsung	available	11/7/2019	11/8/2019
R2-1915186 Discussion on SL radio link management	Nokia, Nok	available	11/7/2019	11/7/2019
R2-1915187 Mobility challenges for NR V2X platooning/groupcast	Nokia, Nok	available	11/7/2019	11/7/2019
R2-1915188 Network Based Monitoring and Reporting of QoS paramete	Nokia, Nok	available	11/7/2019	11/7/2019
R2-1915189 Discussion on SSB measurement in NTN	Huawei, Hi	available	11/7/2019	11/8/2019
R2-1915190 Discussion on feeder link switch for transparent LEO	Huawei, Hi	available	11/7/2019	11/8/2019
R2-1915191 Discussion on mobility with steerable beams in NTN	Huawei, Hi	available	11/7/2019	11/8/2019
R2-1915192 Service continuity between TN and NTN	Huawei, Hi	available	11/7/2019	11/8/2019
R2-1915193 On NR V2X Sidelink transmissions during Handover or Uu P	Nokia, Nok	noted	11/7/2019	11/7/2019
R2-1915194 Discussion on application of SLRB configuration during UE s	Nokia, Nok	available	11/7/2019	11/7/2019
R2-1915195 Discussion on the support of simultaneous mode 1 and mo	Nokia Den	available	11/7/2019	11/7/2019
R2-1915196 BAP mapping support for routing	CMCC	available	11/7/2019	11/8/2019
R2-1915197 Details on determining consistent LBT failure of a BWP	CMCC	available	11/7/2019	11/8/2019
R2-1915198 Further considerations on ephemeris data provision	CMCC	available	11/7/2019	11/8/2019
R2-1915199 Impact analysis of NR CA frame timing relaxation	CMCC	noted	11/7/2019	11/8/2019
R2-1915200 Further consideration on PRACH prioritization	CMCC	available	11/7/2019	11/8/2019
R2-1915201 Discussion on the flexible configuration of Maximum Data I	CMCC, Hua	available	11/7/2019	11/8/2019
R2-1915202 Mobility-state-based cell reselection in NR for HSDN	CMCC, Me	available	11/7/2019	11/8/2019
R2-1915203 [107bis#86][NR L2 meas] running 38.314	CMCC	endorsed	11/7/2019	11/8/2019
R2-1915204 Summary of open points on L2 Measurements	CMCC	noted	11/7/2019	11/15/2019
R2-1915205 Discussion and TP for Number of active UEs for CU/DU split	CMCC	available	11/7/2019	11/8/2019
R2-1915206 Discussion and TP for End-to-End RAN Part of Packet Delay	CMCC	available	11/7/2019	11/8/2019
R2-1915207 Remaining Issues on Supporting M1 to M9 in L2 measurem	CMCC	available	11/7/2019	11/8/2019
R2-1915208 UE capability for SON MDT WI	CMCC	noted	11/7/2019	11/8/2019
R2-1915209 TS 38.306 CR on UE capabilities for SON MDT WI	CMCC	available	11/7/2019	11/8/2019
R2-1915210 Discussion on power saving for inter-frequency measureme	CMCC	available	11/7/2019	11/8/2019
R2-1915211 Consideration of successful HO report	CMCC	available	11/7/2019	11/8/2019
R2-1915212 Further discussion on handling of de-prioritized MAC PDU	CMCC	available	11/7/2019	11/8/2019
R2-1915213 Further discussion on IE design of TimeReferenceInfo used	CMCC	available	11/7/2019	11/8/2019
R2-1915214 Further discussion of the details of reporting UE orientatior	CMCC,Hua	noted	11/7/2019	11/8/2019
R2-1915215 Discussion on the new RA-RNTI for MsgB	CMCC	available	11/7/2019	11/8/2019
R2-1915216 Discussion on 2-step CFRA	CMCC	available	11/7/2019	11/8/2019
R2-1915217 Discussion on the maximum number of configured CHO car	CMCC	available	11/7/2019	11/8/2019
R2-1915218 Discussion on fast handover failure recovery	CMCC	available	11/7/2019	11/8/2019
R2-1915219 Further consideration on EN-DC cell reselection	CMCC, Hua	noted	11/7/2019	11/8/2019
R2-1915220 Discussion on support of NR RAN sharing	CMCC	available	11/7/2019	11/8/2019
R2-1915221 Support of dynamic HARQ process ID sharing in NR-U	Samsung	noted	11/7/2019	11/8/2019
R2-1915222 Applicability of NR-U features to licensed carrier	Samsung	available	11/7/2019	11/8/2019
R2-1915223 To reduce SCell activation delay in NR	Samsung	available	11/7/2019	11/8/2019
R2-1915224 Support of unaligned frame boundary for inter-band TDD C	Samsung	noted	11/7/2019	11/8/2019
R2-1915225 TA handling in 2-step RACH	Samsung	available	11/7/2019	11/8/2019
R2-1915226 Local route selection in IAB	Sony	available	11/7/2019	11/7/2019
R2-1915227 IAB System information handling	Sony	available	11/7/2019	11/7/2019
R2-1915228 How to handle the deprioritized PDU for uplink Intra-UE pri	Sony	available	11/7/2019	11/7/2019
R2-1915229 Consideration on activation/deactivation for CG Type 1	Sony	available	11/7/2019	11/7/2019

R2-1915230 Location report in NTN	Sony	available	11/7/2019	11/7/2019	
R2-1915231 Fallback to 4-step RACH with BI	Sony	available	11/7/2019	11/7/2019	
R2-1915232 Power Saving techniques, UE assistance information	SONY	available	11/7/2019	11/7/2019	
R2-1915233 UE power saving for inter frequency measurements	Sony	available	11/7/2019	11/7/2019	
R2-1915234 Details of Relaxed monitoring for NR UE power saving	Sony	available	11/7/2019	11/7/2019	
R2-1915235 UE-group wake-up signal for MTC/NB-IoT	Sony	available	11/7/2019	11/7/2019	
R2-1915236 Cell selection/reselection with NPN cells	Sony	available	11/7/2019	11/7/2019	
R2-1915237 Mobility enhancements for Connectivity to 5GC for MTC an	Sony	available	11/7/2019	11/7/2019	
R2-1915238 Discussion on differnt RAT dependent NR Positioning techn	Sony	available	11/7/2019	11/7/2019	
R2-1915239 Applying un-used RNTIs for MsgB of 2-Step RACH	Sony	noted	11/7/2019	11/7/2019	
R2-1915240 Differentiating MsgB with and without RRC messages	Sony	not treated	11/7/2019	11/7/2019	
R2-1915241 PUR L1 ACK and application layer response	Sony	available	11/7/2019	11/7/2019	
R2-1915242 RNTI ambiguity for CFRA and CBRA of 4-Step RACH	Sony	available	11/7/2019	11/7/2019	
R2-1915243 Expected signalling flows for SN-initiated PSCell change	NEC	available	11/7/2019	11/8/2019	
R2-1915244 Network configuration for fast MCG recovery	NEC	available	11/7/2019	11/8/2019	
R2-1915245 UE-assisted Activation/Deactivation for UL PDCP Duplicatio	III	available	11/7/2019	11/8/2019	
R2-1915246 Transfer of segmented UECapabilityInformation by SRB2	Samsung	available	11/7/2019	11/8/2019	
R2-1915247 MAC CE design for support of multiple beam indication for	Samsung	available	11/7/2019	11/8/2019	
R2-1915248 Reduction of signaling and latency for beam managements	Samsung	available	11/7/2019	11/8/2019	
R2-1915249 Discussion on the additional UE capability filtering to limit t	Samsung	available	11/7/2019	11/8/2019	
R2-1915250 Additional UE capability filtering to limit the total number c	Samsung	available	11/7/2019	11/8/2019	B
R2-1915251 Additional UE capability filtering to limit the total number c	Samsung	available	11/7/2019	11/8/2019	B
R2-1915252 Change on transfer-type of handoverCommandMessage fo	Samsung	not pursued	11/7/2019	11/8/2019	F
R2-1915253 Clarification regarding conditions of setting omitEN-DC for	Samsung	not pursued	11/7/2019	11/8/2019	F
R2-1915254 MAC running CR for NR eMIMO	Samsung	available	11/7/2019	11/12/2019	B
R2-1915255 Consideration on the variables for 2-step RACH	ZTE Corpo	withdrawn	11/7/2019		
R2-1915256 Running CR to 38.321 on Integrated Access and Backhaul fc	Samsung E	revised	11/7/2019	11/7/2019	B
R2-1915257 RAN2 agreements for Rel-16 additional enhancements for I	Document	noted	11/7/2019	11/7/2019	
R2-1915258 Way forward on pre-emptive BSR	Samsung, I	revised	11/7/2019	11/7/2019	
R2-1915259 Summary of email discussion [107bis#47][NR TEI16] Overh	Huawei, Hi	available	11/7/2019	11/13/2019	
R2-1915260 36.331 CR for addressing overheating issue in (NG)EN-DC	Huawei, Hi	available	11/7/2019	11/13/2019	F
R2-1915261 38.331 CR for addressing overheating issue in (NG)EN-DC	Huawei, Hi	available	11/7/2019	11/13/2019	F
R2-1915262 On the enhancement of SRS carrier switching capability	Huawei, Hi	available	11/7/2019	11/8/2019	
R2-1915263 Further discussion on the impact of PDCCH-WUS	Huawei, Hi	available	11/7/2019	11/8/2019	
R2-1915264 Remaining issues on UE assistance information for power s	Huawei, Hi	available	11/7/2019	11/8/2019	
R2-1915265 Remaining issues on UE capability ID	Huawei, Hi	noted	11/7/2019	11/8/2019	
R2-1915266 Remaining issues on UE capability segmentation	Huawei, Hi	available	11/7/2019	11/8/2019	
R2-1915267 Downlink hop-by-hop flow control	Samsung E	noted	11/7/2019	11/7/2019	
R2-1915268 Draft CR for 2-step CFRA	ZTE Corpo	available	11/7/2019	11/8/2019	B
R2-1915269 On the need for bearer ID in the BAP header	Samsung E	noted	11/7/2019	11/7/2019	
R2-1915270 Discussion on NR SL lower layer procedures	Ericsson	available	11/7/2019	11/7/2019	
R2-1915271 Remaining issues on RLC AM and UM support in SL	Ericsson	available	11/7/2019	11/7/2019	
R2-1915272 Support of HARQ procedure over sidelink	Ericsson	available	11/7/2019	11/7/2019	
R2-1915273 Discussion on configured grant left issues	Ericsson	available	11/7/2019	11/7/2019	
R2-1915274 Discussion on SL link management	Ericsson	available	11/7/2019	11/7/2019	
R2-1915275 Discussion on NR SL QoS management	Ericsson	available	11/7/2019	11/7/2019	
R2-1915276 Discussion on PDCP left issues	Ericsson	available	11/7/2019	11/7/2019	
R2-1915277 Discussion on priority configuration	Ericsson	available	11/7/2019	11/7/2019	
R2-1915278 Upstream routing ID	Samsung E	available	11/7/2019	11/7/2019	

R2-1915279	Running CR for 36.300 on CA/DC Enhancements	Ericsson	revised	11/7/2019	11/7/2019			
R2-1915280	Running CR for 38.300 for CA/DC Enhancements	Ericsson	revised	11/7/2019	11/7/2019			
R2-1915281	Running CR for 36.331 for CA/DC Enhancements	Ericsson	endorsed	11/7/2019	11/19/2019			
R2-1915282	Running CR for 38.331 on CA/DC Enhancements	Ericsson	endorsed	11/7/2019	11/19/2019			
R2-1915283	Idle measurement configuration in UE Inactive AS context	Ericsson	available	11/7/2019	11/7/2019			
R2-1915284	Remaining issues for early measurement results and config	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915285	Applicability of early measurement solutions for LTE	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915286	Delta configurations for early measurement configurations	Ericsson	available	11/7/2019	11/7/2019			
R2-1915287	Correction for P-Max in FR2	Ericsson, N	agreed	11/7/2019	11/8/2019	1	F	
R2-1915288	A second SSB periodicity in Idle and Inactive mode	Ericsson	noted	11/7/2019	11/8/2019			
R2-1915289	cDRX enhancement for CA	Ericsson, C	available	11/7/2019	11/8/2019			
R2-1915290	Introduction of secondary DRX group	Ericsson	available	11/7/2019	11/12/2019		C	
R2-1915291	Introduction of secondary DRX group	Ericsson	available	11/7/2019	11/12/2019		C	
R2-1915292	Email report [107bis#49][NR TEI16] cDRX enhancement for	Ericsson	noted	11/7/2019	11/12/2019			
R2-1915293	RAN2 impact of WUS in connected mode	Ericsson	available	11/7/2019	11/8/2019			
R2-1915294	UE Assistance Information for cDRX and SCell	Ericsson	available	11/7/2019	11/8/2019			
R2-1915295	UE Assistance Information for minimum K0 and K2	Ericsson	available	11/7/2019	11/8/2019			
R2-1915296	RRM measurement relaxation	Ericsson	available	11/7/2019	11/8/2019			
R2-1915297	Stop using redirectedCarrierOffsetDedicated after reselecti	Huawei, Hi	revised	11/7/2019	11/8/2019		F	
R2-1915298	Introduction of additional enhancements for NB-IoT in TS 3	Huawei	available	11/7/2019	11/8/2019		B	
R2-1915299	Introduction of additional enhancements for NB-IoT	Huawei	available	11/7/2019	11/8/2019		B	
R2-1915300	Discussion on SON ANR remaining open issues	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915301	Discussion on SON RACH and RLF remaining open issues	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915302	Introduction of UE specific DRX for NB-IoT	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915303	Introduction of UE specific DRX for NB-IoT in 36.300	Huawei	available	11/7/2019	11/8/2019		B	
R2-1915304	Introduction of UE specific DRX for NB-IoT in 36.304	Huawei	available	11/7/2019	11/8/2019		B	
R2-1915305	Introduction of UE specific DRX for NB-IoT in 36.306	Huawei	available	11/7/2019	11/8/2019		B	
R2-1915306	Introduction of UE specific DRX for NB-IoT in 36.331	Huawei	available	11/7/2019	11/8/2019		B	
R2-1915307	Addressing Editor's Notes and FFSs in 36.300 running CR fo	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915308	Clarification on default configuration and SRB1 for UP-EDT	Huawei, Hi	revised	11/7/2019	11/8/2019	2	F	
R2-1915309	Discussion on remaining aspects of MT-EDT	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1915310	Discussion on configuration for WUS grouping	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915311	FFSes on D-PUR	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915312	Handling of D-PUR configuration for CP solution	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915313	[Draft] LS on handling of D-PUR configuration for the CP sol	Huawei	available	11/7/2019	11/8/2019			RAN3
R2-1915314	Multiple TBs scheduling in NB-IoT	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915315	Discussion on paging of RRC_INACTIVE for eMTC connecte	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1915316	Access Stratum Release Assistance Indicator for eMTC and	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915317	Report of email discussion [107bis#89][NB-IoT R16] Open is	Huawei	available	11/7/2019	11/11/2019			
R2-1915318	Support of RRC connection Re-establishment for the Contr	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1915319	Discussion on SA2 reply LS on WUS assistance information	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1915320	[Draft] Reply LS on WUS assistance information	Huawei	available	11/7/2019	11/8/2019			R2-191434 SA2, RAN3,CT1
R2-1915321	Details of hop-by-hop flow control	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915322	Buffer status reporting for IAB	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915323	eLCID space and handling of IAB specific MAC Ces	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915324	Signalling for IAB timing	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915325	Signalling for radio aware scheduling	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915326	RNTI design for MsgB reception	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915327	2-step RACH only BWP	Nokia, Nok	available	11/7/2019	11/8/2019			

R2-1915328 HARQ ACK resources for successRAR	Nokia, Nok	available	11/7/2019	11/8/2019					
R2-1915329 Draft LS on HARQ ACK resources for successRAR	Nokia, Nok	available	11/7/2019	11/8/2019			TSG RAN WG1		
R2-1915330 CFRA for 2-step RACH	Nokia, Nok	available	11/7/2019	11/8/2019					
R2-1915331 Summary of email discussion [107bis#61][NR][eMIMO]	Nokia, Nok	noted	11/7/2019	11/11/2019					
R2-1915332 Remaining details of SCell BFR	Nokia, Nok	available	11/7/2019	11/8/2019					
R2-1915333 CFRA resource handling for BFR upon TAT expiry	Nokia, Nok	available	11/7/2019	11/8/2019					
R2-1915334 New CG Confirmation MAC CE	Samsung	available	11/7/2019	11/8/2019					
R2-1915335 Configured Grant with Periodicity of any Integer Number o	Samsung	available	11/7/2019	11/8/2019					
R2-1915336 MAC CE for RLC Activation and Deactivation	Samsung	available	11/7/2019	11/8/2019					
R2-1915337 Configuration of Multiple CG/SPS Configurations	Samsung	available	11/7/2019	11/8/2019					
R2-1915338 MAC Running CR for NR IIOT	Samsung	endorsed	11/7/2019	11/8/2019		B			
R2-1915339 Initial Value of RX_DELIV	Samsung	available	11/7/2019	11/8/2019					
R2-1915340 Prioritization of SR Transmission for URLLC	Samsung	available	11/7/2019	11/8/2019					
R2-1915341 Reference Cell for Reference SFN	Samsung	available	11/7/2019	11/8/2019					
R2-1915342 Priority Value of an Uplink Grant	Samsung	available	11/7/2019	11/8/2019					
R2-1915343 Remaining issues with extending LCID space on the backha	Samsung E	available	11/7/2019	11/7/2019					
R2-1915344 Considerations on control plane for DAPS	Huawei, Hi	available	11/7/2019	11/8/2019					
R2-1915345 Further consideration on reply LSs from RAN1 and RAN4	Huawei, Hi	available	11/7/2019	11/8/2019					
R2-1915346 Discussion on handover preparation for DAPS	Huawei, Hi	available	11/7/2019	11/8/2019					
R2-1915347 Discussion on PDCP duplication and reordering for DAPS HO	Huawei, Hi	available	11/7/2019	11/8/2019					
R2-1915348 Discussion on UE capability sharing for DAPS	Huawei, Hi	available	11/7/2019	11/8/2019					
R2-1915349 Clarification of DAPS handover support in 38.300	Huawei, Hi	available	11/7/2019	11/8/2019					
R2-1915350 Draft CR for 36.323 on supporting DAPS handover	Huawei, Hi	revised	11/7/2019	11/8/2019		B			
R2-1915351 Draft CR for 38.323 on supporting DAPS handover	Huawei, Hi	endorsed	11/7/2019	11/8/2019		B			
R2-1915352 Stop timer T310 in SCGFailureInformation	Ericsson	not pursued	11/7/2019	11/7/2019		F			
R2-1915353 (IPA) Handling of AS-Config in HandoverPreparationInform	Ericsson	revised	11/7/2019	11/7/2019	1	F			
R2-1915354 (IPA) Corrections on scg-RB-Config in CG-Config	Ericsson	revised	11/7/2019	11/7/2019	1	F			
R2-1915355 Clarification on timer T304 for SCGFailureInformation	Ericsson	merged	11/7/2019	11/7/2019		F			
R2-1915356 Email discussion on remaining issues for correction on the	Ericsson	noted	11/7/2019	11/13/2019					
R2-1915357 Email discussion on security key derivation	Ericsson	noted	11/7/2019	11/13/2019					
R2-1915358 Correction on security key derivation	Ericsson	revised	11/7/2019	11/13/2019		F			
R2-1915359 Correction on security key derivation	Ericsson	revised	11/7/2019	11/13/2019		F			
R2-1915360 Correction to power limitations in (NG)EN-DC	Ericsson, C	agreed	11/7/2019	11/7/2019	2	F			
R2-1915361 (IPA) Correction of SRB3 handling at full configuration (Alt2	Ericsson	revised	11/7/2019	11/7/2019	2	F			
R2-1915362 (IPA) Correction to integrity protection in DRB addition and	Ericsson	revised	11/7/2019	11/7/2019	1	F			
R2-1915363 Correction on MCG measurements in SCGFailureInformatic	Ericsson	revised	11/7/2019	11/7/2019	1	F			
R2-1915364 Correction on SCGFailureInformation	Ericsson	not pursued	11/7/2019	11/7/2019	1	F			
R2-1915365 (IPA) Correction on sending Failure Information via SRB3	Ericsson, Z	revised	11/7/2019	11/7/2019	2	F			
R2-1915366 Correction on the condition of RBTermChange	Ericsson	revised	11/7/2019	11/13/2019		F			
R2-1915367 (IPA) Correction to SIB5 acquisition for idle mode measurer	Ericsson	revised	11/7/2019	11/7/2019	2	F			
R2-1915368 (IPA)Correction on inter-frequency neighbour cell measure	Ericsson	withdrawn	11/7/2019		2	F			
R2-1915369 Stop timer T313 in SCGFailureInformation for NE-DC	Ericsson	not treated	11/7/2019	11/7/2019		F			
R2-1915370 (IPA) Miscellaneous correction for late drop	Ericsson	revised	11/7/2019	11/7/2019	2	F			
R2-1915371 Unaligned frame boundary with slot alignment and partial	Ericsson	noted	11/7/2019	11/7/2019					
R2-1915372 NR-DC power control	Ericsson	noted	11/7/2019	11/7/2019					
R2-1915373 Sending on-demand SIB(s) request over SRB3	Ericsson	noted	11/7/2019	11/7/2019					
R2-1915374 [107bis#07][NR R16] Running CR on 38.300 for on-demand	Ericsson	endorsed	11/7/2019	11/13/2019		B			
R2-1915375 [107bis#07][NR R16] Running CR on 38.331 for on-demand	Ericsson	revised	11/7/2019	11/13/2019		B			
R2-1915376 Draft Reply LS on resource coordination between NG-RAN	Ericsson	revised	11/7/2019	11/7/2019			R2-191433	RAN3	R3-196280

R2-1915377	Inter-node resource coordination in NR SL	Ericsson	available	11/7/2019	11/7/2019			
R2-1915378	Discussion on SL Mode 2 left issues	Ericsson	available	11/7/2019	11/7/2019			
R2-1915379	Discussion on SL information reporting over Uu	Ericsson	available	11/7/2019	11/7/2019			
R2-1915380	Running CR for 38.322 for NR V2X	Ericsson	revised	11/7/2019	11/7/2019	B		
R2-1915381	Discussion on SL AS configuration handling over NR Uu	Ericsson	available	11/7/2019	11/7/2019			
R2-1915382	Remaining issues on capability transfer in sidelink	Ericsson	available	11/7/2019	11/7/2019			
R2-1915383	Handling of SL in Uu RRC state transitions	Ericsson	available	11/7/2019	11/7/2019			
R2-1915384	Network and cell (re)selection in SNPN access mode	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915385	RRC considerations to support SNPNs	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915386	Discussion on PCI list	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915387	Report from Email Discussion [107bis#63] on SIB1 design	Nokia (Rap	noted	11/7/2019	11/8/2019			
R2-1915388	Draft RRC CR for NPN	Nokia (Rap	endorsed	11/7/2019	11/12/2019			
R2-1915389	Discussion on PLMN and Cell selection enhancements for N	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915390	RLM/RLF measurement on NR-U	Nokia, Nok	available	11/7/2019	11/8/2019			
R2-1915391	Draft TS 38.340 (BAP)	Huawei	withdrawn	11/7/2019	11/8/2019			
R2-1915392	Even further views on NR V2X System Information	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915393	Running CR on 36.321 for eMTC	Ericsson	available	11/7/2019	11/7/2019	B		
R2-1915394	Remaining issues in Msg4-based MT EDT	Ericsson	reserved	11/7/2019				
R2-1915395	Scheduling enhancements for LTE-MTC and NB-IoT	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915396	MPDCCH performance improvement for LTE-M	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915397	Remaining issues for ETWS/CMAS notification delivery in cc	Ericsson	available	11/7/2019	11/7/2019			
R2-1915398	UE capabilities for enhancements for non-BL UEs	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915399	Reception type for ETWS/CMAS for non-BL UE in CE in RRC_	Ericsson	withdrawn	11/7/2019				
R2-1915400	S-Criterion interpretation for non-BL UEs	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915401	Cell Reselection improvement for LTE-M Standalone cells	Ericsson	available	11/7/2019	11/7/2019			
R2-1915402	Coexistence with NR for LTE-M	Ericsson	available	11/7/2019	11/7/2019			
R2-1915403	eDRX in RRC_INACTIVE for LTE-M	Ericsson	available	11/7/2019	11/7/2019			
R2-1915404	Running CR on 36.321 for NB-IoT	Ericsson	available	11/7/2019	11/7/2019	B		
R2-1915405	PUR periodicity and UE multiplexing	Ericsson	available	11/7/2019	11/7/2019			
R2-1915406	PUR with DCI scheduling	Ericsson	withdrawn	11/7/2019				
R2-1915407	PUR - Remaining open issues	Ericsson	available	11/7/2019	11/7/2019			
R2-1915408	On the need for PUR L1 ACK application layer response	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915409	Draft LS reply PUR transmission for NB-IoT/eMTC	Ericsson	revised	11/7/2019	11/7/2019		R2-191430	RAN1 RAN4
R2-1915410	Coexistence with NR for NB-IoT	Ericsson	available	11/7/2019	11/7/2019			
R2-1915411	Discussion on remaining issues of Immediate MDT	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915412	Discussion on remaining issues of Logged MDT	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915413	Immediate MDT continuity upon handover procedure	ZTE Corpo	noted	11/7/2019	11/8/2019			
R2-1915414	Restriction on MDT measurement and report	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915415	Clarification on out-of-coverage measurement and report	ZTE Corpo	noted	11/7/2019	11/8/2019			
R2-1915416	Clarification on connected UE counting in CA	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915417	Further consideration on INACTIVE UE counting	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915418	Discussion on PRB usage of a cell	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915419	Further considerations on RACH optimization	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915420	Discussion on RLF report	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915421	Enhancement on Msg1 based SI request	ZTE Corpo	available	11/7/2019	11/8/2019	F		
R2-1915422	Consideration on SR and DRX in NTN	ZTE Corpo	available	11/7/2019	11/8/2019			
R2-1915423	On SSB-ToMeasure clarifications	Ericsson	available	11/7/2019	11/7/2019			
R2-1915424	CR to 38.331 on SSB-ToMeasure clarifications	Ericsson	not pursued	11/7/2019	11/7/2019	F		
R2-1915425	CR to 36.331 on SSB-ToMeasure clarifications	Ericsson	not pursued	11/7/2019	11/7/2019	F		

R2-1915426 CR to 36.331 on performing L3 filtering for NR related mea	Ericsson	revised	11/7/2019	11/7/2019	F		
R2-1915427 CR to 38.331 on A2 event definition clarification	Ericsson	not pursued	11/7/2019	11/7/2019	F		
R2-1915428 CR to 36.331 on A2 event definition clarification	Ericsson	not pursued	11/7/2019	11/7/2019	F		
R2-1915429 Triggering conditions for A1-A6 events in NR	Ericsson	available	11/7/2019	11/7/2019			
R2-1915430 CR to 38.331 on Triggering conditions for A1 to A6 events ir	Ericsson	available	11/7/2019	11/7/2019	B		
R2-1915431 CR to 38.306 on Triggering conditions for A1 to A6 events ir	Ericsson	available	11/7/2019	11/7/2019	B		
R2-1915432 Open issues of L2 measurements in NR	Ericsson	available	11/7/2019	11/7/2019			
R2-1915433 Open issues related to RACH report	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915434 Open issues related to RLF report	Ericsson	available	11/7/2019	11/7/2019			
R2-1915435 Successful handover report in NR	Ericsson	available	11/7/2019	11/7/2019			
R2-1915436 Open issues of CEF report	Ericsson	noted	11/7/2019	11/7/2019			
R2-1915437 107bis#87 email discussion report on running CR for SON	Ericsson	available	11/7/2019	11/7/2019			
R2-1915438 Running CR to 38.331 on NR SON	Ericsson	endorsed	11/7/2019	11/7/2019	B		
R2-1915439 Discussion on QoS flow in SLRB	Apple	available	11/7/2019	11/8/2019			
R2-1915440 Disucssion on PC5 RRC left issues	Apple	available	11/7/2019	11/8/2019			
R2-1915441 Draft LS on keep alive function	Apple	available	11/7/2019	11/8/2019		SA2	
R2-1915442 UL-SL Prioritization under SL incapable RAN	Apple	available	11/7/2019	11/8/2019			
R2-1915443 SL Synchronization under Async gNB(s)	Apple	noted	11/7/2019	11/8/2019			
R2-1915444 Maximum Data Rate Enumeration for UP Integrity Protecti	Apple, ZTE	available	11/7/2019	11/8/2019			
R2-1915445 Draft LS on Maximum Data Rate Enumeration for UP Integr	Apple	available	11/7/2019	11/8/2019		CT1	SA3
R2-1915446 Handling of fallbacks for combined contiguous and non-cor	Apple	available	11/7/2019	11/8/2019			
R2-1915447 CR to TS38.331 on FR2 intra band contiguous and non-cont	Apple	available	11/7/2019	11/8/2019	F		
R2-1915448 CR to TS38.306 on FR2 intra band contiguous and non-cont	Apple	available	11/7/2019	11/8/2019	F		
R2-1915449 Introduction to additional enhancements NB-IoT Rel-16	BlackBerry	available	11/7/2019	11/7/2019	B		
R2-1915450 Loading Control in the RACH Type Selection	PANASONI	available	11/7/2019	11/7/2019			
R2-1915451 Remaining issues on the PDCP anchor relocation for DPAS I	NEC	available	11/7/2019	11/8/2019			
R2-1915452 DL PDCP handling for RLC UM	NEC	available	11/7/2019	11/8/2019			
R2-1915453 Further consideration on capability coordination for DAPS I	NEC	available	11/7/2019	11/8/2019			
R2-1915454 RLF report for CHO	NEC	noted	11/7/2019	11/8/2019			
R2-1915455 Combination of CHO and DAPS	NEC	available	11/7/2019	11/8/2019			
R2-1915456 Remaining issues for routing	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915457 Remaining issues for bearer mapping	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915458 Flow control for IAB networks	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1915459 Way forward and TP for the pre-BSR	Huawei, Hi	revised	11/7/2019	11/8/2019	B		
R2-1915460 RACH related issues for IAB	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915461 Backhaul RLF Recovery	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915462 Discussion on F1AP over LTE in NSA	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915463 Running CR to 36.331 on Integrated Access and Backhaul fc	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915464 TP for TS 38.304 and 36.304 on the impacts of idle procedu	Huawei, Hi	available	11/7/2019	11/8/2019	B		
R2-1915465 T_delta of IAB DL transmission timing alignment	Huawei, Hi	noted	11/7/2019	11/8/2019			
R2-1915466 Discussion on the BAP PDU format	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915467 Support of UE PDCP duplication	Huawei, Hi	available	11/7/2019	11/8/2019			
R2-1915468 Draft CR to 36.331 on Integrated Access and Backhaul for (I	Ericsson	revised	11/7/2019	11/7/2019			
R2-1915469 Running CR to TS 38.331 on IAB for NR	Ericsson	revised	11/7/2019	11/7/2019			
R2-1915470 Draft CR to TS 38.331 on IAB for TDD UL DL Change of Conf	Ericsson	available	11/7/2019	11/7/2019			
R2-1915471 On Multi-connectivity for IAB	Ericsson	available	11/7/2019	11/7/2019			
R2-1915472 Backhaul Adaptation Protocol (BAP) Header for IAB Networ	Ericsson	available	11/7/2019	11/7/2019			
R2-1915473 Further Discussion on BAP Layer Signaling	Ericsson	available	11/7/2019	11/7/2019			
R2-1915474 Remaining Issues Related to Flow Control	Ericsson	available	11/7/2019	11/7/2019			

R2-1915475	Way forward on pre-emptive BSR in IAB networks	Ericsson, S	noted	11/7/2019	11/7/2019			
R2-1915476	IP Address Assignment for IAB Nodes	Ericsson	available	11/7/2019	11/7/2019			
R2-1915477	Further details on Backhaul link RLF Notification Types to D	Ericsson, S	withdrawn	11/7/2019	11/7/2019			
R2-1915478	Summary for Email Discussion [107bis#40] [IAB] SI Broadas	Ericsson	noted	11/7/2019	11/15/2019			
R2-1915479	Cell reservations, UAC, and initial access aspects in IAB net	Ericsson	available	11/7/2019	11/7/2019			
R2-1915480	RRC Connection Re-establishment cause values for IAB nod	Ericsson	available	11/7/2019	11/7/2019			
R2-1915481	Security for inter-IAB node Signalling	Ericsson	available	11/7/2019	11/7/2019			
R2-1915482	Correction on the Msg3 based on demand system informat	Huawei, Hi	agreed	11/7/2019	11/8/2019	1	F	
R2-1915483	Correction on the configuration of split SRB	Huawei, Hi	revised	11/7/2019	11/8/2019		F	
R2-1915484	Correction for random access initiation due to reconfigurat	Huawei, Hi	not pursued	11/7/2019	11/8/2019		F	
R2-1915485	Enhancement on BSR format for the one LCG case	Huawei, Hi	available	11/7/2019	11/8/2019		F	
R2-1915486	Correction on header compression, integrity protection an	Huawei, Hi	not pursued	11/7/2019	11/8/2019		F	
R2-1915487	Correction on initial BWP bandwidth capabilities	Huawei, Hi	withdrawn	11/7/2019			F	
R2-1915488	Correction on camping conditions	Huawei, Hi	agreed	11/7/2019	11/8/2019		F	
R2-1915489	Correction on CORESET location	Huawei, Hi	revised	11/7/2019	11/8/2019		F	
R2-1915490	On Autonomous Transmission of Pending MAC PDUs	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915491	Intra-UE Prioritization with Per-Grant Priority Indication: M	Nokia, Nok	noted	11/7/2019	11/7/2019			
R2-1915492	Intra-UE Prioritization between SR and PUSCH	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915493	Network Coordination for Uplink PDCP Duplication	Nokia, Nok	noted	11/7/2019	11/7/2019			
R2-1915494	[Draft] LS on Network Coordination for UL PDCP Duplicatio	Nokia, Nok	revised	11/7/2019	11/7/2019			RAN3
R2-1915495	Configuration and Control for Uplink PDCP Duplication	Nokia, Nok	noted	11/7/2019	11/7/2019			
R2-1915496	On per-DRB DAPS Handover in NR and LTE	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915497	On RLF reporting for CHO and DAPS	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915498	On when to decode and non-compliance with target cell co	Nokia, Nok	noted	11/7/2019	11/8/2019			
R2-1915499	Failure Handling via CHO recovery	Nokia, Nok	noted	11/7/2019	11/7/2019			
R2-1915500	DraftCR for early RLF and fast handover failure recovery for	Nokia, Nok	available	11/7/2019	11/7/2019		B	
R2-1915501	Remaining details of DAPS failure handling	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915502	DraftCR for introducing the fallback to source cell in DAPS h	Nokia, Nok	available	11/7/2019	11/7/2019		B	
R2-1915503	On what is still possible for SL RLF detection	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915504	Missing reportAddNeighMeas in periodic measurement rep	Nokia, Nok	available	11/7/2019	11/7/2019		F	
R2-1915505	SMTC setting in MR-DC PSCell change	Nokia, Nok	revised	11/7/2019	11/7/2019	2	F	
R2-1915506	Clarifying the alignment of capability filtering across LTE an	Nokia, Nok	agreed	11/7/2019	11/7/2019	2	F	
R2-1915507	Report for [107bis#36] [NR R15] FR2 CA Fallbacks (Nokia)	Nokia, Nok	revised	11/7/2019	11/7/2019			
R2-1915508	Report for [107bis#35] [NR R15] Consequences if not suppo	Nokia, Nok	postponed	11/7/2019	11/13/2019	2	F	
R2-1915509	On the capability coordination of measurement reporting c	Nokia, Nok	noted	11/7/2019	11/7/2019			
R2-1915510	Clarifying the interpretation behind the encapsulation of th	Nokia, Nok	noted	11/7/2019	11/7/2019			
R2-1915511	On the modelling of dormant SCG	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915512	[DRAFT] Response LS on SL RLM_RLF	LG Electro	available	11/7/2019	11/8/2019			RAN1
R2-1915513	Discussion on assistance information for resource allocatio	LG Electro	available	11/7/2019	11/8/2019			
R2-1915514	Remaining issues on SL RLF reporting	LG Electro	noted	11/7/2019	11/8/2019			
R2-1915515	Remaining issues on SL RLM	LG Electro	available	11/7/2019	11/8/2019			
R2-1915516	Discussion on groupcast HARQ in NR SL	LG Electro	available	11/7/2019	11/8/2019			
R2-1915517	Discussion on measurement and report in NR SL	LG Electro	available	11/7/2019	11/8/2019			
R2-1915518	Discussion on remaining issues of mode1 operation	LG Electro	available	11/7/2019	11/8/2019			
R2-1915519	CAPAC for UL configured grant with SRB data	ZTE Corpo	available	11/7/2019	11/7/2019			
R2-1915520	Further details on PDCCH WUS	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915521	Dedicated RRM Measurement Relaxation	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915522	Further details on RRM measurement relaxation	Nokia, Nok	available	11/7/2019	11/7/2019			
R2-1915523	On UE assistance	Nokia, Nok	available	11/7/2019	11/7/2019			

R2-1915524	(IPA) Correction on inter-frequency neighbour cell measure	Ericsson	revised	11/7/2019	11/7/2019	2	F		
R2-1915525	Correction to Pcompensation for FR2	Huawei, Hi	withdrawn	11/7/2019	11/8/2019	1	F		
R2-1915526	Correction to nonCriticalExtension of RRCConnectionRelea	Huawei, Hi	agreed	11/7/2019	11/8/2019		F		
R2-1915527	Report of email discussion [107bis#71][PowerSaving] 38.32	Huawei, Hi	noted	11/7/2019	11/14/2019				
R2-1915528	Running CR for Introduction of Rel-16 NR UE power saving	Huawei, Hi	available	11/7/2019	11/14/2019		B		
R2-1915529	On SrxlevRef adaptation in relaxed monitoring	Huawei, Hi	available	11/7/2019	11/8/2019				
R2-1915530	Reducing the number of neighbour cells/carriers to measur	Huawei, Hi	available	11/7/2019	11/8/2019				
R2-1915531	Remaining issues of DL quality report	Huawei, Hi	available	11/7/2019	11/8/2019				
R2-1915532	DRAFT LS on channel quality report for LTE-MTC	Huawei, Hi	available	11/7/2019	11/8/2019			R1-191138	RAN1, RAN4
R2-1915533	MPDCCH performance improvement using CRS	Huawei, Hi	noted	11/7/2019	11/8/2019				
R2-1915534	ETWS/CMAS in connected mode	Huawei, Hi	noted	11/7/2019	11/8/2019				
R2-1915535	DRAFT LS to RAN1 on the use of SI-RNTI for the ETWS/CMA	Huawei, Hi	noted	11/7/2019	11/8/2019				RAN1
R2-1915536	Enhancements to idle mode mobility for non-BL UEs	Huawei, Hi	noted	11/7/2019	11/8/2019				
R2-1915537	Use of RSS for measurement improvements	Huawei, Hi	available	11/7/2019	11/8/2019				
R2-1915538	Way forward on pre-emptive BSR	Samsung, I	noted	11/7/2019	11/7/2019				
R2-1915539	Considerations on the RRM measurement relaxation	PANASONI	available	11/7/2019	11/7/2019				
R2-1915540	SI update notification and PWS notification in WUS	PANASONI	available	11/7/2019	11/7/2019				
R2-1915541	Measurement reporting while CHO is configured	PANASONI	available	11/7/2019	11/7/2019				
R2-1915542	CA duplication using NR PDCP in EN-DC	Ericsson	available	11/7/2019	11/7/2019				
R2-1915543	System Information in NTN	Nomor Re	available	11/7/2019	11/7/2019				
R2-1915544	Remaining issues on consistent LBT failures	MediaTek	available	11/7/2019	11/7/2019				
R2-1915545	Indicating SFN LSB in the payload of Msg2 or MsgB	MediaTek	available	11/7/2019	11/7/2019				
R2-1915546	Ethernet Header Compression Message Format	MediaTek	available	11/7/2019	11/7/2019				
R2-1915547	Propagation Delay Compensation by the gNB	MediaTek	noted	11/7/2019	11/7/2019				
R2-1915548	Running CR for 38.331 for Power Savings	MediaTek	available	11/7/2019	11/12/2019				
R2-1915549	Open issues related to the running 38.331 CR	MediaTek	noted	11/7/2019	11/12/2019				
R2-1915550	Periodic CSI and SRS with wake-up indication	MediaTek	available	11/7/2019	11/7/2019				
R2-1915551	On T312 in NR and its relationship with T310	Nokia, Nok	available	11/7/2019	11/7/2019				
R2-1915552	Resource Pool Sharing between Mode 1 and Mode 2 UEs	Fraunhofe	available	11/7/2019	11/7/2019				
R2-1915553	Further D-PUR configuration aspects	Gemalto N	available	11/7/2019	11/7/2019				
R2-1915554	PC5-RRC Procedures for NR V2X	Fraunhofe	available	11/7/2019	11/7/2019				
R2-1915555	Resource Allocation for Mode 2 NR V2X	Fraunhofe	available	11/7/2019	11/7/2019				
R2-1915556	UE capabilities for CHO	Nokia, Nok	available	11/7/2019	11/7/2019				
R2-1915557	UE capabilities for DAPS handover	Nokia, Nok	available	11/7/2019	11/7/2019				
R2-1915558	Stage 2 for Multi-RTT positioning	Qualcomm	noted	11/7/2019	11/8/2019				
R2-1915559	Reconfiguration failure in NE-DC	Google Inc	agreed	11/7/2019	11/8/2019	1	F		
R2-1915560	Running LPP CR for PPP-RTK support (SSR)	Qualcomm	endorsed	11/7/2019	11/8/2019				
R2-1915561	Running LTE RRC CR for PPP-RTK support (SSR)	Qualcomm	endorsed	11/7/2019	11/8/2019				
R2-1915562	Remaining details on broadcast assistance data delivery	Qualcomm	available	11/7/2019	11/8/2019				
R2-1915563	Assistance Data for DL-only UE-based mode	Qualcomm	available	11/7/2019	11/8/2019				
R2-1915564	Details of pre-emptive BSR design	Samsung E	available	11/7/2019	11/7/2019				
R2-1915565	Further details on uplink enhancements for NTN	Ericsson	available	11/7/2019	11/7/2019				
R2-1915566	DRX adaptions for NTN	Ericsson, N	revised	11/7/2019	11/7/2019				
R2-1915567	Remaining details on Random access for NTN	Ericsson	revised	11/7/2019	11/7/2019				
R2-1915568	On RACH less for NTN	Ericsson	available	11/7/2019	11/7/2019				
R2-1915569	Correction to full configuration	Google Inc	revised	11/7/2019	11/8/2019		F		
R2-1915570	Summary of E-mail discusion [107bis#33][NR R15] Exchang	Huawei, Hi	available	11/7/2019	11/19/2019				
R2-1915571	LS on exchanging used IDs of SN terminated DRBs	Huawei, Hi	revised	11/7/2019	11/23/2019				RAN3
R2-1915572	Draft CR on not up-to-date SN terminated RB configuration	Huawei, Hi	available	11/7/2019	11/8/2019		F		

R2-1915573	Clarification on PDCP version change	Huawei, Hi	available	11/7/2019	11/7/2019		F		
R2-1915574	Clarification on PDCP version change	Huawei, Hi	available	11/7/2019	11/7/2019		F		
R2-1915575	Correction to DRB addition/modification for the LTE UE not	Huawei, Hi	available	11/7/2019	11/7/2019		F		
R2-1915576	Clarification on sending of sk-counter for (NG)EN-DC	Huawei, Hi	available	11/7/2019	11/7/2019		F		
R2-1915577	Correction to key derivation for the UE configured with sk-(	Huawei, Hi	revised	11/7/2019	11/7/2019		F		
R2-1915578	Correction on the need for reconfiguration with sync in NR-	Huawei, Hi	available	11/7/2019	11/7/2019		F		
R2-1915579	Correction on the pre-condition for reconfiguration with sy	Huawei, Hi	revised	11/7/2019	11/7/2019		F		
R2-1915580	Correction on the SCG RRCReconfigurationComplete for NF	Huawei, Hi	available	11/7/2019	11/7/2019		F		
R2-1915581	Correction on AS-Context	Huawei, Hi	merged	11/7/2019	11/7/2019		F		
R2-1915582	Correction on AS-Config	Huawei, Hi	agreed	11/7/2019	11/7/2019		F		
R2-1915583	Addition of servCellIndexRangeSCG in AS-Context in 36331	Huawei, Hi	not pursued	11/7/2019	11/7/2019		F		
R2-1915584	Addition of servCellIndexRangeSCG in AS-Context in 38331	Huawei, Hi	available	11/7/2019	11/7/2019		F		
R2-1915585	Clarification on the (NG)EN-DC capabilities	Huawei, Hi	not pursued	11/7/2019	11/7/2019		F		
R2-1915586	Clarification on the en-DC and ng-EN-DC capabilities	Huawei, Hi	revised	11/7/2019	11/7/2019		F		
R2-1915587	Clarification on ne-DC capability	Huawei, Hi	revised	11/7/2019	11/7/2019		F		
R2-1915588	PDCP configuration generation (email discussion of 107#25	Huawei, Hi	revised	11/7/2019	11/7/2019	1	F		
R2-1915589	Correction for the establishment of LTE RLC bearers for (NC	Huawei, Hi	agreed	11/7/2019	11/7/2019	2	F		
R2-1915590	Correction on measurement reporting in NR-DC	Huawei, Hi	agreed	11/7/2019	11/7/2019		F		
R2-1915591	PUCCH configuration for MR-DC and NR standalone	Huawei, Hi	available	11/7/2019	11/7/2019				
R2-1915592	Correction on PUCCH configuration	Huawei, Hi	postponed	11/7/2019	11/7/2019		F		
R2-1915593	Draft LS to RAN1 for clarification of PUCCH configuration	Huawei, Hi	revised	11/7/2019	11/7/2019				RAN1
R2-1915594	Correction on SIB1 description	Huawei, Hi	revised	11/7/2019	11/7/2019		F		
R2-1915595	Enhancement of RRC_INACTIVE	Google Inc	available	11/7/2019	11/8/2019				
R2-1915596	Consideration of preemptive BSR in IAB	Kyocera	available	11/7/2019	11/8/2019				
R2-1915597	Further discussion on-demand SI for RRC_CONNECTED UE	Huawei, Hi	noted	11/7/2019	11/11/2019				
R2-1915598	Possible issues on Backhaul RLF handling	Kyocera	available	11/7/2019	11/8/2019				
R2-1915599	Hand-over rate in Earth fixed vs. Earth moving cells in NTN	THALES	available	11/7/2019	11/7/2019				
R2-1915600	Recovery due to LBT failures	Kyocera	available	11/7/2019	11/8/2019				
R2-1915601	PC5 L2/L3 protocols for unicast and groupcast	Kyocera	available	11/7/2019	11/8/2019				
R2-1915602	RA type switch and fallback in 2-step RA	Ericsson	noted	11/7/2019	11/7/2019				
R2-1915603	New msgB format for 2-step RA	Ericsson	available	11/7/2019	11/7/2019				
R2-1915604	Preamble group handling for 2-step RA	Ericsson	available	11/7/2019	11/7/2019				
R2-1915605	CFRA in 2-step RA	Ericsson	available	11/7/2019	11/7/2019				
R2-1915606	Beam-specific 2-step RA support	Ericsson	available	11/7/2019	11/7/2019				
R2-1915607	msgB RNTI design for 2-step RA	Ericsson	noted	11/7/2019	11/7/2019				
R2-1915608	Introduction of additional enhancements for NB-IoT	Qualcomm	available	11/7/2019	11/7/2019				
R2-1915609	Introduction of additional enhancements for eMTC	Qualcomm	available	11/7/2019	11/7/2019				
R2-1915610	Proposals for WUS group open issues	Qualcomm	available	11/7/2019	11/7/2019				
R2-1915611	Proposal for 2-bit downlink channel quality reporting in MS	Qualcomm	revised	11/7/2019	11/7/2019				
R2-1915612	LTE-M indication discussion paper	Qualcomm	noted	11/7/2019	11/7/2019				
R2-1915613	RNTI for ETWS/CMAS indication in connected mode for nor	Qualcomm	noted	11/7/2019	11/7/2019				
R2-1915614	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm	revised	11/7/2019	11/7/2019			R2-191434	SA2, CT1, RAN3
R2-1915615	Remaining issues for EHC in TSC	ZTE Corpo	available	11/7/2019	11/8/2019				
R2-1915616	UE behaviour on Logged MDT configuration events	Nokia, Nok	noted	11/7/2019	11/7/2019				
R2-1915617	Avoiding conflicting MDT configurations in DC	Nokia, Nok	available	11/7/2019	11/8/2019				
R2-1915618	Impact of SNPN on PLMN check for MDT	Nokia, Nok	noted	11/7/2019	11/7/2019				
R2-1915619	RACH report and its reporting procedure	Nokia, Nok	available	11/7/2019	11/8/2019				
R2-1915620	Scheduled IP Throughput configuration for NR MDT	Nokia, Nok	available	11/7/2019	11/7/2019				
R2-1915621	Beam measurements linked to successful and failed handov	Nokia, Nok	noted	11/7/2019	11/7/2019				

R2-1915622 Measurement event for interference-forced inter-RAT/inte	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915623 QoE measurements collection support in Rel-16	Nokia, Nok	noted	11/7/2019	11/7/2019					
R2-1915624 Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nok	revised	11/7/2019	11/7/2019	4	F			
R2-1915625 Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nok	revised	11/7/2019	11/7/2019	3	A			
R2-1915626 Miscellaneous non-controversial corrections Set IV	Ericsson	withdrawn	11/7/2019			F			
R2-1915627 Presence and absence of TAC in NR cell	Ericsson	withdrawn	11/7/2019			F			
R2-1915628 Definition of NR standalone	Ericsson	withdrawn	11/7/2019			F			
R2-1915629 Clarification on sCellIndex and SCell lists	Ericsson, N	withdrawn	11/7/2019			F			
R2-1915630 Correction to channelBWs	Ericsson	withdrawn	11/7/2019			F			
R2-1915631 Rel-16 RRC planning	Ericsson	withdrawn	11/7/2019						
R2-1915632 Clarification of submission of RRCReconfigurationcomplete	Ericsson	withdrawn	11/7/2019			F			
R2-1915633 Correction to early measurement reporting results	Ericsson	withdrawn	11/7/2019			F			
R2-1915634 Correction to maximum number of carriers for idle mode m	Ericsson	withdrawn	11/7/2019			F			
R2-1915635 Correction on reestablishRLC and reestablishPDCP	Ericsson	withdrawn	11/7/2019			F			
R2-1915636 Ambiguities in channel bandwidth capabilities	Ericsson	withdrawn	11/7/2019						
R2-1915637 Full configuration in inter-RAT handover	Google Inc	available	11/7/2019	11/8/2019	1	F			
R2-1915638 Formula for mapping UE to WUS group	ZTE Corpo	available	11/7/2019	11/8/2019					
R2-1915639 Configuration details for WUS grouping	ZTE Corpo	available	11/7/2019	11/8/2019					
R2-1915640 Unresolved issues for BFR on SCell	Ericsson	available	11/7/2019	11/8/2019					
R2-1915641 BFR MAC CE for SpCell	Ericsson	available	11/7/2019	11/8/2019					
R2-1915642 Addition of indication for successful Random access proced	Ericsson	available	11/7/2019	11/7/2019	1	F			
R2-1915643 New BSR trigger for EN-DC	Ericsson	available	11/7/2019	11/7/2019					
R2-1915644 Introduction of Additional SRS	Ericsson	postponed	11/7/2019	11/7/2019		B			
R2-1915645 Draft LS on S-KgNB/KSN Derivation in Conditional PSCell Ad	Futurewei	available	11/7/2019	11/8/2019				SA3	RAN3
R2-1915646 Use case and Signaling for RSS	Ericsson	available	11/7/2019	11/7/2019					
R2-1915647 New SIB for hosting posSI Scheduling Information	Ericsson	available	11/7/2019	11/7/2019					
R2-1915648 Quality Report in eMTC Remaining Issues	Ericsson	available	11/7/2019	11/7/2019					
R2-1915649 RSS Signalling Configuration	Ericsson	available	11/7/2019	11/7/2019					
R2-1915650 Remaining Issues for ANR measurements	Ericsson	available	11/7/2019	11/7/2019					
R2-1915651 Additional path reporting for downlink NR positioning mea	Ericsson, T	revised	11/7/2019	11/7/2019					
R2-1915652 LPP, RRC and UE Rx-Tx Aspects of NR RAT dependent positi	Ericsson	noted	11/7/2019	11/7/2019					
R2-1915653 Corrections of terminology for stage 2	Ericsson	noted	11/7/2019	11/7/2019		F			
R2-1915654 GNSS Integer Ambiguity Level Indications	Ericsson, S	noted	11/7/2019	11/7/2019					
R2-1915655 Corrections for Positioning Architecture	Ericsson	agreed	11/7/2019	11/7/2019	2	F			
R2-1915656 On Demand Delivery of Positioning Assistance Data	Ericsson	available	11/7/2019	11/7/2019					
R2-1915657 Specify UDC Header is part of Data Field	Ericsson, S	agreed	11/7/2019	11/7/2019		F			
R2-1915658 UE-based configuration options	Ericsson	available	11/7/2019	11/7/2019					
R2-1915659 System support for NB-IoT Paging across Multiple Carriers	VODAFON	postponed	11/7/2019	11/7/2019		F			
R2-1915660 Miscellaneous non-controversial corrections Set IV	Ericsson	withdrawn	11/7/2019			F			
R2-1915661 Presence and absence of TAC in NR cell	Ericsson	withdrawn	11/7/2019			F			
R2-1915662 Definition of NR standalone	Ericsson	withdrawn	11/7/2019			F			
R2-1915663 Clarification on sCellIndex and SCell lists	Ericsson, N	revised	11/7/2019	11/7/2019		F			
R2-1915664 Correction to channelBWs	Ericsson	available	11/7/2019	11/7/2019		F			
R2-1915665 Rel-16 RRC planning	Ericsson	endorsed	11/7/2019	11/7/2019					
R2-1915666 Clarification of submission of RRCReconfigurationcomplete	Ericsson	available	11/7/2019	11/7/2019		F			
R2-1915667 Correction to early measurement reporting results	Ericsson	revised	11/7/2019	11/7/2019		F			
R2-1915668 Correction to maximum number of carriers for idle mode m	Ericsson	not pursued	11/7/2019	11/7/2019		F			
R2-1915669 Correction on reestablishRLC and reestablishPDCP	Ericsson	merged	11/7/2019	11/7/2019		F			
R2-1915670 Ambiguities in channel bandwidth capabilities	Ericsson	noted	11/7/2019	11/8/2019					

R2-1915671	Miscellaneous non-controversial corrections Set IV	Ericsson	available	11/7/2019	11/7/2019	1	F			
R2-1915672	Presence and absence of TAC in NR cell	Ericsson	agreed	11/7/2019	11/7/2019	2	F			
R2-1915673	Definition of NR standalone	Ericsson	revised	11/7/2019	11/7/2019	2	F			
R2-1915674	CR to 36.306 - On explicit NR FR1 related CGI reporting cap	Ericsson	not pursued	11/7/2019	11/7/2019		F			
R2-1915675	CR to 36.331 - On explicit NR FR1 related CGI reporting cap	Ericsson	available	11/7/2019	11/7/2019		F			
R2-1915676	CR to 38.306 - On NR CGI reporting related issues	Ericsson	merged	11/7/2019	11/7/2019		F			
R2-1915677	CR to 38.331 - On NR CGI reporting related issues	Ericsson	available	11/7/2019	11/7/2019		F			
R2-1915678	System support for NB-IoT Paging across Multiple Carriers	VODAFON	available	11/7/2019	11/7/2019		A			
R2-1915679	Network control for non-BL UE in BR mode	ZTE Corpo	available	11/7/2019	11/8/2019					
R2-1915680	Introducing multiple BC-FS	Ericsson	available	11/7/2019	11/7/2019		B			
R2-1915681	Returning multiple BC+FS in CG-Config	Ericsson	available	11/7/2019	11/7/2019					
R2-1915682	Correction to Feature Set Combination and Band combinat	Ericsson	revised	11/7/2019	11/7/2019		F			
R2-1915683	Security requirements for split PDU session (38.331)	Ericsson, C	revised	11/7/2019	11/7/2019		F			
R2-1915684	Use of splitSRB-WithOneUL-Path capability (38.306)	Ericsson	revised	11/7/2019	11/7/2019		F			
R2-1915685	Use of splitSRB-WithOneUL-Path capability (38.331)	Ericsson	available	11/7/2019	11/7/2019		F			
R2-1915686	Use of splitSRB-WithOneUL-Path capability	Ericsson	available	11/7/2019	11/7/2019					
R2-1915687	Open issues for supended SCG behaviour	Ericsson	noted	11/7/2019	11/7/2019					
R2-1915688	Configuration of dormancy behaviour in SCell	Ericsson	noted	11/7/2019	11/7/2019					
R2-1915689	Correction to pdsch-RepetitionMultiSlots and pusch-Repeti	Ericsson	agreed	11/7/2019	11/7/2019		F			
R2-1915690	Running CR for the introduction of NR positioning	Ericsson	available	11/7/2019	11/7/2019		B			
R2-1915691	Remaining issues for accurate reference time delivery	Nokia, Nok	noted	11/7/2019	11/8/2019					
R2-1915692	CG/SPS alignment with TSN periodicity	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915693	Further discussion on CG periodicities and CG and SPS occa	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915694	SPS collisions with multiple SPS configurations	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915695	Padding removal	Nokia, Nok	revised	11/7/2019	11/7/2019					
R2-1915696	Joint IP and Ethernet Header compression	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915697	Ethernet Header compression profiles	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915698	Further details of feedback mechanism	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915699	Route priority and local routing	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915700	BH link failure handling	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915701	Remaining issues of routing and bearer mapping configurat	Nokia, Nok	noted	11/7/2019	11/8/2019					
R2-1915702	Remaining issues of routing and bearer mapping configurat	Nokia, Nok	noted	11/7/2019	11/7/2019					
R2-1915703	RAN2 aspects of F1AP over LTE signalling	Nokia, Nok	available	11/7/2019	11/7/2019					
R2-1915704	[DRAFT] LS on F1AP over LTE leg signalling for IAB	Nokia, Nok	revised	11/7/2019	11/7/2019				RAN3	
R2-1915705	Routing ID design for uplink	Nokia, Nok	available	11/7/2019	11/13/2019					
R2-1915706	Remaining issues regarding UE assistance information	Samsung T	available	11/7/2019	11/7/2019					
R2-1915707	Correction of UE assistance information	Samsung T	revised	11/7/2019	11/7/2019		F			
R2-1915708	Correction of UE assistance information	Samsung T	revised	11/7/2019	11/7/2019		F			
R2-1915709	Clarification regarding QoS handling in MRDC with 5G CN	Samsung T	agreed	11/7/2019	11/8/2019		F			
R2-1915710	Clarification regarding inter-node transfer of UE capability	Samsung T	revised	11/7/2019	11/8/2019		F			
R2-1915711	Adding comment to avoid improper extension of per BC ca	Samsung T	not pursued	11/7/2019	11/8/2019		F			
R2-1915712	Recommended Bit Rate/Query for FLUS and MTSI	Qualcomm	noted	11/7/2019	11/8/2019					
R2-1915713	[Draft] Reply LS on Recommended Bit Rate/Query for FLUS	Qualcomm	revised	11/7/2019	11/8/2019			S4-191031	SA4	
R2-1915714	Too strong interference during CLI-RSSI measurement	Qualcomm	available	11/7/2019	11/8/2019					
R2-1915715	Report of [107bis#58]CLI measurements UE capabilities	Qualcomm	noted	11/7/2019	11/9/2019					
R2-1915716	Introduction of Cross Link Interference (CLI) handling and R	Qualcomm	endorsed	11/7/2019	11/8/2019		B			
R2-1915717	Introduction of Rel-16 eMTC enhancements	Qualcomm	available	11/7/2019	11/8/2019		B			
R2-1915718	Discussion on reply LS from SA2 on MT-EDT	Qualcomm	available	11/7/2019	11/8/2019					
R2-1915719	[DRAFT] Reply LS on Mobile-terminated Early Data Transmi	Qualcomm	revised	11/7/2019	11/8/2019			S2-191080	SA2	RAN3, CT1, RAN, SA

R2-1915720 MT-EDT related Editor's Notes and FFSes in RRC running CR	Qualcomm	available	11/7/2019	11/8/2019		
R2-1915721 PUR related Editor's Notes and FFSes in RRC running CR	Qualcomm	available	11/7/2019	11/8/2019		
R2-1915722 Correction to field conditions in NE-DC	Ericsson	agreed	11/7/2019	11/7/2019	2	F
R2-1915723 Hop-by-Hop Flow control for IAB	Futurewei	noted	11/7/2019	11/8/2019		
R2-1915724 SLRB configuration during UE state transition	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915725 Support of non-standardized PQI in NR V2X	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915726 Remaining aspects for SL RLC	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915727 On the support of simultaneous configuration of mode1 an	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915728 Remaining aspects for SL PDCP	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915729 UE capabilities for features specified in R16 PWS WI	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915730 Remaining issues for early measurements upon UE mobility	Samsung T	noted	11/7/2019	11/8/2019		
R2-1915731 Resumption based on early measurement results	Samsung T	available	11/7/2019	11/8/2019		
R2-1915732 Immediate MDT, inter-node aspects	Samsung T	available	11/7/2019	11/7/2019		
R2-1915733 Logged MDT, inter-node aspects (SN configuration)	Samsung T	available	11/7/2019	11/8/2019		
R2-1915734 MDT for early measurments (Logged, immediate)	Samsung T	available	11/7/2019	11/7/2019		
R2-1915735 Review of UE information in NR, alignment and harmonisat	Samsung T	reserved	11/7/2019			
R2-1915736 CHO configuration/ execution, remaining aspects	Samsung T	available	11/7/2019	11/8/2019		
R2-1915737 Main issues remaining for SN initiated SN change	Samsung T	revised	11/7/2019	11/8/2019		
R2-1915738 Capability coordination for DAPS, required UE capability de	Samsung T	available	11/7/2019	11/8/2019		
R2-1915739 Further considerations on mobility for CAG	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915740 Configured grant confirmation MAC CE	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915741 TSC assistance information	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915742 Intra UE prioritization of UL Data and Data	Intel Corpo	available	11/7/2019	11/8/2019		
R2-1915743 RRC Connection establishment/resumption in SNPN and CA	Intel Corpo	noted	11/7/2019	11/8/2019		
R2-1915744 Benefits of inter-IAB node metric exchange for IAB scheduli	AT&T	noted	11/7/2019	11/8/2019		
R2-1915745 Remaining details of F1AP over LTE	AT&T, KDD	available	11/7/2019	11/8/2019		
R2-1915746 CR to 36.331 for F1AP over LTE	AT&T, KDD	available	11/7/2019	11/8/2019		
R2-1915747 CR to 38.331 for F1AP over LTE	AT&T, KDD	available	11/7/2019	11/8/2019		
R2-1915748 UL BAP address and BAP path ID lengths	AT&T	available	11/7/2019	11/8/2019		
R2-1915749 Control of pre-emptive SR/BSR functionality for low-latency	AT&T	noted	11/7/2019	11/8/2019		
R2-1915750 Consideration of IAB features that may potentially require s	AT&T	available	11/7/2019	11/8/2019		
R2-1915751 Further Pre-configured UL Resources Design Considerations	Sierra Wire	available	11/7/2019	11/8/2019		
R2-1915752 Report on Email discussion [107bis#84][NR MDT] MR DC re	Ericsson	available	11/7/2019	11/8/2019		
R2-1915753 Mobility history information reporting from the UE	Ericsson	available	11/7/2019	11/8/2019		
R2-1915754 Logged MDT Configuration & Reporting handling in DC scer	Ericsson	available	11/7/2019	11/8/2019		
R2-1915755 Leftover issues for Logged MDT in NR	Ericsson	noted	11/7/2019	11/8/2019		
R2-1915756 CR on introducing UE capability for MDT in NR	Ericsson	available	11/7/2019	11/8/2019		B
R2-1915757 UE Location Report capability indication for MDT	Ericsson	available	11/7/2019	11/8/2019		
R2-1915758 Maximum processing time for RRC Segmentation	Ericsson	available	11/7/2019	11/8/2019		
R2-1915759 Remaining aspects on Capability ID	Ericsson	noted	11/7/2019	11/8/2019		
R2-1915760 Introduction of RRC Segmentation - Downlink	Ericsson, D	available	11/7/2019	11/8/2019		B
R2-1915761 Introduction of RRC Segmentation - Downlink	Ericsson, D	available	11/7/2019	11/8/2019		B
R2-1915762 Segmentation in DL	Ericsson, D	noted	11/7/2019	11/8/2019		
R2-1915763 Introduction of RRC Segmentation - Downlink	Ericsson, D	available	11/7/2019	11/8/2019		B
R2-1915764 Introduction of RRC Segmentation - Downlink	Ericsson, D	available	11/7/2019	11/8/2019		B
R2-1915765 Remaining details of UL LBT failure mechanism	Qualcomm	noted	11/7/2019	11/8/2019		
R2-1915766 Issue of loop topology after RLF	SHARP Cor	available	11/7/2019	11/7/2019		
R2-1915767 Validity of CHO configurations based on security configurat	SHARP Cor	noted	11/7/2019	11/7/2019		
R2-1915768 RLC aspects of DAPS handover	Ericsson	available	11/7/2019	11/7/2019		

R2-1915769 Reception type for ETWS/CMAS for non-BL UE in CE in RRC	Ericsson	available	11/7/2019	11/7/2019	B				
R2-1915770 Conditional measurement configuration for LEO NTN	InterDigita	available	11/7/2019	11/7/2019					
R2-1915771 Further considerations for the WUS	InterDigita	available	11/7/2019	11/7/2019					
R2-1915772 RRC release assistance for Control and User Plane CIoT EPS	Ericsson	available	11/7/2019	11/8/2019					
R2-1915773 Discussion on RLC bi-directional bearer setup for SL unicast	Apple	available	11/7/2019	11/8/2019					
R2-1915774 Discussion on remaining issues on HARQ process	Apple	available	11/7/2019	11/8/2019					
R2-1915775 Discussion on HARQ feedback for Sidelink Groupcast	Apple	available	11/7/2019	11/8/2019					
R2-1915776 Draft Reply LS on Sidelink HARQ Feedback for Groupcast	Apple	available	11/7/2019	11/8/2019		R2-191435	SA2	RAN1	
R2-1915777 UE Mobility for Simultaneous Mode 1 & Mode 2 configurat	Apple	available	11/7/2019	11/8/2019					
R2-1915778 Resource allocations for UEs with simultaneous mode 1 & r	Apple	available	11/7/2019	11/8/2019					
R2-1915779 Discussion on SLRB configuration during state transition	Apple	available	11/7/2019	11/8/2019					
R2-1915780 On-demand system information and dedicated signalling	MediaTek	available	11/7/2019	11/8/2019					
R2-1915781 Introduction of RACS [36.300]	MediaTek	endorsed	11/7/2019	11/8/2019	B				
R2-1915782 RRC release assistance for Control and User Plane CIoT EPS	Ericsson	withdrawn	11/7/2019		B				
R2-1915783 Further details on Backhaul link RLF Notification Types to D	Ericsson	available	11/7/2019	11/7/2019					
R2-1915784 Introduction of RACS [38.300]	MediaTek	endorsed	11/7/2019	11/8/2019	B				
R2-1915785 Processing time for segmented UE capability	MediaTek	noted	11/7/2019	11/8/2019					
R2-1915786 2-step RA 38.331 Running CR	Ericsson (E	endorsed	11/7/2019	11/7/2019	B				
R2-1915787 Report on email [107bis#77][2-step RACH] RRC details and	Ericsson (E	noted	11/7/2019	11/7/2019					
R2-1915788 Report for email discussion [107bis#64][PRN] Suitable and	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915789 Introduction of UECapabilityInformation segmentation in 3	MediaTek	available	11/7/2019	11/8/2019	B				
R2-1915790 Work plan for RACS-RAN work item	MediaTek	noted	11/7/2019	11/8/2019					
R2-1915791 Support (or not) of PC5-RRC for groupcast	MediaTek	noted	11/7/2019	11/8/2019					
R2-1915792 Capturing RLM for NR sidelink in stage 2	MediaTek	available	11/7/2019	11/8/2019					
R2-1915793 RLM and state modelling based on PC5-S connection	MediaTek	available	11/7/2019	11/8/2019					
R2-1915794 Early security re-activation	Ericsson, L	noted	11/7/2019	11/8/2019					
R2-1915795 Early security re-activation at RRC Connection Resume - Alt	Ericsson, L	available	11/7/2019	11/8/2019	B				
R2-1915796 Early security re-activation at RRC Connection Resume - Alt	Ericsson, L	available	11/7/2019	11/8/2019	B				
R2-1915797 Early security re-activation at RRC Connection Resume	Ericsson, L	available	11/7/2019	11/8/2019	B				
R2-1915798 Asynchronous synchronisation reference sources	MediaTek	available	11/7/2019	11/8/2019					
R2-1915799 Validity areas based on cell lists	MediaTek	available	11/7/2019	11/8/2019					
R2-1915800 Running 38.304 CR for PRN	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915801 Group WUS	Ericsson	available	11/7/2019	11/8/2019					
R2-1915802 Adapting the BFD mechanism for consistent LBT failure det	Google Inc	available	11/7/2019	11/8/2019					
R2-1915803 CAPC for configured grants in NR-U	Google Inc	available	11/7/2019	11/8/2019					
R2-1915804 Draft Reply LS on Sending CAG ID in NAS layer	Qualcomm	revised	11/7/2019	11/7/2019			SA3, SA2, F	CT1	S3-193142
R2-1915805 Support for NPN HRNN broadcast	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915806 System support for Wake Up Signal	VODAFON	available	11/7/2019	11/7/2019	F				
R2-1915807 Views on cell reselection for CAGs	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915808 Extended MAC CE ID	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915809 RoHC and EHC configuration on same PDCP entity	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915810 Draft LS on need for Ethernet padding compression	Qualcomm	revised	11/7/2019	11/7/2019			SA1		
R2-1915811 Views on handling of PDUs and data of deprioritized grants	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915812 Discussion of RAN1 LS on propagation delay compensation	Qualcomm	noted	11/7/2019	11/7/2019					
R2-1915813 Feedback Frame Format for EHC and CIoT link	Qualcomm	noted	11/7/2019	11/7/2019					
R2-1915814 More granularity for PDCP discardTimer	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915815 PDCP duplication enhancements and RLC AM	Qualcomm	available	11/7/2019	11/7/2019					
R2-1915816 Discussion on multiple configured grants	OPPO	available	11/7/2019	11/8/2019					
R2-1915817 Views on UE autonomous transmission using CG	Qualcomm	noted	11/7/2019	11/7/2019					

R2-1915818	MAC CE structure for PDCP duplication enhancement	Qualcomm	available	11/7/2019	11/7/2019			
R2-1915819	Coexistence of measurement relaxation and early measure	LG Electro	available	11/7/2019	11/8/2019			
R2-1915820	RRM measurement relaxation based on measurement resu	LG Electro	available	11/7/2019	11/8/2019			
R2-1915821	Considerations on validity area in NR	LG Electro	available	11/7/2019	11/8/2019			
R2-1915822	Handling early measurement results upon cell reselection	LG Electro	available	11/7/2019	11/8/2019			
R2-1915823	Remaining issues on early measurement configuration	LG Electro	available	11/7/2019	11/8/2019			
R2-1915824	Cell identification information in NTN	LG Electro	available	11/7/2019	11/8/2019			
R2-1915825	Left issue on LCP for NR V2X	OPPO	available	11/7/2019	11/8/2019			
R2-1915826	Left issues on SR and BSR	OPPO	available	11/7/2019	11/8/2019			
R2-1915827	Views on SPS collisions and some CG issues	Qualcomm	available	11/7/2019	11/7/2019			
R2-1915828	Simultaneous use of mode 1 and mode 2	KT Corp.	available	11/8/2019	11/8/2019			
R2-1915829	Open issues on system information	OPPO	available	11/8/2019	11/8/2019			
R2-1915830	MAC prioritization for Intra-UE prioritization	Qualcomm	noted	11/8/2019	11/8/2019			
R2-1915831	Value of UE-based PDCP duplication	Qualcomm	available	11/8/2019	11/8/2019			
R2-1915832	Clarification on candidate NR frequencies for IDC in EN-DC	NTT DOCO	postponed	11/8/2019	11/8/2019		F	
R2-1915833	Discussion on Scell handling for CA	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915834	Correction on Scell handling for CA	Huawei, Hi	available	11/8/2019	11/8/2019		C	
R2-1915835	Correction on Scell handling for CA	Huawei, Hi	available	11/8/2019	11/8/2019		A	
R2-1915836	Correction on Scell handling for CA	Huawei, Hi	available	11/8/2019	11/8/2019		A	
R2-1915837	Correction to the handling of stored AS context upon CN ty	Huawei, Hi	merged	11/8/2019	11/8/2019	2	F	
R2-1915838	Correction on RRC_INACTIVE state	Huawei, Hi	revised	11/8/2019	11/8/2019		F	
R2-1915839	Discussion on segment number for CMAS notification	Huawei, Hi	noted	11/8/2019	11/8/2019			
R2-1915840	Technical considerations on new QMC requirements from S	Huawei, Hi	noted	11/8/2019	11/8/2019			
R2-1915841	Discussion on potential impacts to other WGs due to new C	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915842	Report of email discussion 107b-51	Huawei	noted	11/8/2019	11/8/2019			
R2-1915843	Correction on non-3GPP paging	Huawei, Hi	revised	11/8/2019	11/8/2019		B	
R2-1915844	Discussion on configuration aspect for CHO	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915845	Discussion on execution aspect for CHO	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915846	Discussion on combination of simultaneous connectivity an	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915847	Discussion on MN initiated conditional PScell change	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915848	Discussion on conditional PScell change	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915849	Draft LS to RAN3 on conditional Pscell addition/change	Huawei, Hi	available	11/8/2019	11/8/2019			RAN3
R2-1915850	Report of email discussion [107bis#83] MDT	Huawei	noted	11/8/2019	11/11/2019			
R2-1915851	Running 38.331 CR for introducing MDT	Huawei, Er	endorsed	11/8/2019	11/11/2019		B	
R2-1915852	Discussion on open issues for running 38.331 CR for MDT	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915853	Discussion on logging NR neighbour cell measurements for	Huawei, Hi	noted	11/8/2019	11/8/2019			
R2-1915854	Introduction of NR neighbour cell measurements for LTE M	Huawei, Hi	available	11/8/2019	11/8/2019		B	
R2-1915855	Discussion on remaining aspects on logged MDT and Acces	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915856	Discussion on remaining aspects on immediate MDT in NR	Huawei, Hi	postponed	11/8/2019	11/8/2019			
R2-1915857	Discussion on remaining aspects on MDT and mobility histo	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915858	Discussion on delay measurement and collection	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915859	Discussion on SA5 defined measurements for the immediat	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915860	Discussion on the throughput measurements in MR-DC	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915861	Discussion on remaining aspects on SON	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1915862	Remaining issues in PDCP duplication	LG Electro	available	11/8/2019	11/8/2019			
R2-1915863	Handling of DRB integrity verification failure	LG Electro	available	11/8/2019	11/8/2019			
R2-1915864	Handling of EHC protocol at PDCP re-establishment	LG Electro	available	11/8/2019	11/8/2019			
R2-1915865	Latency reduction enhancements for SCG RACH procedure	Qualcomm	available	11/8/2019	11/8/2019			
R2-1915866	Enhancements to PUCCH-UCI and PHR	Ericsson	noted	11/8/2019	11/8/2019			

R2-1915867 Remaining issues on Configured Grant	Ericsson	noted	11/8/2019	11/8/2019		
R2-1915868 Channel access priority for Configured Grant	Ericsson	available	11/8/2019	11/8/2019		
R2-1915869 DRX enhancement for NR-U	Ericsson	available	11/8/2019	11/8/2019		
R2-1915870 Handling consistent UL LBT failures	Ericsson	available	11/8/2019	11/8/2019		
R2-1915871 RACH enhancements for NR-U	Ericsson	noted	11/8/2019	11/8/2019		
R2-1915872 2-step Random Access for NR-U	Ericsson	available	11/8/2019	11/8/2019		
R2-1915873 Running MAC CR for NR-U	Ericsson	endorsed	11/8/2019	11/8/2019		B
R2-1915874 Rapporteur input on Running MAC CR for NR-U	Ericsson	noted	11/8/2019	11/8/2019		
R2-1915875 Introduction of wideband PRG size	Huawei, Hi	available	11/8/2019	11/8/2019		B
R2-1915876 Introduction of wideband PRG size	Huawei, Hi	postponed	11/8/2019	11/8/2019		B
R2-1915877 UDC reconfiguration for RRC connection re-establishment (	Huawei, Hi	postponed	11/8/2019	11/8/2019		C
R2-1915878 Discussion on DL MIMO efficiency enhancement	Huawei, Hi	noted	11/8/2019	11/8/2019		
R2-1915879 Introduction of DL MIMO efficiency enhancement	Huawei, Hi	revised	11/8/2019	11/8/2019		B
R2-1915880 Introduction of DL MIMO efficiency enhancement	Huawei, Hi	revised	11/8/2019	11/8/2019		B
R2-1915881 Introduction of cross link interfernce management	Huawei, Hi	revised	11/8/2019	11/8/2019		B
R2-1915882 Introduction of cross link interfernce management	Huawei, Hi	available	11/8/2019	11/8/2019		
R2-1915883 Improvements for non-BL UEs camping in CE Mode	Apple (UK)	noted	11/8/2019	11/8/2019		
R2-1915884 Missing RACH aspect for DC	Nokia, Nok	agreed	11/8/2019	11/8/2019		F
R2-1915885 UL LBT failure detection	Nokia, Nok	noted	11/8/2019	11/8/2019		
R2-1915886 UL LBT failure report	Nokia, Nok	available	11/8/2019	11/8/2019		
R2-1915887 Multiple configured grants for NR-U	Nokia, Nok	noted	11/8/2019	11/8/2019		
R2-1915888 LCP restriction for SRBs	Nokia, Nok	noted	11/8/2019	11/8/2019		
R2-1915889 Stage-2 running CR for 2-step RACH	Nokia (rap	endorsed	11/8/2019	11/8/2019		B
R2-1915890 Clarification for aggregated bandwidth for overheating	Huawei, Hi	agreed	11/8/2019	11/8/2019	2	F
R2-1915891 Clarification on the feature set report in EUTRAN	Huawei, Hi	agreed	11/8/2019	11/8/2019	1	F
R2-1915892 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.331	Huawei, Hi	postponed	11/8/2019	11/8/2019		F
R2-1915893 CR on BWCS for inter-ENDC BC with intra-ENDC BC (38.306	Huawei, Hi	postponed	11/8/2019	11/8/2019		F
R2-1915894 On the RAN2 signalling support for new introduced channe	Huawei, Hi	available	11/8/2019	11/8/2019		
R2-1915895 CR to 38.331 on support of 70MHz channel bandwidth -opt	Huawei, Hi	revised	11/8/2019	11/8/2019		F
R2-1915896 CR to 38.306 on support of 70MHz channel bandwidth -opt	Huawei, Hi	revised	11/8/2019	11/8/2019		F
R2-1915897 CR to 38.331 on support of 70MHz channel bandwidth -opt	Huawei, Hi	available	11/8/2019	11/8/2019		F
R2-1915898 CR to 38.306 on support of 70MHz channel bandwidth -opt	Huawei, Hi	available	11/8/2019	11/8/2019		F
R2-1915899 On the capability of EN-DC power class	Huawei, Hi	postponed	11/8/2019	11/8/2019		
R2-1915900 CR to clarify the power class for EN-DC	Huawei, Hi	postponed	11/8/2019	11/8/2019		F
R2-1915901 Forward compatibility discussion on channel bandwidths p	Huawei, Hi	available	11/8/2019	11/8/2019		
R2-1915902 CR on forward compatibility for channel bandwidths param	Huawei, Hi	available	11/8/2019	11/8/2019		F
R2-1915903 CR on CSI UE capabilities parameters (38.331)	Huawei, Hi	postponed	11/8/2019	11/8/2019		F
R2-1915904 CR on CSI UE capabilities parameters (38.306)	Huawei, Hi	postponed	11/8/2019	11/8/2019		F
R2-1915905 Corrections on PDCCH blind decoding in NR-DC	Huawei, Hi	agreed	11/8/2019	11/8/2019	1	F
R2-1915906 Discussion on performing ROHC and EHC	LG Electro	available	11/8/2019	11/8/2019		
R2-1915907 Discussion on EHC feedback	LG Electro	available	11/8/2019	11/8/2019		
R2-1915908 Dicussion on padding removal	LG Electro	available	11/8/2019	11/8/2019		
R2-1915909 When to apply the target network configurations	LG Electro	available	11/8/2019	11/8/2019		
R2-1915910 Need of discard indication	LG Electro	available	11/8/2019	11/8/2019		
R2-1915911 Need of PDCP status report	LG Electro	available	11/8/2019	11/8/2019		
R2-1915912 Discussion on DAPS HO for UM DRB	LG Electro	available	11/8/2019	11/8/2019		
R2-1915913 Scheduling enhancement in NTN	LG Electro	available	11/8/2019	11/8/2019		
R2-1915914 Extension of the LCID	LG Electro	available	11/8/2019	11/8/2019		
R2-1915915 Considerations on failure handling for CPAC in NR	Potevio	available	11/8/2019	11/8/2019		

R2-1915916	Deprioritized PDU Retransmission Schemes	Apple (UK)	available	11/8/2019	11/8/2019	
R2-1915917	Contents of a new CG confirmation MAC CE for multiple CC	LG Electro	available	11/8/2019	11/11/2019	
R2-1915918	Remaining issues in intra-UE prioritization	LG Electro	available	11/8/2019	11/11/2019	
R2-1915919	Measurement gap skipping for TSN traffic	LG Electro	available	11/8/2019	11/11/2019	
R2-1915920	Additional opportunity for Msg1 in 4-step RACH	LG Electro	available	11/8/2019	11/11/2019	
R2-1915921	Dynamic DL opportunity enhancement based on channel b	LG Electro	available	11/8/2019	11/11/2019	
R2-1915922	Discussion on SCell BFR procedure	LG Electro	available	11/8/2019	11/11/2019	
R2-1915923	Enhancements of SR cancellation for URLLC traffic	LG Electro	available	11/8/2019	11/11/2019	
R2-1915924	Open Issues on PDCCH-WUS Mechanism	Apple	available	11/8/2019	11/8/2019	
R2-1915925	UE Assistance Information for CDRX Configuration	Apple	available	11/8/2019	11/8/2019	
R2-1915926	UE Assistance Information for SCell Configuration	Apple	available	11/8/2019	11/8/2019	
R2-1915927	UE Assistance Information for MR-DC	Apple	available	11/8/2019	11/8/2019	
R2-1915928	RAN1 Impact on MsgB Design	Apple	available	11/8/2019	11/8/2019	
R2-1915929	2-Step CFRA	Apple	available	11/8/2019	11/8/2019	
R2-1915930	Further Detail on CHO Release	Apple	available	11/8/2019	11/8/2019	
R2-1915931	DAPS HO UP	Apple	withdrawn	11/8/2019		
R2-1915932	DRB specific DAPS HO	Apple	available	11/8/2019	11/8/2019	
R2-1915933	SCG Suspension	Apple	available	11/8/2019	11/8/2019	
R2-1915934	SCell BFR Operation	Apple	available	11/8/2019	11/8/2019	
R2-1915935	PCell BFR Operation	Apple	available	11/8/2019	11/8/2019	
R2-1915936	Positioning SIB Acquisition in Connected Mode	Apple	available	11/8/2019	11/8/2019	
R2-1915937	Preamble Selection for RACH Procedure	Apple	available	11/8/2019	11/8/2019	
R2-1915938	Sidelink and Uplink Prioritization in cross-RAT	Samsung	available	11/8/2019	11/8/2019	
R2-1915939	Layer2 ID and cast type in SL MAC header	Samsung	available	11/8/2019	11/8/2019	
R2-1915940	Discussion on V2X specific validity area	Samsung	available	11/8/2019	11/8/2019	
R2-1915941	TX profile for selected sidelink RAT	Samsung	available	11/8/2019	11/8/2019	
R2-1915942	Some remaining issues on the UE assistance information	Xiaomi Co	available	11/8/2019	11/8/2019	
R2-1915943	Remaining Issues for PDCP Duplication Enhancements for I	Apple (UK)	available	11/8/2019	11/8/2019	
R2-1915944	Discussion on Configuration of MCG Fast Recovery	CATT	available	11/8/2019	11/8/2019	
R2-1915945	DRX enhancement for NR-U	Xiaomi Co	available	11/8/2019	11/8/2019	
R2-1915946	UE based PDCP Duplication Enhancement	Apple (UK)	available	11/8/2019	11/8/2019	
R2-1915947	Discussion on MT EDT support for 5G CIoT	LG Electro	available	11/8/2019	11/8/2019	
R2-1915948	RRC message for UP CIoT 5GS Optimisation	LG Electro	available	11/8/2019	11/11/2019	
R2-1915949	Report of Email discussion [106#65][R16 eMTC] UE identifi	LG Electro	noted	11/8/2019	11/11/2019	
R2-1915950	Draft LS on UE Identifier in UP CIoT 5GS Optimisation	LG Electro	available	11/8/2019	11/11/2019	
R2-1915951	Discussion on D-PUR request and TA validity check	LG Electro	available	11/8/2019	11/8/2019	
R2-1915952	Paging response usign D-PUR	LG Electro	available	11/8/2019	11/8/2019	
R2-1915953	Support for S-PUR	LG Electro	available	11/8/2019	11/8/2019	
R2-1915954	Consideration on the report of BWP information and on de	Beijing Xia	available	11/8/2019	11/8/2019	
R2-1915955	UE Radio Capabilities Segmentation Remaining Issues	Apple (UK)	available	11/8/2019	11/8/2019	
R2-1915956	Consideration on SR transmission colliding with PUSCH trar	Xiaomi Co	available	11/8/2019	11/8/2019	
R2-1915957	General considerations on idle and inactive mode for NPN	Huawei, H	available	11/8/2019	11/8/2019	
R2-1915958	General considerations on connected mode for NPN	Huawei, H	available	11/8/2019	11/8/2019	
R2-1915959	Considerations on SI Validity Checking	Huawei, H	available	11/8/2019	11/8/2019	
R2-1915960	DRAFT LS to SA3 on Conditional PSCell addition/change	CATT	available	11/8/2019	11/8/2019	SA3
R2-1915961	DRAFT LS to RAN3 on Conditional PSCell addition/change	CATT	available	11/8/2019	11/8/2019	RAN3
R2-1915962	Report on Email Discussion [107b#52][NR MobE] Open issu	CATT	revised	11/8/2019	11/8/2019	
R2-1915963	Further details of CHO configuration and execution	China Tele	available	11/8/2019	11/8/2019	
R2-1915964	Remaining issues on accurate reference timing delivery	NTTDOCOI	available	11/8/2019	11/8/2019	

R2-1915965 Handling of releasing source stacks for DAPS	China Tele	available	11/8/2019	11/8/2019						
R2-1915966 Discussion on Sidelink Configured Grant support	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915967 Discussion on remaining issues of SR and BSR for SL Mode :	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915968 Discussion on HARQ support for NR sidelink	Huawei, H	noted	11/8/2019	11/8/2019						
R2-1915969 Remaining issues on NR SL and NR UL prioritization	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915970 Further discussion on SLRB configuration via SIB	Huawei, H	noted	11/8/2019	11/8/2019						
R2-1915971 Remaining issues on cell reselection	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915972 SLRB configurations handling during UE state transition	Huawei, H	noted	11/8/2019	11/8/2019						
R2-1915973 Further details of Uu RRC procedures for NR sidelink	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915974 Discussion on related aspects of system information	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915975 On potential RAN2 impacts related to security design for N	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915976 [Draft] LS on potential RAN2 impacts related to NR SL secu	Huawei	available	11/8/2019	11/8/2019		SA3	SA3	SA2	S3-193802	
R2-1915977 Discussion on the NR sidelink failure cases	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915978 Discussion about mode coexistence for NR sidelink	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915979 Running CR to 36.331 for NR V2X	Huawei, H	endorsed	11/8/2019	11/15/2019						
R2-1915980 TP on NR-V2X for TR 37.985 - RAN2 parts	Huawei, H	endorsed	11/8/2019	11/8/2019						
R2-1915981 Summary of email discussion [107bis#96][V2X] RLC AM mis	Huawei (R	available	11/8/2019	11/15/2019						
R2-1915982 Summary of email discussion [107bis#91][V2X] - Miscellane	Huawei (R	available	11/8/2019	11/15/2019						
R2-1915983 Running CR to TS 38.331 for 5G V2X with NR sidelink	Huawei, H	endorsed	11/8/2019	11/15/2019						
R2-1915984 Discussion on Sidelink L3 RSRP and CSI reporting in NR SL	Huawei, H	available	11/8/2019	11/8/2019						
R2-1915985 Draft Stage-2 CR for Conditional PSCell Addition/Change	CATT	available	11/8/2019	11/8/2019	B					
R2-1915986 Running CR to Introduce NR MDT for RAN Data Collection a	CMCC, Nol	endorsed	11/8/2019	11/8/2019	B					
R2-1915987 Leftovers for TS 37.320 to support NR MDT	CMCC	noted	11/8/2019	11/8/2019						
R2-1915988 LS on Logged Measurements	CMCC	available	11/8/2019	11/8/2019			RAN4			
R2-1915989 Cell selection and reselection for NPN	CMCC	available	11/8/2019	11/8/2019						
R2-1915990 Access and mobility control for NPN	CMCC	available	11/8/2019	11/8/2019						
R2-1915991 CAG ID transmission during both initial access and resume	CMCC	available	11/8/2019	11/8/2019						
R2-1915992 Draft Reply LS on CAG ID Transmission	CMCC	available	11/8/2019	11/8/2019		SA3,CT1	SA2	RAN3	C1-195157	
R2-1915993 Approaches comparison of supporting TSN periodicities of	CMCC	available	11/8/2019	11/8/2019						
R2-1915994 Supported periodicity values for CG SPS Configurations	CMCC	available	11/8/2019	11/8/2019						
R2-1915995 Repetitions Transmission for SPS configurations	CMCC	available	11/8/2019	11/8/2019						
R2-1915996 Down selection on the PDCP Duplication MAC CE Structure	CMCC	available	11/8/2019	11/8/2019						
R2-1915997 Message Mergence for fast HO failure recovery	CMCC	available	11/8/2019	11/8/2019						
R2-1915998 Discussion of UL data transmission switch for DAPS	CMCC	revised	11/8/2019							
R2-1915999 Left issues of the new confirmation MAC CE format	CMCC	available	11/8/2019	11/8/2019						
R2-1916000 Handling for CG resource collision of equal priority	CMCC	available	11/8/2019	11/8/2019						
R2-1916001 Discussion on impact of PDCCH-WUS on timer-based BWP :	CMCC	available	11/8/2019	11/8/2019						
R2-1916002 Discussion on UE assistance information	CMCC	available	11/8/2019	11/8/2019						
R2-1916003 Discussion on human-readable network name	China Tele	withdrawn	11/8/2019							
R2-1916004 Sidelink RSRP reporting	MediaTek	noted	11/8/2019	11/8/2019						
R2-1916005 Sidelink RLF enhancement	MediaTek	available	11/8/2019	11/8/2019						
R2-1916006 Remaining issues on user plane aspects	LG Electro	available	11/8/2019	11/8/2019						
R2-1916007 Open issue of uplink MDBV enforcement	Huawei, H	available	11/8/2019	11/8/2019						
R2-1916008 Correction on PRACH procedure with SRS switching	Huawei, H	revised	11/8/2019	11/8/2019	F					
R2-1916009 Correction on description of BFR RAR window in 38.321	Huawei, H	not pursued	11/8/2019	11/8/2019	F					
R2-1916010 Stopping ra-ResponseWindow for contention-free BFR	Huawei, H	available	11/8/2019	11/8/2019						
R2-1916011 Summary of [107bis#48][TEI16UP] Correction on PRACH re	Huawei, H	noted	11/8/2019	11/8/2019						
R2-1916012 Correction on autonomous RACH retransmission for SRS sw	Huawei, H	endorsed	11/8/2019	11/8/2019	F					
R2-1916013 Remaining issues on PDU format for MsgB	Huawei, H	available	11/8/2019	11/8/2019						

R2-1916014 MsgA resource configuration and selection	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1916015 Remaining issues on MsgB reception	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1916016 Discussion on MsgB-RNTI design	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1916017 Remaining issues on the msgA transmission	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1916018 Further Discussions on Fallback Procedure for 2-step RACH	Huawei, Hi	available	11/8/2019	11/8/2019			
R2-1916019 Discussion on RRC configurations of L1 parameters for eUR	Huawei, Hi	noted	11/8/2019	11/8/2019			
R2-1916020 Running 38.331 CR for NR_L1enh_URLLC	Huawei, Hi	revised	11/8/2019	11/8/2019		B	
R2-1916021 Overview of MAC impacts of URLLC enhancement	Huawei, Hi	noted	11/8/2019	11/8/2019			
R2-1916022 Running 38.321 CR for NR_L1enh_URLLC	Huawei, Hi	available	11/8/2019	11/8/2019		B	
R2-1916023 Running 38.300 CR for NR_L1enh_URLLC	Huawei, Hi	postponed	11/8/2019	11/8/2019		B	
R2-1916024 RNTI for msgB	LG Electro	available	11/8/2019	11/8/2019			
R2-1916025 Considerations on simultaneous configuration of mode 1 a	ITL	available	11/8/2019	11/8/2019			
R2-1916026 Reselection to a Cell with Valid Dedicated Frequency Offset	MediaTek	noted	11/8/2019	11/8/2019			
R2-1916027 Draft LS to RAN1 on RNTI for msgB	LG Electro	available	11/8/2019	11/8/2019			RAN1
R2-1916028 Consideration on 2-step CFRA	LG Electro	available	11/8/2019	11/8/2019			
R2-1916029 Logical channel based RA type selection	LG Electro	available	11/8/2019	11/8/2019			
R2-1916030 Running CR to 38.300 on 5G V2X with NR sidelink	LG Electro	available	11/8/2019	11/15/2019		B	
R2-1916031 Running CR to 36.300 on 5G V2X with NR sidelink	LG Electro	withdrawn	11/8/2019			B	
R2-1916032 Clarification on informative timer table	Huawei, Hi	available	11/8/2019	11/8/2019		F	
R2-1916033 Clarification on the using of RRCSetup	Huawei, Hi	available	11/8/2019	11/8/2019		F	
R2-1916034 Corrections on the PDCP duplication	Huawei, Hi	revised	11/8/2019	11/8/2019		F	
R2-1916035 Correction on initial BWP bandwidth capabilities	Huawei, Hi	revised	11/8/2019	11/8/2019		F	
R2-1916036 Remaining issues on random access procedures in NTN	ETRI	available	11/8/2019	11/8/2019			
R2-1916037 Remaining issues of SCell BFR	ASUSTeK	available	11/8/2019	11/8/2019			
R2-1916038 Discussion on association between sidelink data and resou	ASUSTeK	available	11/8/2019	11/8/2019			
R2-1916039 Discussion on resource allocation for sidelink HARQ ACK/N	ASUSTeK	available	11/8/2019	11/8/2019			
R2-1916040 Discussion on traditional uplink traffic and IAB uplink traffi	ASUSTeK	available	11/8/2019	11/8/2019			
R2-1916041 Handling D-PUR configuration in RRC_CONNECTED state	ASUSTeK	available	11/8/2019	11/8/2019			
R2-1916042 Remaining issues of D-PUR TA timer	ASUSTeK	available	11/8/2019	11/8/2019			
R2-1916043 Buffer status indicated by BSR in multi-TB scheduling	ASUSTeK	noted	11/8/2019	11/8/2019			
R2-1916044 Issue related to CG overridden by PDCCH	ASUSTeK	revised	11/8/2019	11/8/2019			
R2-1916045 CG overridden	ASUSTeK	not pursued	11/8/2019	11/8/2019		F	
R2-1916046 Release of UE assistance information	OPPO	available	11/8/2019	11/8/2019			
R2-1916047 Correction on RRC Resume procedure	OPPO	available	11/8/2019	11/8/2019	1	F	
R2-1916048 Discussion on human-readable network name	China Tele	available	11/8/2019	11/8/2019			
R2-1916049 Consideration of beam for NR OTDOA	Samsung F	available	11/8/2019	11/8/2019			
R2-1916050 Considerations for NR E-CID	Samsung F	available	11/8/2019	11/8/2019			
R2-1916051 Measurement aspects for CHO	Samsung F	available	11/8/2019	11/8/2019			
R2-1916052 Clarification on failure handling using CHO	Samsung F	withdrawn	11/8/2019				
R2-1916053 Normal handover using conditional handover configuration	Samsung F	available	11/8/2019	11/8/2019			
R2-1916054 On the supporting of relaxed measurement state for UE po	Samsung F	available	11/8/2019	11/8/2019			
R2-1916055 EN-DC support in IAB	Samsung F	available	11/8/2019	11/8/2019			
R2-1916056 NR-DC support in IAB (signaling perspective)	Samsung F	available	11/8/2019	11/8/2019			
R2-1916057 Remaining issues on IAB RLF	Samsung F	available	11/8/2019	11/8/2019			
R2-1916058 Delivering T_delta for IAB node	Samsung F	available	11/8/2019	11/8/2019			
R2-1916059 Discussion on UE capability	China Tele	available	11/8/2019	11/8/2019			
R2-1916060 RNTI design for msgB	Qualcomm	noted	11/8/2019	11/8/2019			
R2-1916061 Cell Selection for Backhaul RLF Recovery	Futurewei	available	11/8/2019	11/8/2019			
R2-1916062 Contention resolution for msgA with C-RNTI	Qualcomm	available	11/8/2019	11/8/2019			

R2-1916063 Discussion on the deployment for CAG	China Tele	available	11/8/2019	11/8/2019	
R2-1916064 msgB MAC PDU format	Qualcomm	available	11/8/2019	11/8/2019	
R2-1916065 Remaining issue on 2-step RACH fall back procedure	Qualcomm	available	11/8/2019	11/8/2019	
R2-1916066 Enhanced TCI States Activation/Deactivation PDSCH MAC C	Qualcomm	available	11/8/2019	11/8/2019	
R2-1916067 Procedures and MAC CE design for BFR for SCells	Qualcomm	available	11/8/2019	11/8/2019	
R2-1916068 Some Considerations on autonomous re-transmission for d	ZTE Corpo	noted	11/8/2019	11/8/2019	
R2-1916069 The remaining issues on BFR on SCell	ZTE Corpo	available	11/8/2019	11/8/2019	
R2-1916070 The remaining issues on mPDCCH mTRP transmission	ZTE Corpo	noted	11/8/2019	11/8/2019	
R2-1916071 The remaining issues on LCP restriction for CG	ZTE Corpo	available	11/8/2019	11/8/2019	
R2-1916072 The CR to 38.321 for on UL grant reception in RAR	ZTE Corpo	not pursued	11/8/2019	11/8/2019	F
R2-1916073 Considerations on support of split bearer in the case of PD(	ZTE Corpo	available	11/8/2019	11/8/2019	
R2-1916074 Discussion on UE based PDCP Duplication activationdeactiv	ZTE Corpo	available	11/8/2019	11/8/2019	
R2-1916075 Consideration on the multiplexing BSR MAC CE and URLLC (	ZTE Corpo	available	11/8/2019	11/8/2019	
R2-1916076 Consideration on HARQ conflict between configured grant	ZTE Corpo	available	11/8/2019	11/8/2019	
R2-1916077 Discussion on the ambiguity in calculation of RA-RNTI	ZTE Corpo	available	11/8/2019	11/8/2019	
R2-1916078 Discussion on UE behaviours for access barring alleviation	Google Inc	available	11/8/2019	11/8/2019	
R2-1916079 Discussion of UL data transmission switch for DAPS	CMCC	available	11/8/2019	11/8/2019	
R2-1916080 Clarification on UE Inactive AS context	Google Inc	available	11/8/2019	11/8/2019	F
R2-1916081 Correction on PUSCH-less Scell	Huawei, Hi	not pursued	11/8/2019	11/8/2019	F
R2-1916082 Clarification on UE Inactive AS context	Google Inc	revised	11/8/2019	11/8/2019	F
R2-1916083 Discussion on MSGB-RNTI design	Google	available	11/8/2019	11/8/2019	
R2-1916084 Discussion on msgB HARQ process	Google	available	11/8/2019	11/8/2019	
R2-1916085 RLC re-establishment when PDCP is re-established	Qualcomm	not pursued	11/8/2019	11/8/2019	F
R2-1916086 On Supporting Make-Before-Break in NR	Samsung	withdrawn	11/8/2019		
R2-1916087 Introducing Make-Before-Break in NR	Samsung	available	11/8/2019	11/8/2019	B
R2-1916088 Open Issues on NR-U Uplink Transmission	Qualcomm	noted	11/8/2019	11/8/2019	
R2-1916089 On Triggering RRM Measurement Relaxation	Samsung	available	11/8/2019	11/8/2019	
R2-1916090 Remaining issue on Groupcast and Broadcast QoS Report	ITRI	available	11/8/2019	11/8/2019	
R2-1916091 Remaining issue on UE-based positioning in NR	ITRI	available	11/8/2019	11/8/2019	
R2-1916092 On NR-U Operation in DFS Channels	Charter Co	noted	11/8/2019	11/8/2019	
R2-1916093 Accessibility Measurements for NR MDT	Samsung	noted	11/8/2019	11/8/2019	
R2-1916094 Remaining Issues on Consistent LBT Failure Detection in NR	Charter Co	available	11/8/2019	11/8/2019	
R2-1916095 Further Logged Information in NR MDT	Samsung	available	11/8/2019	11/8/2019	
R2-1916096 Discussion on the support of CA duplication with multiple l	vivo	available	11/8/2019	11/8/2019	
R2-1916097 Discussion on Network identifier for SNPN	vivo	available	11/8/2019	11/8/2019	
R2-1916098 Discussion on the proximity indication in CONNECTED mod	vivo	available	11/8/2019	11/8/2019	
R2-1916099 IP address configuration for IAB	Samsung	available	11/8/2019	11/8/2019	
R2-1916100 RLF Report Enhancement	Samsung	available	11/8/2019	11/8/2019	
R2-1916101 UL mapping configuration	Samsung	available	11/8/2019	11/8/2019	
R2-1916102 On supporting Event-triggered Logged MDT	Samsung	available	11/8/2019	11/8/2019	
R2-1916103 On Providing Mobility State and Mobility History Informatic	Samsung	available	11/8/2019	11/8/2019	
R2-1916104 PDCP enhancement for NTN	LG Electro	not treated	11/8/2019	11/8/2019	
R2-1916105 Angle of Departure UE positioning technique	Nokia, Nok	available	11/8/2019	11/8/2019	
R2-1916106 On-demand and dynamic PRS configuration for DL-TDOA	Nokia, Nok	available	11/8/2019	11/8/2019	
R2-1916107 Dedicated positioning SIB delivery for on-demand SI in con	Nokia, Nok	noted	11/8/2019	11/8/2019	
R2-1916108 PC5 groupcast handling	Qualcomm	available	11/8/2019	11/8/2019	
R2-1916109 plmn-IdentityList in CellAccessRelatedInfo broadcast in SIB:	Nokia, Nok	not pursued	11/8/2019	11/8/2019	F
R2-1916110 Handling of new flow when the number of stored contexts	SHARP Cor	available	11/8/2019	11/8/2019	
R2-1916111 On per DAPS handover	SHARP Cor	available	11/8/2019	11/8/2019	

R2-1916112 Stopping of SI acquisition for ETWS/CMAS	Nokia, Nok	not pursued	11/8/2019	11/8/2019	F	
R2-1916113 Handling of bwp-InactivityTimer upon BWP switching	LG Electro	available	11/8/2019	11/11/2019		
R2-1916114 On Stopping of Paging Monitoring for UE Energy Savings	MediaTek	available	11/8/2019	11/8/2019		
R2-1916115 Remaining issues on RACH without location information	Huawei, H	available	11/8/2019	11/8/2019		
R2-1916116 RACH resource configuration and utilization in NTN	Huawei, H	available	11/8/2019	11/8/2019		
R2-1916117 Running CR for the introduction of SRVCC from 5G to 3G	China Unic	revised	11/8/2019	11/8/2019	B	
R2-1916118 Handling LBT failures for support of wideband operations	ETRI	available	11/8/2019	11/8/2019		
R2-1916119 Running CR to 36.321 on 5G V2X with NR sidelink	LG Electro	endorsed	11/8/2019	11/14/2019	B	
R2-1916120 Running CR to 38.321 on 5G V2X with NR sidelink	LG Electro	endorsed	11/8/2019	11/15/2019	B	
R2-1916121 Report of 107bis#93 open issues on 38.321 on NR Sidelink	LG Electro	noted	11/8/2019	11/13/2019		
R2-1916122 Proposed LS on TX resource (re-)reselection	LG Electro	available	11/8/2019	11/13/2019		RAN1
R2-1916123 Remaining MAC issues and response to RAN1 LS	LG Electro	noted	11/8/2019	11/8/2019		
R2-1916124 Proposed Response LS on additional high layer information	LG Electro	available	11/8/2019	11/8/2019		RAN1
R2-1916125 PC5-RRC connection establishment and release with PC5 u	LG Electro	available	11/8/2019	11/8/2019		
R2-1916126 PC5-RRC and Uu RRC procedures	LG Electro	available	11/8/2019	11/8/2019		
R2-1916127 MAC header for SL-SCH	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916128 Remaining issues on CLI measurement	ZTE Corpo	noted	11/8/2019	11/8/2019		
R2-1916129 Reply LS on signalling of sidelink RSRP and CSI	LG Electro	available	11/8/2019	11/8/2019		RAN1
R2-1916130 Sidelink HARQ operation in mode 1	ITL	available	11/8/2019	11/8/2019		
R2-1916131 Retransmission of an RLC SDU with a poll after discard proc	LG Electro	available	11/8/2019	11/8/2019		
R2-1916132 Consideration on the postponed decision on DL hop-by-hop	LG Electro	noted	11/8/2019	11/8/2019		
R2-1916133 Consideration on local re-routing after BH RLF	LG Electro	available	11/8/2019	11/8/2019		
R2-1916134 BSR MAC CE format for pre-BSR	LG Electro	available	11/8/2019	11/8/2019		
R2-1916135 Consideration on remaining FFS of LCID extension	LG Electro	available	11/8/2019	11/8/2019		
R2-1916136 Remaining issues for DL flow control	LG Electro	noted	11/8/2019	11/8/2019		
R2-1916137 LCG based UL grant	LG Electro	available	11/8/2019	11/8/2019		
R2-1916138 Way forward for CP bearer mapping	LG Electro	available	11/8/2019	11/8/2019		
R2-1916139 Need of BAP buffer	LG Electro	available	11/8/2019	11/8/2019		
R2-1916140 Consideration on BAP Routing ID for UL	LG Electro	available	11/8/2019	11/8/2019		
R2-1916141 Discussion on the flow control	ITL	available	11/8/2019	11/8/2019		
R2-1916142 NE-DC dynamic power sharing capability	Qualcomm	agreed	11/8/2019	11/8/2019	F	
R2-1916143 NE-DC dynamic power sharing capability	Qualcomm	revised	11/8/2019	11/8/2019	F	
R2-1916144 DL BWP Configuration mandatory fields upon SCell additio	Qualcomm	available	11/8/2019	11/8/2019	F	
R2-1916145 Allow fallback band combinations for reporting SRS-TxSwit	Qualcomm	available	11/8/2019	11/8/2019	C	
R2-1916146 Expectation when srs-TxSwitch capability is not supported	Qualcomm	not pursued	11/8/2019	11/8/2019	F	
R2-1916147 Discussion of the PUCCH & SRS Resource Release	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916148 Discussion on DRX operation associated with disabling HAR	LG Electro	available	11/8/2019	11/8/2019		
R2-1916149 PC5-RRC and PC5-S interactions and their security in NR V2	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916150 Discussion on L2 measurement in EN-DC	NTT DOCO	available	11/8/2019	11/8/2019		
R2-1916151 Further consideration on capability reporting	LG Electro	available	11/8/2019	11/8/2019		
R2-1916152 Further Considerations on multiple C-DRX	Samsung	available	11/8/2019	11/8/2019		
R2-1916153 MAC impacts of multiple CCAs in wide band operation	LG Electro	available	11/8/2019	11/8/2019		
R2-1916154 Discussion on UE location information in SCG failure report	NTT DOCO	noted	11/8/2019	11/8/2019		
R2-1916155 Remaining issues of header compression for IIoT	NTT DOCO	available	11/8/2019	11/8/2019		
R2-1916156 UE autonomous transmission in a CG resource for depriorit	Huawei, H	available	11/8/2019	11/8/2019		
R2-1916157 Clarification of suspended SCG	LG Electro	available	11/8/2019	11/8/2019		
R2-1916158 Discussion on LTE and EN-DC Measurement Gap configurat	Nokia, Nok	noted	11/8/2019	11/8/2019		
R2-1916159 PDCP for PC5-S, PC5-RRC	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916160 Discussion and TP on MAC PDU overwriting in CG resource	LG Electro	available	11/8/2019	11/8/2019	B	

R2-1916161 Resumption of suspended SCG	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916162 PC5-S, PC5-RRC RLC mode	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916163 Discussion on indication for presence of RRC messages	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916164 Draft TS 38.340 (BAP)	Huawei	available	11/8/2019	11/8/2019		
R2-1916165 PC5-RRC support for Groupcast	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916166 Management of Control Plane during DAPS HO_NR	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916167 Access control in IAB networks	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916168 BH RLF Notification Terminaton Layer	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916169 Resolving open issues on BH RLF	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916170 Access control for PRN	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916171 MDT for DC	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916172 Clarification to CSI reporting in C-DRX	Qualcomm	agreed	11/8/2019	11/8/2019	3	F
R2-1916173 Correction to PHR in dual connectivity	Qualcomm	agreed	11/8/2019	11/8/2019	3	F
R2-1916174 Correction to long truncated BSR	Qualcomm	not pursued	11/8/2019	11/8/2019		F
R2-1916175 Configuration aspects of wakeup signaling	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916176 Link management with WUS	Qualcomm	noted	11/8/2019	11/8/2019		
R2-1916177 Prohibit timer for Release Request	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916178 Remaining issues on UE Assistance Information	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916179 UE indication on expected data	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916180 Cross cell group wakeup message in MR-DC	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916181 Backoff indication in multi-beam operation	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916182 Enhancements to PHR in multi-beam operation	Qualcomm	available	11/8/2019	11/8/2019		
R2-1916183 New values for RLC and PDCP timers	Qualcomm	noted	11/8/2019	11/8/2019		
R2-1916184 Correction on mini-slot scheduling	Fujitsu, No	agreed	11/8/2019	11/8/2019		F
R2-1916185 Impacts of L1 priorities on data prioritization	Fujitsu	available	11/8/2019	11/8/2019		
R2-1916186 Remaining issues on de-prioritized MAC PDU on CG resourc	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916187 General aspects on cDRX enhancement	NEC	available	11/8/2019	11/8/2019		
R2-1916188 CR on LTE and EN-DC Measurement Gap configuration coo	Nokia, Nok	available	11/8/2019	11/8/2019		F
R2-1916189 Sidelink CSI report	MediaTek	available	11/8/2019	11/8/2019		
R2-1916190 Inter-RAT BSR	MediaTek	available	11/8/2019	11/8/2019		
R2-1916191 CR on NeedForGap capability for each supported NR band I	Nokia, Nok	available	11/8/2019	11/8/2019		C
R2-1916192 Work plan for Rel-16 UE Capability feature list	Intel Corpo	endorsed	11/8/2019	11/8/2019		
R2-1916193 Discussion on NeedForGap signalling in NR SA before NE-D	Nokia, Nok	noted	11/8/2019	11/8/2019		
R2-1916194 Discussion on multiple triggering conditions for CHO	Samsung E	available	11/8/2019	11/8/2019		
R2-1916195 Confirmation of working assumption for T312 support on P	Samsung, I	noted	11/8/2019	11/8/2019		
R2-1916196 Discussion on DRX operation impact for NTN	Nokia, Nok	available	11/8/2019	11/8/2019		
R2-1916197 CHO compliance check and handling	CMCC	available	11/8/2019	11/8/2019		
R2-1916198 Introduction of T312 for PCell and PSCell in NR (Draft)	Samsung, I	available	11/8/2019	11/8/2019		
R2-1916199 Further consideration on T312 for conditional handover	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916200 Cell (re)selection after consecutive UL LBT failures	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916201 RLM/RLF enhancements in NR-U	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916202 SSI and channel occupancy measurements for serving freq	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916203 Stopping condition for monitoring additional paging occasi	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916204 Support of conditional handover for NR-U	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916205 Measurement ID Swapping Issue for CHO	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916206 Consideration of CHO Release After HO	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916207 SCG Failure Handling with Conditional PSCell Configuration	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916208 Consideration of After-action upon Conditional PSCell Addi	LG Electroı	available	11/8/2019	11/8/2019		
R2-1916209 Consideration of Compliance Check in CHO	LG Electroı	available	11/8/2019	11/8/2019		

R2-1916210	Handling Excess of UE Capability in DAPS HO	LG Electro	available	11/8/2019	11/8/2019		
R2-1916211	Introduction of Cross Link Interference (CLI) handling and R	LG Electro	revised	11/8/2019	11/13/2019		B
R2-1916212	Padding Removal and Feedback for Context Establishment	China Tele	available	11/8/2019	11/8/2019		
R2-1916213	AS-layer configuration failure case in SL unicast	Samsung E	available	11/8/2019	11/8/2019		
R2-1916214	MAC PDU handling for Sidelink UE capabilities and Sidelink	Samsung E	available	11/8/2019	11/8/2019		
R2-1916215	Remaining issues on reselection priority handlings for V2X	Samsung E	available	11/8/2019	11/8/2019		
R2-1916216	Interaction between RRC Connection Resume Condition an	Samsung E	available	11/8/2019	11/8/2019		
R2-1916217	Discussion on SL-RSRP reporting	Samsung E	available	11/8/2019	11/8/2019		
R2-1916218	Remaining Issues on Handling of SLRB configuration handli	Samsung E	available	11/8/2019	11/8/2019		
R2-1916219	UE Assistance for Release Request	Samsung	available	11/8/2019	11/8/2019		
R2-1916220	SLRB Reconfiguration Handling	Samsung	available	11/8/2019	11/8/2019		
R2-1916221	Transmission of Deprioritized Data by Retransmission Gran	Samsung	available	11/8/2019	11/8/2019		
R2-1916222	Split Bearer Fallback at Deactivation of PDCP Duplication	Samsung	available	11/8/2019	11/8/2019		
R2-1916223	Configuration and Initial State of PDCP Duplication	Samsung	noted	11/8/2019	11/8/2019		
R2-1916224	Fast failure recovery in CHO	Samsung R	available	11/8/2019	11/8/2019		
R2-1916225	Cell Reselection remaining issues	Samsung R	available	11/8/2019	11/8/2019		
R2-1916226	CHO UE behaviour upon transitioning to RRC_INACTIVE/RR	Samsung R	available	11/8/2019	11/8/2019		
R2-1916227	Single stack eMOB solution for NR	Samsung R	available	11/8/2019	11/8/2019		
R2-1916228	Email discussion report [107bis#90] Further details on "m"	Qualcomm	available	11/8/2019	11/9/2019		
R2-1916229	TP for TA validation based on serving cell RSRP change (rel	Qualcomm	available	11/8/2019	11/8/2019		B
R2-1916230	CG/SPS alignment on Resource Boundary Pattern	Sequans C	noted	11/8/2019	11/8/2019		
R2-1916231	Impact of CG/SPS with periodicities non dividing HF length	Sequans C	available	11/8/2019	11/8/2019		
R2-1916232	UE autonomous retransmission in a CG resource	Sequans C	available	11/8/2019	11/15/2019		
R2-1916233	Enhanced rescheduling for dropped CG	Sequans C	available	11/8/2019	11/15/2019		
R2-1916234	On Inter-RAT assistance information for NB-IoT and LTE(-eM	Sequans C	noted	11/8/2019	11/8/2019		
R2-1916235	NB-IoT UE Specific DRX - Backward Compatibility	Sequans C	available	11/8/2019	11/8/2019		
R2-1916236	NB-IoT UE Specific DRX - Efficiency Issues	Sequans C	available	11/8/2019	11/8/2019		
R2-1916237	Support for LTE deployment at IAB node sites	Sequans C	available	11/8/2019	11/8/2019		
R2-1916238	F1-U Flow Control and Reordering Issues	Sequans C	available	11/8/2019	11/8/2019		
R2-1916239	Packet Marking for E2E Flow Control	Sequans C	available	11/8/2019	11/15/2019		
R2-1916240	Discussion on Earth fixed vs. Earth moving cells in NTN LEO	Nokia, Nok	revised	11/8/2019	11/8/2019		
R2-1916241	UE positioning requirements and solution analysis in NTN	Nokia, Nok	revised	11/8/2019	11/8/2019		
R2-1916242	Pre-trigger based mechanism for NTN connected mode mo	Nokia, Nok	available	11/8/2019	11/8/2019		
R2-1916243	RRC message for source and target configuration	SHARP Cor	noted	11/8/2019	11/8/2019		
R2-1916244	CR to 38.306 on DRX-based intra-frequency SFTD measurer	Huawei, Hi	not pursued	11/8/2019	11/8/2019	1	F
R2-1916245	CR to 38.331 on DRX-based intra-frequency SFTD measurer	Huawei, Hi	available	11/8/2019	11/8/2019	1	F
R2-1916246	Remaining issues on CLI	Ericsson	available	11/8/2019	11/8/2019		
R2-1916247	DRX considerations and RAN paging for PUR	Sequans C	available	11/8/2019	11/8/2019		
R2-1916248	Padding removal	Nokia, Nok	noted	11/8/2019	11/8/2019		
R2-1916249	TP for TS36.302 on ETSW/CMAS in connected mode for no	Huawei Te	available	11/8/2019	11/8/2019		B
R2-1916250	Way forward on BAP Configuration	Futurewei	noted	11/8/2019	11/8/2019		
R2-1916251	Enhancements for PUR	Sequans C	available	11/8/2019	11/8/2019		
R2-1916252	Power and signalling savings at TAT expiry and reaching sr-	Ericsson, N	available	11/8/2019	11/8/2019		
R2-1916253	Allowing PDCP version change without handover	Ericsson	postponed	11/8/2019	11/8/2019		F
R2-1916254	Issue on ping pong state transition for sidelink UE	Beijing Xia	available	11/8/2019	11/8/2019		
R2-1916255	Discussion on resource allocation	Beijing Xia	available	11/8/2019	11/8/2019		
R2-1916256	Discussion on the use case of CHO failure recovery	Beijing Xia	available	11/8/2019	11/8/2019		
R2-1916257	Discussion on BSR prioritization issue	Beijing Xia	available	11/8/2019	11/8/2019		
R2-1916258	[DRAFT] LS on CLI measurements UE capabilities	Qualcomm	revised	11/8/2019	11/9/2019		RAN1

R2-1916259	Discussion on eMIMO MAC CE	vivo	available	11/12/2019	11/12/2019						
R2-1916260	Access control differentiation for IMS registration related s	Intel Corpc	postponed	11/12/2019	11/12/2019						
R2-1916261	Different Access Control Treatment for IMS signaling in EPS	Intel Corpc	available	11/12/2019	11/12/2019		C				
R2-1916262	Security Algorithms for Radio Bearers	Qualcomm	agreed	11/12/2019	11/12/2019	4	F				
R2-1916263	Remaining issues of SL Prioritization	MediaTek	available	11/12/2019	11/12/2019						
R2-1916264	UE Behavior Clarification during UE States Transition	CATT	available	11/12/2019	11/13/2019						
R2-1916265	Comparison of different PSCell modelling options for SCG s	Qualcomm	available	11/12/2019	11/12/2019						
R2-1916266	Running 38.331 CR for NR_L1enh_URLLC	Huawei, Hi	available	11/12/2019	11/13/2019		B				
R2-1916267	Proposal for 2-bit downlink channel quality reporting in MS	Qualcomm	available	11/12/2019	11/12/2019						
R2-1916268	Forwarding of Reply LS on GUTI allocation for 5G CIoT (C1-1	CT1	noted	11/12/2019	11/12/2019			C1-195111	SA2	RAN2, RAN	C1-198560
R2-1916269	RA Prioritization for MPS for 2-step RACH	Perspecta	noted	11/12/2019	11/13/2019						
R2-1916270	Clarification on crossCarrierScheduling-OtherSCS in R15	OPPO	not pursued	11/13/2019	11/13/2019		F				
R2-1916271	Clarification on crossCarrierScheduling-OtherSCS in R15	OPPO	agreed	11/13/2019	11/13/2019		F				
R2-1916272	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, Hi	revised	11/13/2019	11/15/2019		B				
R2-1916273	Main issues remaining for Conditional SN initiated SN chan	Samsung T	available	11/13/2019	11/13/2019						
R2-1916274	On Maximum Number of CHO Candidate Cells and Nodes	Charter Co	available	11/14/2019	11/14/2019						
R2-1916275	Reply LS on NR V2X Security for user plane data and PDCP S	SA3	noted	11/15/2019	11/15/2019			R2-191168	RAN2		S3-193854
R2-1916276	The Reporting of CHO failure	CMCC	available	11/15/2019	11/18/2019						
R2-1916277	Alternative solution for “under-reporting” CSI-RS capabiliti	NTT DOCO	postponed	11/15/2019	11/19/2019						
R2-1916278	Impacts of PDCCH-WUS on RRC	CATT	available	11/15/2019	11/15/2019						
R2-1916279	Session notes from NTN offline discussion	THALES	available	11/15/2019	11/20/2019						
R2-1916280	LS on further aspects of Mission Critical Services over 5MB	SA6	noted	11/17/2019	11/17/2019				SA, RAN, S.	SA1	S6-192404
R2-1916281	Report from session on LTE legacy, LTE TEI16 and NR/LTE R	Vice Chairr	approved	11/17/2019	11/22/2019						
R2-1916282	Report from Break-Out Session on SRVCC, CLI, PRN, eMIMC	Vice Chairr	approved	11/17/2019	11/23/2019						
R2-1916283	Report eMTC breakout session	Session ch	available	11/17/2019	11/23/2019						
R2-1916284	Session minutes for NR-U, Power Savings, NTN and 2-step F	Session ch	approved	11/17/2019	11/23/2019						
R2-1916285	Report from session on Rel-15 and 16 LTE and NR positioni	Session ch	approved	11/17/2019	11/22/2019						
R2-1916286	Report from SOM/MDT session	Session ch	approved	11/17/2019	11/22/2019						
R2-1916287	Report NB-IoT breakout session	Session ch	approved	11/17/2019	11/23/2019						
R2-1916288	Report from session on LTE V2X and NR V2X	Session ch	available	11/17/2019	11/23/2019						
R2-1916289	LS on GUTI allocation for MT-EDT in 5G CIoT (C1-199005; cc	CT1	noted	11/17/2019	11/17/2019				SA2, RAN2	SA3, CT4	C1-199005
R2-1916290	LS on enhanced access control for IMS signalling (C1-19900	CT1	noted	11/17/2019	11/17/2019				SA1	RAN2	C1-199007
R2-1916291	Reply LS on assistance indication for WUS (C1-199008; con	CT1	available	11/17/2019	11/17/2019			S2-191054	SA2, RAN2, RAN3		C1-199008
R2-1916292	LS on Extended NAS timers for Coverage Enhancement in 5	CT1	noted	11/17/2019	11/17/2019				RAN2	RAN3, SA2	C1-199034
R2-1916293	CR of TS 36.355 for introducing NavIC in LTE	Reliance Ji	revised	11/17/2019	11/19/2019	3	B				
R2-1916294	CR of TS 36.331 for introducing NavIC in LTE	Reliance Ji	revised	11/17/2019	11/19/2019	2	B				
R2-1916295	Discussion on PDCCH-WUS missing problems during BWP s	Xiaomi Cor	available	11/17/2019	11/18/2019						
R2-1916296	Correction to Pcompensation for FR2	Huawei, Hi	agreed	11/18/2019	11/18/2019		F				
R2-1916297	IAB remaining issues	Qualcomm	noted	11/18/2019	11/19/2019						
R2-1916298	WF on UL BAP routing ID	Qualcomm	noted	11/18/2019	11/19/2019						
R2-1916299	Discussion on PRACH coordination	CATT	available	11/18/2019	11/18/2019						
R2-1916300	Report on Email Discussion [107b#52][NR MobE] Open issu	CATT	available	11/18/2019	11/20/2019						
R2-1916301	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nok	agreed	11/18/2019	11/18/2019	5	F				
R2-1916302	Clarification on RA and Msg3 with PUSCH Enhancements	Nokia, Nok	agreed	11/18/2019	11/18/2019	4	A				
R2-1916303	Correction to SIB5 acquisition for idle mode measurements	Ericsson	revised	11/18/2019	11/19/2019	3	F				
R2-1916304	Correction on inter-frequency neighbour cell measurement	Ericsson	agreed	11/18/2019	11/19/2019	3	F				
R2-1916305	Correction to SIB5 acquisition for idle mode measurements	Ericsson	agreed	11/18/2019	11/20/2019	4	F				
R2-1916306	Clarification on sCellIndex and SCell lists	Ericsson, N	agreed	11/18/2019	11/22/2019		F				
R2-1916307	Clarification on sCellIndex and SCell lists	Ericsson, N	agreed	11/18/2019	11/22/2019		F				

R2-1916308	Clarification on sCellIndex and SCell lists	Ericsson, N	revised	11/18/2019	11/21/2019	1	F					
R2-1916309	Correction on handling of stored AS context for UP optimiz	Huawei, Hi	agreed	11/18/2019	11/22/2019	1	F					
R2-1916310	Miscellaneous corrections	Lenovo, M	agreed	11/18/2019	11/22/2019	1	F					
R2-1916311	Correction to full configuration	Google Inc	revised	11/18/2019	11/22/2019	1	F					
R2-1916312	Correction to early measurement reporting results	Ericsson	revised	11/18/2019	11/21/2019	1	F					
R2-1916313	Clarification on UE Inactive AS context	Google Inc	agreed	11/18/2019	11/20/2019	1	F					
R2-1916314	[DRAFT] Reply LS on support of high peak data rate for Cat-	Qualcomm	revised	11/18/2019	11/22/2019			R1-191135	RAN1			
R2-1916315	[DRAFT] reply LS on QoE Measurement Collection	Ericsson	revised	11/18/2019	11/22/2019			R2-191206	SA5	RAN3, SA4	S5-195659	
R2-1916316	Correction on non-3GPP paging	Huawei, Hi	agreed	11/18/2019	11/22/2019	1	C					
R2-1916317	Introduction of DL MIMO efficiency enhancement	Huawei, Hi	endorsed	11/18/2019	11/22/2019	1	B					
R2-1916318	Introduction of DL MIMO efficiency enhancement	Huawei, Hi	endorsed	11/18/2019	11/22/2019	1	B					
R2-1916319	Draft CR for 36.323 on supporting DAPS handover	Huawei, Hi	endorsed	11/18/2019	11/22/2019		B					
R2-1916320	Report of [offline 106] UE capability on NR&LTE mobility	Intel Corpo	reserved	11/18/2019								
R2-1916321	Report on Offline Discussion [108] agreeable proposals on (	CATT	revised	11/18/2019	11/22/2019							
R2-1916322	Report of [Offline 109] Release of measID for CHO	Ericsson	noted	11/18/2019	11/22/2019							
R2-1916323	Clarification on sCellIndex and SCell lists	Ericsson, N	agreed	11/18/2019	11/22/2019	2	F					
R2-1916324	Correction to full configuration	Google Inc	postponed	11/18/2019		2	F					
R2-1916325	Correction to early measurement reporting results	Ericsson	agreed	11/18/2019	11/22/2019	2	F					
R2-1916326	[DRAFT] reply LS on QoE Measurement Collection	Ericsson	revised	11/18/2019	11/22/2019			R2-191206	SA5	RAN3, SA4	S5-195659	
R2-1916327	Reply LS on support of high peak data rate for Cat-M1 Ues i	RAN2	approved	11/18/2019				R1-191135	RAN1, RAN			
R2-1916328	Reply LS on QoE Measurement Collection	RAN2	approved	11/18/2019	11/23/2019			R2-191206	SA5	RAN3, SA4	S5-195659	
R2-1916329	Report on Offline Discussion [108] agreeable proposals on (	CATT	available	11/18/2019	11/22/2019							
R2-1916330	LS on Conditional PSCell addition/change	CATT	approved	11/18/2019	11/23/2019				RAN3	RAN, RAN4		
R2-1916331	Introduction of cross link interfernce management	Huawei, Hi	revised	11/18/2019	11/22/2019	1	B					
R2-1916332	[DRAFT] LS on CLI measurements UE capabilities	Qualcomm	revised	11/18/2019	11/22/2019				RAN1	RAN4		
R2-1916333	Running CR for the introduction of SRVCC from 5G to 3G	Huawei, Hi	endorsed	11/18/2019	11/22/2019		B					
R2-1916334	Running CR for the introduction of SRVCC from 5G to 3G	China Unic	endorsed	11/18/2019	11/22/2019		B					
R2-1916335	Introduction of SRVCC from 5G to 3G	Ericsson	endorsed	11/18/2019	11/22/2019	1	B					
R2-1916336	[DRAFT] Reply LS on NID structure and length	Ericsson	revised	11/18/2019	11/21/2019			R2-191432	CT4, CT	RAN3, CT1, CT3, SA2		
R2-1916337	NPN Stage 2 Draft CR	Nokia (Rap	endorsed	11/18/2019	11/21/2019		B					
R2-1916338	Introduction of Cross Link Interference (CLI) handling and R	LG Electro	available	11/18/2019	11/22/2019	1	B					
R2-1916339	Running RRC CR for Introduction of NR eMIMO	Ericsson	revised	11/18/2019	11/21/2019		B					
R2-1916340	Introduction of cross link interfernce management	Huawei, Hi	endorsed	11/18/2019	11/22/2019		B					
R2-1916341	[Draft] CMAS/ETWS and emergency services for SNPNs	Qualcomm	revised	11/18/2019	11/22/2019				SA1, SA2	CT1		
R2-1916342	Report of Offline Discussion 211 (CATT)	CATT (Rap	noted	11/18/2019	11/22/2019							
R2-1916343	Running RRC CR for Introduction of NR eMIMO	Ericsson	available	11/18/2019	11/22/2019		B					
R2-1916344	Reply LS on NID structure and length	RAN2	approved	11/18/2019	11/23/2019			R2-191432	CT4	RAN3, CT1, CT3, SA2, CT		
R2-1916345	CMAS/ETWS and emergency services for SNPNs	RAN2	approved	11/18/2019	11/22/2019				SA1, SA2	CT1		
R2-1916346	Draft Reply LS on Sending CAG ID in NAS layer	Qualcomm	revised	11/18/2019	11/22/2019				SA3, SA2, I	CT1	S3-193142	
R2-1916347	Introduction of cross link interfernce management	Huawei, Hi	endorsed	11/18/2019	11/23/2019	2	B					
R2-1916348	LS on CLI measurements UE capabilities	RAN2	approved	11/18/2019					RAN1	RAN4		
R2-1916349	Reply LS on Sending CAG ID in NAS layer	RAN2	approved	11/18/2019	11/23/2019				SA3, SA2, I	CT1	S3-193142	
R2-1916350	(reserved)	Sergio's td	reserved	11/18/2019								
R2-1916351	(reserved)	Sergio's td	reserved	11/18/2019								
R2-1916352	(reserved)	Sergio's td	reserved	11/18/2019								
R2-1916353	(reserved)	Sergio's td	reserved	11/18/2019								
R2-1916354	(reserved)	Sergio's td	reserved	11/18/2019								
R2-1916355	(reserved)	Sergio's td	reserved	11/18/2019								
R2-1916356	Clarification on default configuration and SRB1 for UP-EDT	Huawei, Hi	postponed	11/18/2019	11/22/2019	3	F					

R2-1916357	[DRAFT] Reply LS on Mobile-terminated Early Data Transmi	Qualcomm	revised	11/18/2019	11/22/2019			S2-191080	SA2, CT1	RAN3, RAN, SA
R2-1916358	[DRAFT] LS on UE identifier for UP CIoT 5GS Optimisation	LGE	revised	11/18/2019	11/22/2019				RAN3	
R2-1916359	Summary of [CB Offline #303] on HARQ RTT timer length	Huawei, H	noted	11/18/2019	11/22/2019					
R2-1916360	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916361	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916362	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916363	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916364	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916365	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916366	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916367	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916368	Reply LS on Mobile-terminated Early Data Transmission	RAN2	approved	11/18/2019	11/22/2019			S2-191080	SA2, CT1	RAN3, RAN, SA
R2-1916369	LS on UE identifier for UP CIoT 5GS Optimisation	RAN2	approved	11/18/2019	11/22/2019				RAN3	
R2-1916370	(reserved)	Emre's tdo	reserved	11/18/2019						
R2-1916371	Draft LS on consistent Uplink LBT failure detection mechan	Qualcomm	revised	11/18/2019	11/20/2019				RAN1	
R2-1916372	Summary of offline 404 discussion	Qualcomm	revised	11/18/2019	11/20/2019					
R2-1916373	[Draft] Reply LS on UE higher layer signalling for cross-slot s	MediaTek	noted	11/18/2019	11/20/2019				RAN1	R1-1911586
R2-1916374	Running CR for Introduction of Rel-16 NR UE power saving	Huawei	noted	11/18/2019	11/22/2019		B			
R2-1916375	LS on RRM Measurement Relaxation for UE Power Saving ir	RAN2	approved	11/18/2019	11/22/2019				RAN4	
R2-1916376	[107bis#66][NR/NTN] Running TP (Thales)	THALES	agreed	11/18/2019	11/22/2019					
R2-1916377	[DRAFT] LS on dependencies on AS design for mobility man	Thales	revised	11/18/2019	11/22/2019			S2-191078	SA2, RAN3	CT1
R2-1916378	[DRAFT] LS on LS on system level design assumptions for sa	Thales	revised	11/18/2019	11/22/2019			S2-191078	SA2, RAN3	CT1
R2-1916379	Inputs to TR 38.821 recommendations	THALES, N	revised	11/18/2019	11/22/2019					
R2-1916380	LS on consistent Uplink LBT failure detection mechanism	RAN2	approved	11/18/2019	11/22/2019				RAN1	
R2-1916381	Summary of offline 404 discussion	Qualcomm	noted	11/18/2019						
R2-1916382	Report of offline-403 - Remaining issues of consistent UL LE	OPPO	noted	11/18/2019	11/21/2019					
R2-1916383	DRX adaptions for NTN	Ericsson, N	available	11/18/2019	11/21/2019					
R2-1916384	UE positioning requirements and solution analysis in NTN	Nokia, Nok	noted	11/18/2019	11/22/2019					
R2-1916385	Discussion on Earth fixed vs. Earth moving cells in NTN LEO	Nokia, Nok	available	11/18/2019	11/22/2019					
R2-1916386	TP on Feeder Link Switch	CATT, Hua	revised	11/18/2019	11/21/2019					
R2-1916387	Service continuity between TN and NTN	NEC	noted	11/18/2019	11/22/2019					
R2-1916388	Remaining details on Random access for NTN	Ericsson	available	11/18/2019	11/21/2019					
R2-1916389	Satellite type differentiation	ZTE Corpo	noted	11/18/2019	11/21/2019					
R2-1916390	CHO for NTN LEO	Ericsson	revised	11/18/2019	11/22/2019					
R2-1916391	Report of email discussion [107bis#67] [NR - NTN]	Ericsson	available	11/18/2019	11/22/2019					
R2-1916392	TP on RACH capacity calculation based on typical cell size	ZTE Corpo	agreed	11/18/2019	11/21/2019		B			
R2-1916393	CHO for NTN LEO	Ericsson	agreed	11/18/2019	11/22/2019					
R2-1916394	LS on dependencies on AS design for mobility management	RAN2	approved	11/18/2019	11/22/2019			S2-191078	SA2, RAN3	CT1
R2-1916395	LS on LS on system level design assumptions for satellite in	RAN2	approved	11/18/2019	11/22/2019			S2-191078	SA2, RAN3	CT1
R2-1916396	Inputs to TR 38.821 recommendations	THALES, N	revised	11/18/2019	11/22/2019					
R2-1916397	Inputs to TR 38.821 recommendations	THALES, N	agreed	11/18/2019						
R2-1916398	(reserved)	Diana's tdo	reserved	11/18/2019						
R2-1916399	(reserved)	Diana's tdo	reserved	11/18/2019						
R2-1916400	(reserved)	Diana's tdo	reserved	11/18/2019						
R2-1916401	UE capability on NR positioning	Intel Corpo	withdrawn	11/18/2019						
R2-1916402	[Report of Offline#502]	Ericsson	noted	11/18/2019	11/22/2019					
R2-1916403	Summary of Offline discussion #503 on whether to have on	CATT	revised	11/18/2019	11/22/2019					
R2-1916404	[Report of Offline#504]	Ericsson	available	11/18/2019	11/22/2019					
R2-1916405	Introduction of B1C signal in BDS system in A-GNSS	CATT, CAI	reserved	11/18/2019		1	B			

R2-1916406	CR of TS 36.355 for introducing NavIC in LTE	Reliance Ji	endorsed	11/18/2019	11/22/2019	4	B				
R2-1916407	CR of TS 36.331 for introducing NavIC in LTE	Reliance Ji	endorsed	11/18/2019	11/22/2019	3	B				
R2-1916408	CR of TS 36.305 for introducing NavIC in LTE	Reliance Ji	endorsed	11/18/2019	11/22/2019	2	B				
R2-1916409	SSR Phase Bias Positioning Modes for Stage 2	Swift Navig	endorsed	11/18/2019	11/22/2019		B				
R2-1916410	SSR Phase Bias Positioning Modes for Stage 2	Swift Navig	withdrawn	11/18/2019			B				
R2-1916411	Introducing support for GNSS Integer Ambiguity Level Indic	Ericsson	revised	11/18/2019	11/22/2019		B				
R2-1916412	Introducing support for GNSS Integer Ambiguity Level Indic	Ericsson	endorsed	11/18/2019	11/22/2019		B				
R2-1916413	(reserved)	Nathan's to	reserved	11/18/2019							
R2-1916414	(reserved)	Nathan's to	reserved	11/18/2019							
R2-1916415	(reserved)	Nathan's to	reserved	11/18/2019							
R2-1916416	[DRAFT] LS on trace related configurations for NR MDT	Huawei	revised	11/18/2019	11/22/2019				SA5	RAN3	
R2-1916417	[DRAFT] LS on EN-DC related MDT configuration details	Ericsson	revised	11/18/2019	11/22/2019				RAN3, SA5		
R2-1916418	[DRAFT] LS on MDT Measurements	CMCC	revised	11/18/2019	11/22/2019				RAN4		
R2-1916419	RAN2-108#661 offline discussion on SON functions	Ericsson	noted	11/18/2019	11/22/2019						
R2-1916420	[DRAFT] LS on RACH report and RLF report	Ericsson	revised	11/18/2019	11/22/2019				RAN3, SA5		
R2-1916421	Clarification of PDCCH monitoring when not fully aligned w	NTT DOCO	revised	11/18/2019	11/20/2019	1	F				
R2-1916422	Stop using redirectedCarrierOffsetDedicated after reselecti	Huawei, Hi	agreed	11/18/2019	11/21/2019	1	F				
R2-1916423	Allow Delta Configuration of ParametersListFmt2 and Para	MediaTek	agreed	11/18/2019	11/20/2019	1	F				
R2-1916424	RAN2 agreements for Rel-16 additional enhancements for I	Blackberry	reserved	11/18/2019							
R2-1916425	[DRAFT] LS on PUR Fallback	Qualcomm	revised	11/18/2019	11/21/2019				RAN1		
R2-1916426	Draft LS reply PUR transmission for NB-IoT/eMTC	Ericsson	revised	11/18/2019	11/21/2019			R2-191430	RAN1	RAN4	
R2-1916427	Alternative TP for TA validation based on serving cell RSRP	Sierra Wire	available	11/18/2019	11/21/2019						
R2-1916428	[Report from Offline discussion #700]	Qualcomm	withdrawn	11/18/2019							
R2-1916429	[Report from Offline discussion #701]	Qualcomm	noted	11/18/2019	11/21/2019						
R2-1916430	Offline discussion #702 (Qualcomm) To discuss the configu	Qualcomm	available	11/18/2019	11/21/2019						
R2-1916431	Report of [Offline#705] Further progress on PUR	Ericsson (R	noted	11/18/2019	11/22/2019						
R2-1916432	Report of [Offline#706] whether to re-use SIB14-NB or hav	Huawei (Ra	noted	11/18/2019	11/22/2019						
R2-1916433	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm	revised	11/18/2019	11/21/2019			R2-191434	SA2, CT1,	RAN3	
R2-1916434	[DRAFT] Feedback on RAN1 agreements on PUR	Qualcomm	revised	11/18/2019	11/21/2019				RAN1		
R2-1916435	LS reply PUR transmission for NB-IoT/eMTC	RAN2	approved	11/18/2019	11/22/2019			R2-191430	RAN1	RAN4	
R2-1916436	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm	revised	11/18/2019	11/22/2019			R2-191434	SA2, CT1,	RAN3	
R2-1916437	Feedback on RAN1 agreements on PUR	RAN2	approved	11/18/2019	11/21/2019				RAN1		
R2-1916438	[DRAFT] Reply LS on assistance indication for WUS	Qualcomm	revised	11/18/2019	11/22/2019			R2-191434	SA2, CT1,	RAN3	
R2-1916439	Clarification of PDCCH monitoring when not fully aligned w	NTT DOCO	agreed	11/18/2019	11/22/2019	2	F				
R2-1916440	Reply LS on assistance indication for WUS	RAN2	approved	11/18/2019	11/22/2019			R2-191434	SA2, CT1,	RAN3	
R2-1916441	Reply LS on signalling of sidelink RSRP and CSI	RAN2	approved	11/18/2019	11/22/2019				RAN1		
R2-1916442	[DRAFT] Response LS on SL RLM/RLF	InterDigita	revised	11/18/2019	11/23/2019				RAN1, SA2		
R2-1916443	[DRAFT] Response LS on additional high layer information f	LGE	revised	11/18/2019	11/22/2019			R2-191432	RAN1		
R2-1916444	[DRAFT] Reply LS on resource coordination between NG-RA	Ericsson	available	11/18/2019	11/22/2019			R2-191433	RAN3		R3-196280
R2-1916445	[DRAFT] Reply LS on sidelink synchronization under multipl	Qualcomm	revised	11/18/2019	11/23/2019				RAN4, RAN1		
R2-1916446	[DRAFT] Reply LS on PC5S and PC5 RRC unicast message pr	Qualcomm	revised	11/18/2019	11/22/2019			R2-191435	SA3	SA2, CT1	
R2-1916447	Offline discussion on open issues of V2X 38.331 running CR	Huawei	noted	11/18/2019	11/22/2019						
R2-1916448	[DRAFT] Response LS on TX resource (re-)selection and MA	LGE	revised	11/18/2019	11/22/2019			R1-191174	RAN1		
R2-1916449	Running CR for 38.322 for NR V2X	Ericsson	endorsed	11/18/2019	11/22/2019		B				
R2-1916450	[Results of Offline#810]	OPPO	noted	11/18/2019	11/22/2019						
R2-1916451	[Discussion on remaining prioritization issues]	OPPO	noted	11/18/2019	11/22/2019						
R2-1916452	Summary of offline [Offline-812] on HFN part of RX_NEXT a	CATT	noted	11/18/2019	11/23/2019						
R2-1916453	[DRAFT] LS on NR V2X Security issue and PDCP SN size	CATT	revised	11/18/2019	11/22/2019				SA3		
R2-1916454	Summary of offline [814] on sidelink transmissions during I	Nokia, Nok	noted	11/18/2019	11/22/2019						

R2-1916455	Summary on Offline [815] SL Synchronization under Async	Apple	noted	11/18/2019	11/22/2019						
R2-1916456	Open issues on V2X 38.322 running CR	Ericsson	available	11/18/2019	11/22/2019						
R2-1916457	(reserved)	Kyeongin's	available	11/18/2019	11/23/2019						
R2-1916458	Response LS on additional high layer information for sidelir	RAN2	approved	11/18/2019	11/22/2019			R2-191432	RAN1		
R2-1916459	(reserved)	Kyeongin's	available	11/18/2019	11/22/2019						
R2-1916460	Response LS on TX resource (re-)selection and MAC related	RAN2	approved	11/18/2019	11/22/2019			R1-191174	RAN1		
R2-1916461	Reply LS on PC5S and PC5 RRC unicast message protection	RAN2	approved	11/18/2019	11/22/2019			R2-191435	SA3	SA2, CT1	
R2-1916462	[DRAFT] Reply LS on UL-SL prioritization	OPPO	revised	11/18/2019	11/23/2019			R2-191431	RAN1, RAN4		
R2-1916463	[DRAFT] LS on NR V2X Security issue and PDCP SN size	CATT	revised	11/18/2019	11/23/2019				SA3		
R2-1916464	Response LS on SL RLM/RLF	RAN2	approved	11/18/2019	11/23/2019				RAN1, SA2		
R2-1916465	Reply LS on sidelink synchronization under multiple synchr	RAN2	approved	11/18/2019	11/23/2019				RAN4, RAN1		
R2-1916466	(reserved)	Kyeongin's	available	11/18/2019	11/23/2019						
R2-1916467	LS on NR V2X Security issue and PDCP SN size	RAN2	approved	11/18/2019	11/23/2019				SA3		
R2-1916468	Reply LS on UL-SL prioritization	RAN2	approved	11/18/2019	11/23/2019			R2-191431	RAN1, RAN4		
R2-1916469	(reserved)	Kyeongin's	reserved	11/18/2019							
R2-1916470	(reserved)	Kyeongin's	reserved	11/18/2019							
R2-1916471	Correction on sending Failure Information via SRB3	Ericsson, Z	agreed	11/18/2019	11/19/2019	3	F				
R2-1916472	Running stage 2 CR on positioning ([107bis#78][NR Pos])	Intel Corp	available	11/18/2019	11/18/2019						
R2-1916473	SMTC setting in MR-DC PSCell change	Nokia, Nok	agreed	11/18/2019	11/19/2019	3	F				
R2-1916474	Correction to integrity protection in DRB addition and mod	Ericsson	agreed	11/18/2019	11/19/2019	2	F				
R2-1916475	CR to 36.331 on performing L3 filtering for NR related mea	Ericsson	agreed	11/18/2019	11/21/2019	1	F				
R2-1916476	Corrections on scg-RB-Config in CG-Config	Ericsson	agreed	11/18/2019	11/19/2019	2	F				
R2-1916477	Draft LS to RAN1 for clarification of PUCCH configuration	RAN2	revised	11/18/2019	11/19/2019				RAN1		
R2-1916478	Broadcast Positioning Procedure in Connected Mode	CATT	available	11/18/2019	11/19/2019						
R2-1916479	Correction on the condition of RBTermChange	Ericsson	agreed	11/18/2019	11/23/2019	1	F				
R2-1916480	Correction on the configuration of split SRB	Huawei, Hi	agreed	11/18/2019	11/23/2019	1	F				
R2-1916481	LS to RAN1 for clarification of PUCCH configuration	RAN2	approved	11/18/2019	11/19/2019				RAN1		
R2-1916482	LS on Discussion over UE capabilities of FG2-36/2-40/2-41/	RAN1	noted	11/18/2019	11/19/2019				RAN2		R1-1913295
R2-1916483	Correction to key derivation for the UE configured with sk-	Huawei, Hi	agreed	11/18/2019	11/22/2019	1	F				
R2-1916484	Correction on the pre-condition for reconfiguration with sy	Huawei, Hi	agreed	11/19/2019		1	F				
R2-1916485	Restoring RoHC/SDAP during Resume	Intel	agreed	11/19/2019	11/22/2019	1	F				
R2-1916486	Security requirements for split PDU session (38.331)	Ericsson, C	revised	11/19/2019	11/22/2019	1	F				
R2-1916487	Additional path reporting for downlink NR positioning mea	Ericsson, T	available	11/19/2019	11/19/2019						
R2-1916488	Definition of NR standalone	Ericsson	postponed	11/19/2019		3	F				
R2-1916489	Correction of UE assistance information	Samsung T	agreed	11/19/2019	11/22/2019	1	F				
R2-1916490	Correction of UE assistance information	Samsung T	agreed	11/19/2019	11/22/2019	1	F				
R2-1916491	Correction on SIB1 description	Huawei, Hi	agreed	11/19/2019	11/23/2019	1	F				
R2-1916492	IAB flow control feedback info	Qualcomm	noted	11/19/2019	11/19/2019						
R2-1916493	Clarification regarding inter-node transfer of UE capability	Samsung T	agreed	11/19/2019	11/22/2019	1	F				
R2-1916494	Miscellaneous correction for late drop	Ericsson	agreed	11/19/2019	11/23/2019	3	F				
R2-1916495	[107bis#34]Correction on ambiguity of UE FDD&TDD FR1&	ZTE Corpo	agreed	11/19/2019	11/22/2019	1	F				
R2-1916496	[DRAFT] LS on default codebook parameters	Nokia, Nok	revised	11/19/2019	11/20/2019				RAN1		
R2-1916497	Issue related to CG overridden by PDCCH	ASUSTeK	noted	11/19/2019	11/19/2019						
R2-1916498	Report for [107bis#36] [NR R15] FR2 CA Fallbacks (Nokia)	Nokia, Nok	postponed	11/19/2019	11/22/2019						
R2-1916499	Report of Offline#26, absence of scs-XXkHz in channelBWs-	Ericsson	available	11/19/2019	11/22/2019						
R2-1916500	CR to 38.331 on support of 70MHz channel bandwidth -opt	Huawei, Hi	available	11/19/2019	11/23/2019	1	F				
R2-1916501	CR to 38.306 on support of 70MHz channel bandwidth -opt	Huawei, Hi	available	11/19/2019	11/23/2019	1	F				
R2-1916502	Use of splitSRB-WithOneUL-Path capability (38.306)	Ericsson	agreed	11/19/2019	11/23/2019	1	F				
R2-1916503	[DRAFT] LS on Uplink skipping	vivo	revised	11/19/2019	11/22/2019				RAN1		

R2-1916504 Upper layer parameters to support IAB physical layer opera	Qualcomm	available	11/19/2019	11/19/2019							
R2-1916505 TP on Random Access procedure	CATT, Thal	available	11/19/2019	11/19/2019		F					
R2-1916506 F1AP signalling over LTE leg way forward	Nokia, Nok	noted	11/19/2019	11/20/2019							
R2-1916507 Miscellaneous corrections on UE capability fields	Intel Corpo	agreed	11/19/2019	11/22/2019	3	F					
R2-1916508 Measurement Initiation Issue for NTN System	CATT, Thal	revised	11/19/2019	11/19/2019							
R2-1916509 [DRAFT] LS on secondary DRX group	Ericsson	revised	11/19/2019	11/22/2019					RAN1	RAN4	
R2-1916510 Correction of cell reselection parameters for multi-beam op	Qualcomm	agreed	11/20/2019	11/22/2019	2	F					
R2-1916511 Offline 34, IAB bootstrap configuration	Qualcomm	noted	11/19/2019	11/22/2019							
R2-1916512 Motivation for a dedicated mechanism for misaligned peric	Nokia, Nok	available	11/20/2019	11/20/2019							
R2-1916513 Handling of AS-Config in HandoverPreparationInformation	Ericsson	agreed	11/20/2019	11/21/2019	2	F					
R2-1916514 Correction of SRB3 handling at full configuration (Alt2)	Ericsson	agreed	11/20/2019	11/21/2019	3	F					
R2-1916515 Reply LS on Fast MCG Link Recovery using SRB3 (R3-19760(	RAN3	available	11/20/2019	11/20/2019					RAN2		R3-197606
R2-1916516 Reply LS on Recommended Bit Rate/Query for FLUS and M	RAN2	approved	11/20/2019	11/20/2019				S4-191031	SA4		
R2-1916517 Reply LS on direct indication of ETWS/CMAS (R1-1913367;	RAN1	noted	11/20/2019	11/20/2019					RAN2		R1-1913367
R2-1916518 Running CR for 36.300 on CA/DC Enhancements	Ericsson	reserved	11/20/2019								
R2-1916519 Running CR for 38.300 for CA/DC Enhancements	Ericsson	reserved	11/20/2019								
R2-1916520 Reply LS on Sending CAG ID in NAS layer (R3-197591; conta	RAN3	available	11/20/2019	11/20/2019					SA3, SA2, I	CT1	R3-197591
R2-1916521 Measurement Initiation Issue for NTN System	CATT, Thal	available	11/20/2019	11/21/2019							
R2-1916522 Running CR on 38.331 for on-demand SI procedure in RRC_	Ericsson	revised	11/20/2019	11/23/2019		B					
R2-1916523 Correction to Feature Set Combination and Band combinat	Ericsson	agreed	11/20/2019	11/23/2019	1	F					
R2-1916524 [DRAFT] LS on measurement reporting criteria for EN-DC	Nokia	revised	11/20/2019	11/21/2019					RAN4		
R2-1916525 Correction on MCG measurements in SCGFailureInformatic	Ericsson	agreed	11/20/2019	11/23/2019	2	F					
R2-1916526 Summary of Offline 52: TP for LCH-priority based Data-Data	CATT	noted	11/21/2019	11/22/2019							
R2-1916527 [Summary of] Offline 53, CG/SPS configuration and MAC CE	Nokia, Nok	noted	11/21/2019	11/22/2019							
R2-1916528 Reply LS on CSI-RS configuration transfer	RAN2	approved	11/21/2019	11/21/2019				R2-191433	RAN3		
R2-1916529 Restoring RoHC/SDAP during INACTIVe Resume	Intel	agreed	11/21/2019	11/22/2019		F					
R2-1916530 LS on RRC establishment cause value in EPS voice fallback f	RAN2	approved	11/21/2019	11/21/2019					CT1		
R2-1916531 Summary of offline #40 on UE autonomous (re)transmissio	CATT	noted	11/21/2019	11/22/2019							
R2-1916532 Offline discussion about Power control for NR-DC	vivo	available	11/21/2019	11/22/2019							
R2-1916533 Summary of Offline discussion #503 on whether to have on	CATT	reserved	11/21/2019								
R2-1916534 Correction on security key derivation	Ericsson	agreed	11/21/2019	11/23/2019	1	F					
R2-1916535 Correction on security key derivation	Ericsson	agreed	11/21/2019	11/23/2019	1	F					
R2-1916536 Reply LS on SL RLM/RLF (R1-1913464; contact: InterDigital)	RAN1	available	11/21/2019	11/21/2019					RAN2		R1-1913464
R2-1916537 Way forward and TP for the pre-BSR	Huawei, Hi	endorsed	11/21/2019	11/22/2019		B					
R2-1916538 TP for Timing Delta MAC CE	ZTE	agreed	11/21/2019	11/22/2019							
R2-1916539 Running CR to 38.321 on Integrated Access and Backhaul fo	Samsung E	endorsed	11/21/2019	11/22/2019	1	B					
R2-1916540 [DRAFT] LS on F1AP over LTE leg signalling for IAB	Nokia, Nok	revised	11/21/2019	11/22/2019					RAN3		
R2-1916541 LS on UE capabilities and RRC signalling on Tx switching per	RAN4	available	11/21/2019	11/22/2019					RAN2	RAN1	R4-1916083
R2-1916542 LS on UE capability of intraBandENDC-Support (R4-191313(	RAN4	available	11/21/2019	11/22/2019					RAN2		R4-1913130
R2-1916543 [DRAFT] LS on inter-RAT HO from SA to EN-DC	China Tele	revised	11/22/2019	11/22/2019					SA2		
R2-1916544 [Draft] LS on Network Coordination for UL PDCP Duplicatio	Nokia, Nok	revised	11/22/2019	11/22/2019					RAN3		
R2-1916545 NE-DC dynamic power sharing capability	Qualcomm	agreed	11/22/2019	11/22/2019	1	F					
R2-1916546 Correction on initial BWP bandwidth capabilities	Huawei, Hi	agreed	11/22/2019	11/23/2019	1	F					
R2-1916547 Need for Ethernet padding compression	RAN2	approved	11/22/2019	11/22/2019					SA1		
R2-1916548 Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-1(	China Tele	revised	11/22/2019	11/22/2019		B					
R2-1916549 Corrections on the PDCP duplication	Huawei, Hi	revised	11/22/2019	11/23/2019	1	F					
R2-1916550 Clarification for PDCP duplication (de)activation by RRC	Huawei	available	11/22/2019	11/23/2019							
R2-1916551 Correction on PRACH procedure with SRS switching	Huawei, Hi	agreed	11/22/2019	11/22/2019	1	F					
R2-1916552 Correction on CORESET location	Huawei, Hi	agreed	11/22/2019	11/23/2019	1	F					

R2-1916553	Work plan for Industrial IoT WI finalization	Nokia (Rap	available	11/22/2019	11/22/2019						
R2-1916554	Text Proposal for TS 36.331 for support of F1AP signalling c	Nokia, Nok	endorsed	11/22/2019	11/22/2019						
R2-1916555	TP on Feeder Link Switch	CATT, Hua	agreed	11/22/2019	11/22/2019						
R2-1916556	PSCell MIB configuration in MR-DC	MediaTek	available	11/22/2019	11/22/2019						
R2-1916557	Corrections on the PDCP duplication	Huawei, Hi	available	11/22/2019	11/23/2019	2	F				
R2-1916558	Report of offline discussion #202	LG Electro	available	11/22/2019	11/22/2019						
R2-1916559	[DRAFT] LS on Additional frequency information for SRS RS	LGE	noted	11/22/2019	11/22/2019				RAN1		
R2-1916560	PDCP configuration generation (email discussion of 107#25	Huawei, Hi	available	11/22/2019	11/22/2019	2	F				
R2-1916561	Check RAN1 impacts of UE autonomous transmission of de	Qualcomm	noted	11/22/2019	11/22/2019						
R2-1916562	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916563	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916564	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916565	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916566	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916567	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916568	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916569	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916570	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916571	(reserved)	Brian's tdo	reserved	11/22/2019							
R2-1916572	LS on Uplink skipping	RAN2	approved	11/22/2019	11/22/2019				RAN1		
R2-1916573	Draft CR to 36.331 on Integrated Access and Backhaul for (I	Ericsson	reserved	11/22/2019							
R2-1916574	Running CR to TS 38.331 on IAB for NR	Ericsson	available	11/22/2019	11/22/2019						
R2-1916575	[DRAFT] LS on introduction of additional CG periodicities	Nokia	withdrawn	11/22/2019					RAN1		
R2-1916576	LS on Network Coordination for UL PDCP Duplication	RAN2	approved	11/22/2019	11/22/2019				RAN3		
R2-1916577	LS on F1AP over LTE leg signalling for IAB	RAN2	approved	11/22/2019	11/22/2019				RAN3		
R2-1916578	LS on channel raster for NR V2X UE (R4-1916146; contact: (	RAN4	available	11/22/2019	11/22/2019				RAN2	RAN1	R4-1916146
R2-1916579	LS on EN-DC related MDT configuration details	RAN2	approved	11/22/2019	11/23/2019				RAN3, SA5		
R2-1916580	LS on RACH report and RLF report	RAN2	approved	11/22/2019	11/23/2019				RAN3, SA5		
R2-1916581	Offline discussion summary of UL dormancy behaviour	Qualcomm	available	11/22/2019	11/22/2019						
R2-1916582	Offline discussion [#45] cross-carrier scheduling CR	Qualcomm	available	11/22/2019	11/22/2019						
R2-1916583	CR to 38.331 on support of cross-carrier scheduling with di	Qualcomm	available	11/22/2019	11/22/2019		F				
R2-1916584	[Draft] LS on FR2 gap timing impacts of async CA	Qualcomm	noted	11/22/2019	11/22/2019				RAN4		
R2-1916585	LS reply on CSI/SRS reporting (R1-1913480; contact: vivo)	RAN1	available	11/22/2019	11/22/2019				RAN2	RAN4	R1-1913480
R2-1916586	Stage 2 CR for Inter-RAT HO between NR to EN-DC in Rel-1(	China Tele	agreed	11/22/2019	11/23/2019		B				
R2-1916587	[Draft] LS on RAN2 progress on SCell uplink behaviour of th	Intel	revised	11/22/2019	11/23/2019				RAN1	RAN4	
R2-1916588	LS on MDT Measurements	RAN2	approved	11/22/2019	11/23/2019				RAN4		
R2-1916589	Security requirements for split PDU session (38.331)	Ericsson, C	agreed	11/23/2019	11/23/2019	2	F				
R2-1916590	[DRAFT] Reply LS on Handling of Fallbacks for combined co	Ericsson	available	11/23/2019	11/23/2019			R2-191204	RAN4		
R2-1916591	Running CR on 38.331 for on-demand SI procedure in RRC_	Ericsson	endorsed	11/23/2019	11/23/2019		B				
R2-1916592	LS on default codebook parameters	RAN2	approved	11/23/2019					RAN1		
R2-1916593	Clarification on ne-DC capability	Huawei, Hi	agreed	11/23/2019	11/23/2019	1	F				
R2-1916594	Clarification on the en-DC and ng-EN-DC capabilities	Huawei, Hi	agreed	11/23/2019	11/23/2019	1	F				
R2-1916595	LS on measurement reporting criteria for EN-DC	RAN2	approved	11/23/2019					RAN4		
R2-1916596	Overheating issue in (NG)EN-DC	Huawei, Hi	not pursued	11/23/2019	11/23/2019						
R2-1916597	LS on secondary DRX group	RAN2	approved	11/23/2019					RAN1	RAN4	
R2-1916598	LS on trace related configurations for NR MDT	RAN2	approved	11/23/2019	11/23/2019				SA5	RAN3	
R2-1916599	LS on exchanging used IDs of SN terminated DRBs	RAN2	approved	11/23/2019	11/23/2019				RAN3		
R2-1916600	LS on inter-RAT HO from SA to EN-DC	RAN2	approved	11/23/2019	11/23/2019				SA2		
R2-1916601	LS on RAN2 progress on Scell uplink behaviour of the UE in	RAN2	approved	11/23/2019	11/23/2019				RAN1	RAN4	