UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

OnePlus Technology (Shenzhen) Co., Ltd.,
Petitioner,

v.

Pantech Corporation,
Patent Owner.

U.S. Patent No. 9,769,776

Case No. IPR2025-00720

DECLARATION OF FRIEDHELM RODERMUND IN SUPPORT OF A PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,769,776

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 22

1. TDoc R2-115812 ("Potevio") 22

2. TDoc R2-120218 ("Sharp") 28

3. TDoc R2-106856 ("Samsung") 34

4. TS 36.331 V10.4.0 41

V. AVAILABILITY FOR CROSS-EXAMINATION 53

A. Right To Supplement 53

B. Signature 53

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 R2-115812, which represents a 3GPP document with the title "Signalling for TA group configuration" (hereinafter "R2-115812" or "Potevio") (Ex. 1007)
- TDoc R2-120218, which represents a 3GPP document with the title "TA group handling" (hereinafter "R2-120218" or "Sharp") (Ex. 1006)
- TDoc R2-106856, which represents a 3GPP document with the title "Introduction of Carrier Aggregation and UL/ DL MIMO" (hereinafter "R2-106856" or "Samsung") (Ex. 1021)

IPR2025-00720, OnePlus Ex. 1004
Page 3 of 700

- Version 10.4.0 of technical specification 3GPP TS 36.331 which represents a 3GPP document with the title "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC); Protocol specification (Release 10)" (hereinafter "TS 36.331 V10.4.0") (Ex. 1005)

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 €470 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 Pantech Corporation ("Pantech" or "Patent Owner") is the current assignee of U.S. Patent No. 9,769,776 ("the '776 Patent") (Ex. 1001). I have no financial interest in the Patent Owner or the '776 patent.

6. In forming my opinions, I have considered the cited exhibits, including the exhibits identified in Appendix B, and my academic and professional training

IPR2025-00720, OnePlus Ex. 1004
Page 4 of 700

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

IPR2025-00720, OnePlus Ex. 1004
Page 7 of 700

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 Ex. 1007 (Potevio) is an authentic copy of 3GPP T-doc R2-115812 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by November 6, 2011, at the latest.

21. It is my opinion that Ex. 1006 (Sharp) is an authentic copy of 3GPP T-doc R2-120218 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by January 31, 2012, at the latest.

22. It is my opinion that Ex. 1021 (Samsung) is an authentic copy of 3GPP T-doc R2-106856 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by November 26, 2010, at the latest.

23. It is my opinion that Ex. 1005 is an authentic copy of technical specification TS 36.331 V10.4.0 published by 3GPP and would have been publicly accessible through ftp.3gpp.org as of December 20, 2011.

IV. PUBLICATION OF 3GPP SPECIFICATIONS AND RELATED DOCUMENTS

A. General Practices

24. Unless otherwise noted, the foregoing and following is an accurate description of 3GPP general practices from 1998 to the present, including in 2011/2012, regardless of whether I use the present or past tense to describe those practices.

25. 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

IPR2025-00720, OnePlus Ex. 1004
Page 10 of 700

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.

26. 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.

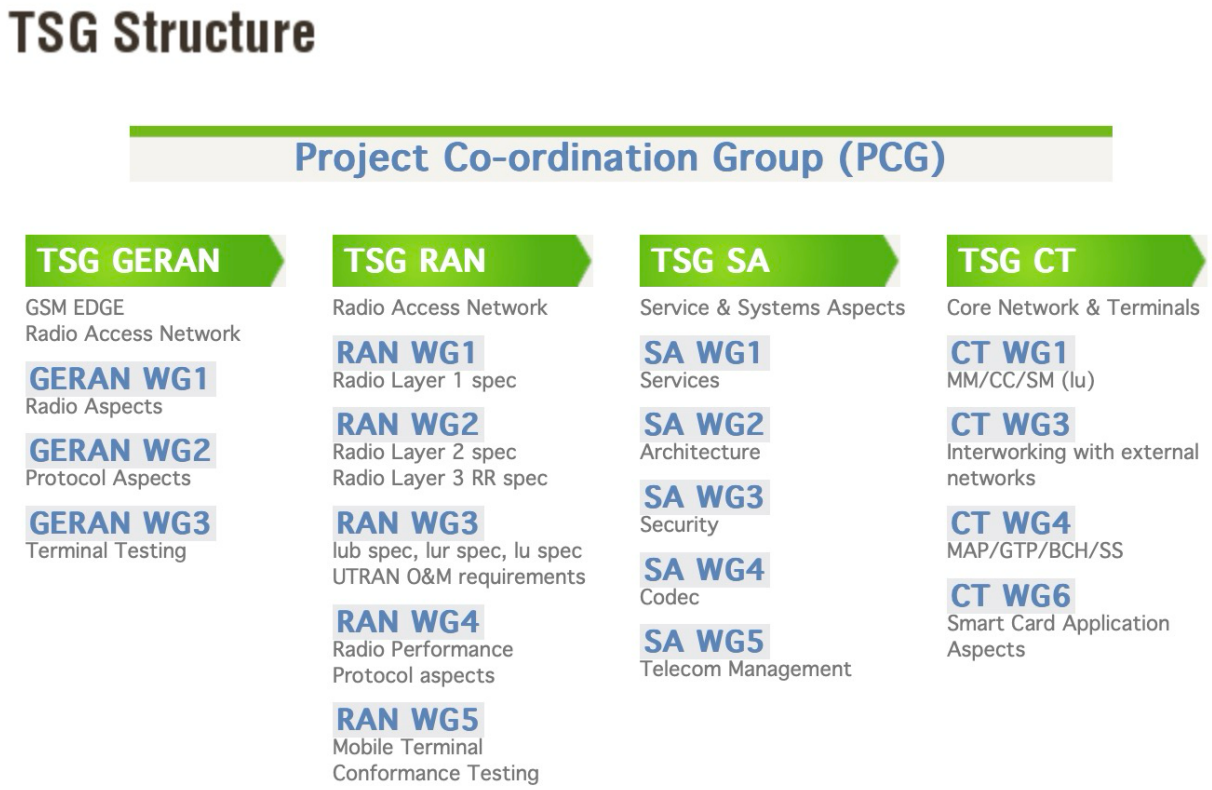
27. In the ordinary course of its regularly conducted business activities, and pursuant to its standard business practices, 3GPP publishes technical specifications, proposals, reports, and other documents related to the development of cellular telecommunications standards. Such documents are published 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.

28. 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

IPR2025-00720, OnePlus Ex. 1004
Page 11 of 700

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.

29. The names and the structure of 3GPP working groups, as of in 2011, can be found at below[1]:



[1] https://web.archive.org/web/20110509054716/http://3gpp.org/Specification-Groups

30. 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 2011/2012 was one of G (GSM EDGE Radio Access Network), R (Radio Access Network), C (Core Network & Terminals), S (Service and System Aspects), or T (Terminals); (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).

31. 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 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.

32. As early as December 1998, including in 2002, 3GPP's FTP server was freely accessible to the general public with no login, password, or membership requirement.

IPR2025-00720, OnePlus Ex. 1004
Page 13 of 700

33. By 1999, at least 100 companies were members of 3GPP (836 companies by March 2025), 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.

34. Based on my experience with 3GPP and the telecommunications industry, I would expect any person implementing a cellular network or device, e.g., an UMTS or 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.

IPR2025-00720, OnePlus Ex. 1004
Page 14 of 700

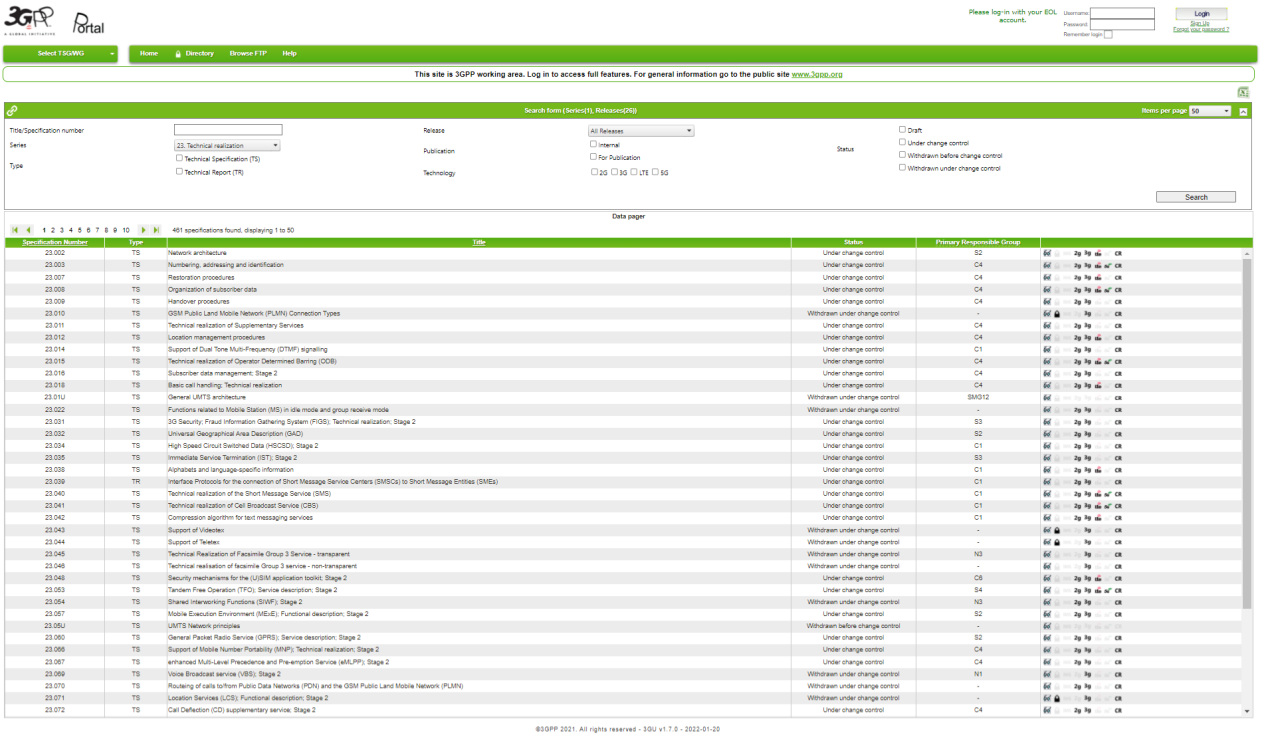
35. By June 1999, 3GPP's FTP server was well-known to persons in the cellular telecommunications industry as a source of public information regarding industry standards and technological advances.

36. 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.

IPR2025-00720, OnePlus Ex. 1004
Page 15 of 700

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		

37. 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:



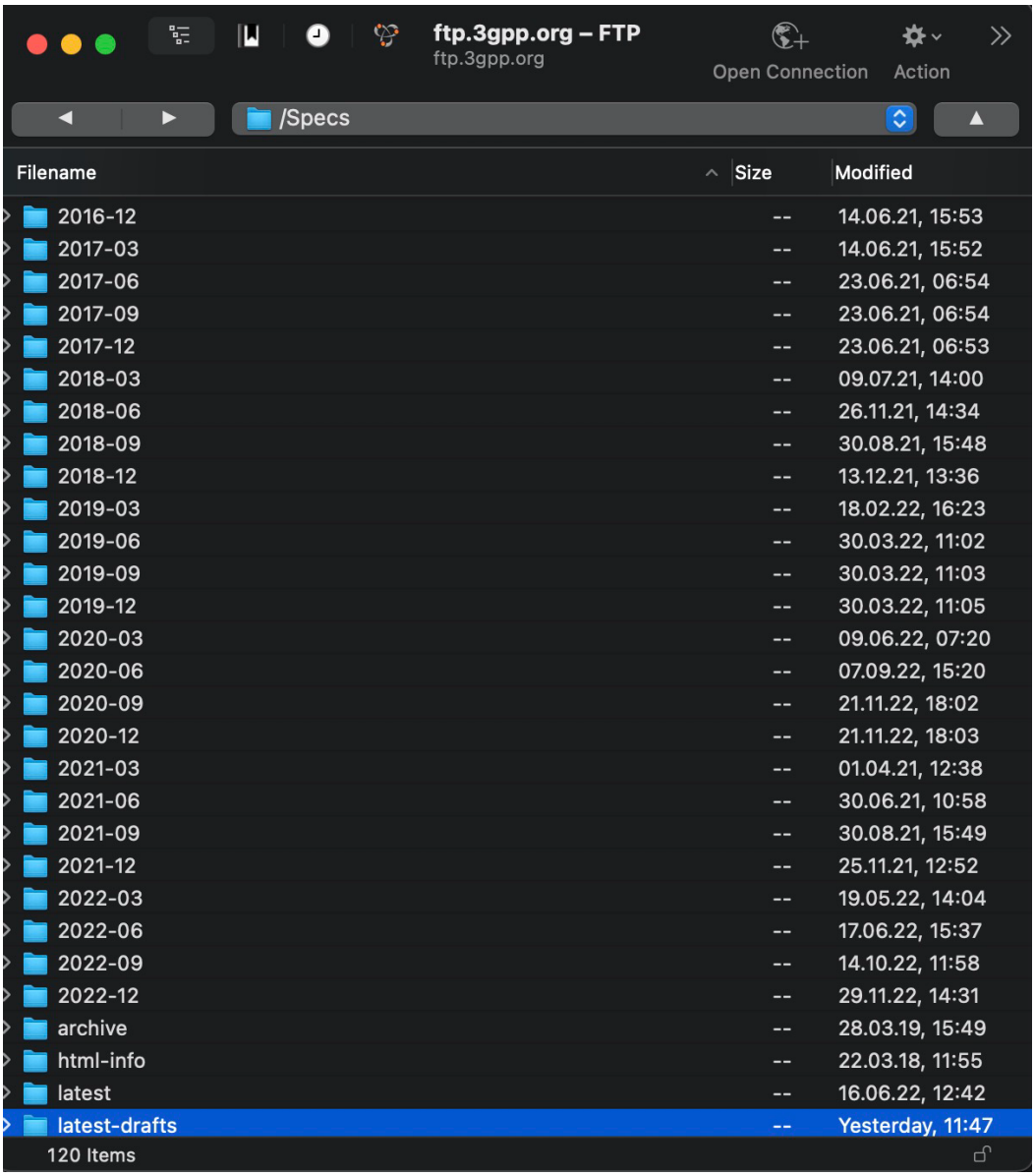
38. As an example of a series, the radio aspects of the 3GPP UMTS standard are covered in the "25 series," and are further subdivided into separate sections or specifications. The UMTS radio specification series starts at TS 25.053 and ends at TR 25.999.

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

40. 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).

41. 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.

42. 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:



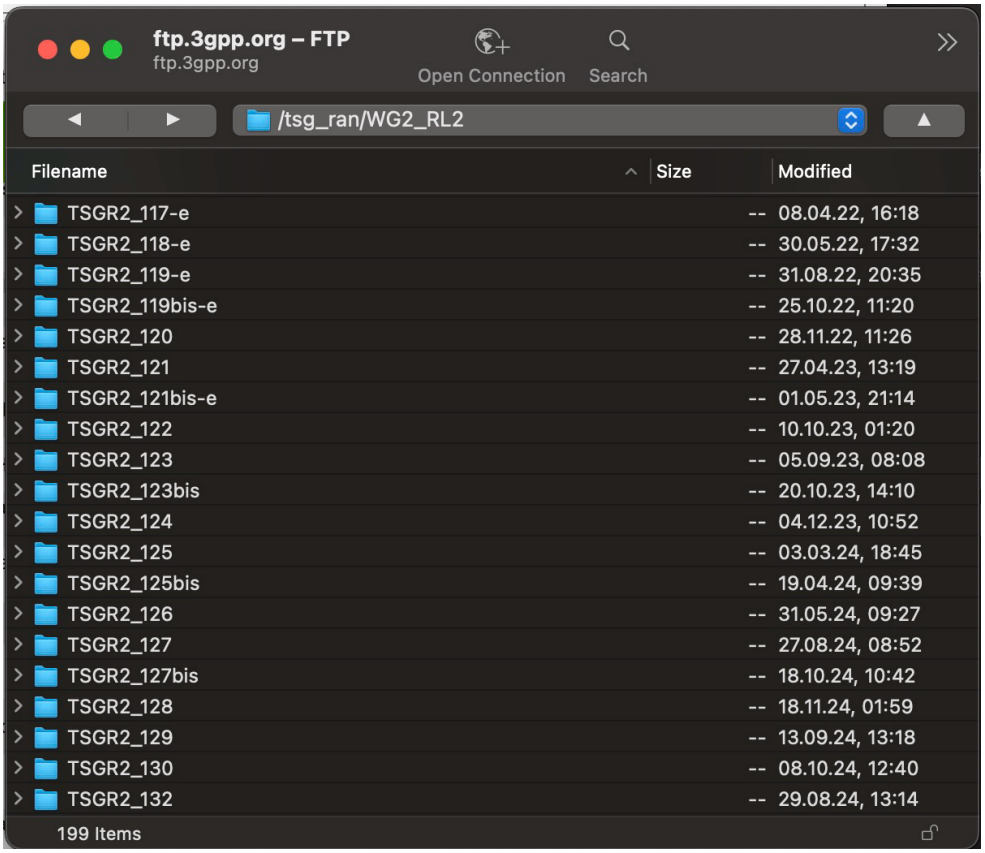
43. While 3GPP aims to upload the updated specifications to both locations at the same time, occasionally there may be a small difference in the upload date, and thus the date stamp, for the same specification uploaded to the two locations. Additionally, specifications which are not yet approved (so 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.

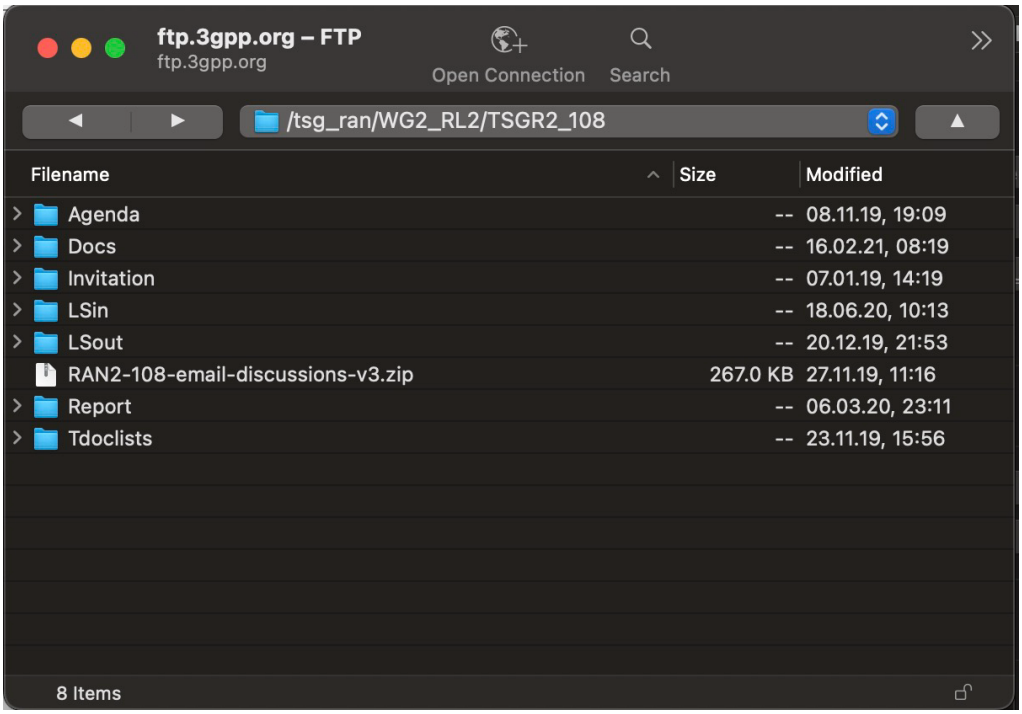
44. The timestamp on 3GPP's FTP server shows the date when the document was uploaded the last time. Thus, the timestamp shows the latest possible date the document became publicly available and accessible on 3GPP's FTP server. The given document might have been available earlier and the original timestamp 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.

45. 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:

IPR2025-00720, OnePlus Ex. 1004
Page 21 of 700



46. 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):



47. 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.

48. 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

IPR2025-00720, OnePlus Ex. 1004
Page 23 of 700

- 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 R2-115812 ("Potevio")

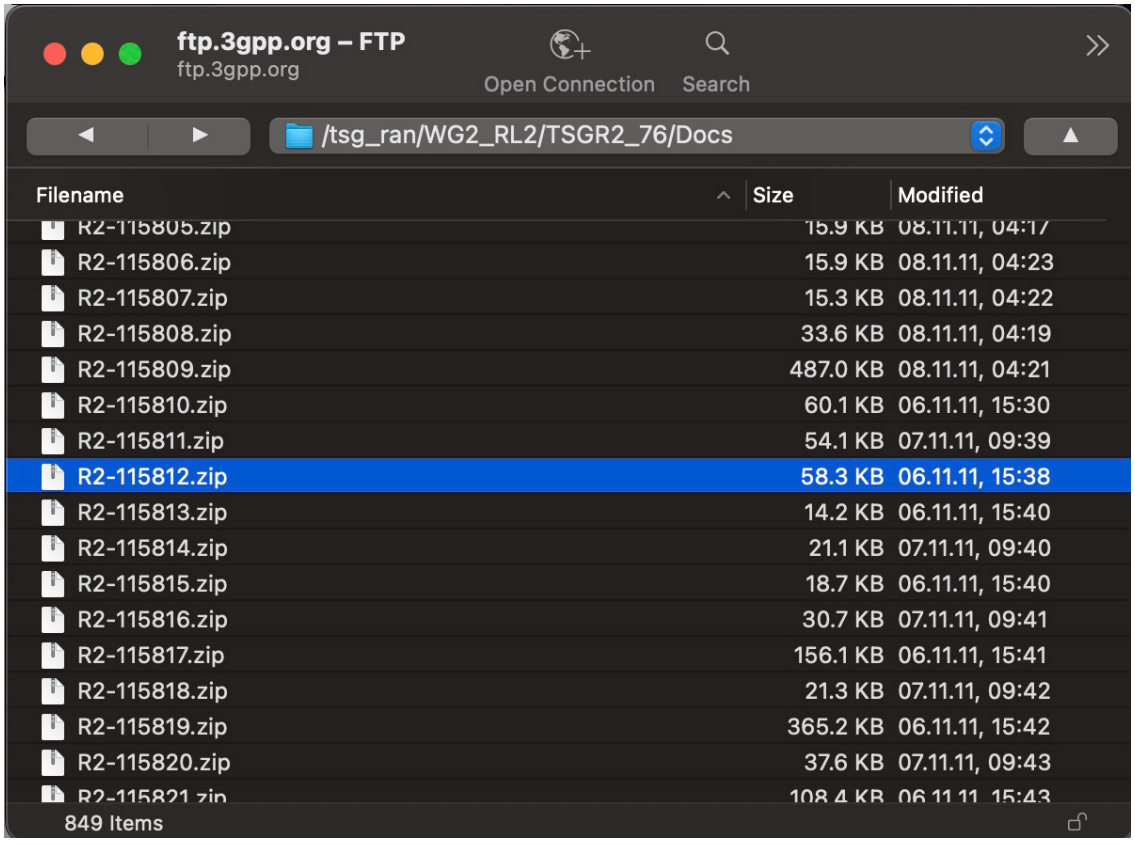
49. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1007 as a true and correct copy of 3GPP TDoc R2-115812, which represents a 3GPP document with the title "Signalling for TA group configuration" that was authored by Potevio.

50. On its face, R2-115812 refers to the RAN WG2 meeting #76 held on November 14-18, 2011, in San Francisco, USA. The document header wrongly shows the year 2010, however, as shown further below the meeting was held in 2011. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that R2-115812 was available either prior to or during or shortly after that meeting to all attending 3GPP members and to the general public.

51. The public availability of the document is confirmed by the date stamp, November 6, 2011, shown on the historic 3GPP FTP server for the

IPR2025-00720, OnePlus Ex. 1004
Page 24 of 700

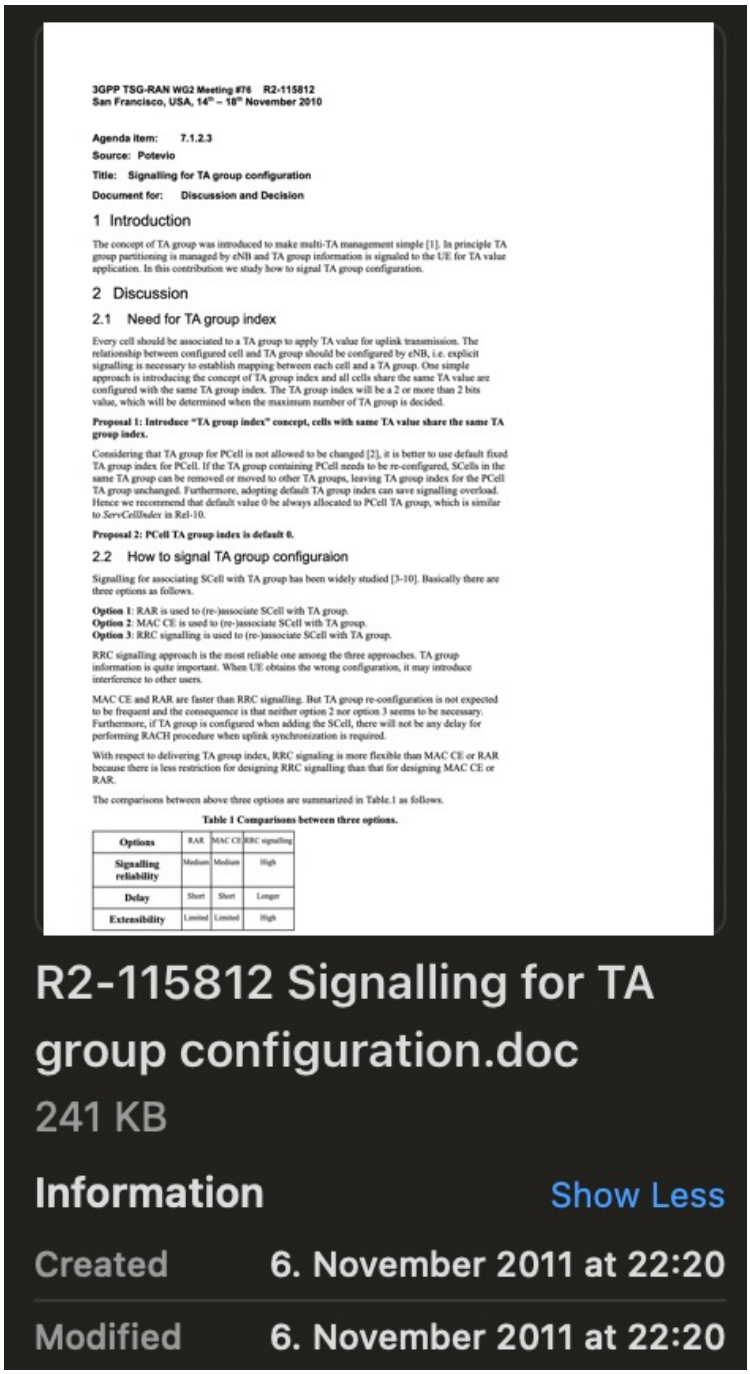
corresponding downloadable file ("R2-115812.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20140327052333/http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_76/docs/. This information is also shown on the date stamp for the present-day listing of the same document on the 3GPP FTP server at https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_76/docs as shown in the screenshot below:



52. 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.

53. In addition, metadata information for the downloaded and extracted TDoc file states a last Modified date of "6. November 2011," as shown in the screenshot below.

IPR2025-00720, OnePlus Ex. 1004
Page 26 of 700



3GPP TSG-RAN WG2 Meeting #76 R2-115812
San Francisco, USA, 14th – 18th November 2010

Agenda item: 7.1.2.3
Source: Potevio
Title: Signalling for TA group configuration
Document for: Discussion and Decision

1 Introduction

The concept of TA group was introduced to make multi-TA management simple [1]. In principle TA group partitioning is managed by eNB and TA group information is signaled to the UE for TA value application. In this contribution we study how to signal TA group configuration.

2 Discussion

2.1 Need for TA group index

Every cell should be associated to a TA group to apply TA value for uplink transmission. The relationship between configured cell and TA group should be configured by eNB, i.e. explicit signalling is necessary to establish mapping between each cell and a TA group. One simple approach is introducing the concept of TA group index and all cells share the same TA value are configured with the same TA group index. The TA group index will be a 2 or more than 2 bits value, which will be determined when the maximum number of TA group is decided.

Proposal 1: Introduce "TA group index" concept, cells with same TA value share the same TA group index.

Considering that TA group for PCell is not allowed to be changed [2], it is better to use default fixed TA group index for PCell. If the TA group containing PCell needs to be re-configured, SCells in the same TA group can be removed or moved to other TA groups, leaving TA group index for the PCell TA group unchanged. Furthermore, adopting default TA group index can save signalling overload. Hence we recommend that default value 0 be always allocated to PCell TA group, which is similar to *ServCellIndex* in Rel-10.

Proposal 2: PCell TA group index is default 0.

2.2 How to signal TA group configuraion

Signalling for associating SCell with TA group has been widely studied [3-10]. Basically there are three options as follows.

Option 1: RAR is used to (re-)associate SCell with TA group.
Option 2: MAC CE is used to (re-)associate SCell with TA group.
Option 3: RRC signalling is used to (re-)associate SCell with TA group.

RRC signalling approach is the most reliable one among the three approaches. TA group information is quite important. When UE obtains the wrong configuration, it may introduce interference to other users.

MAC CE and RAR are faster than RRC signalling. But TA group re-configuration is not expected to be frequent and the consequence is that neither option 2 nor option 3 seems to be necessary. Furthermore, if TA group is configured when adding the SCell, there will not be any delay for performing RACH procedure when uplink synchronization is required.

With respect to delivering TA group index, RRC signaling is more flexible than MAC CE or RAR because there is less restriction for designing RRC signalling than that for designing MAC CE or RAR.

The comparisons between above three options are summarized in Table.1 as follows.

Table 1 Comparisons between three options.

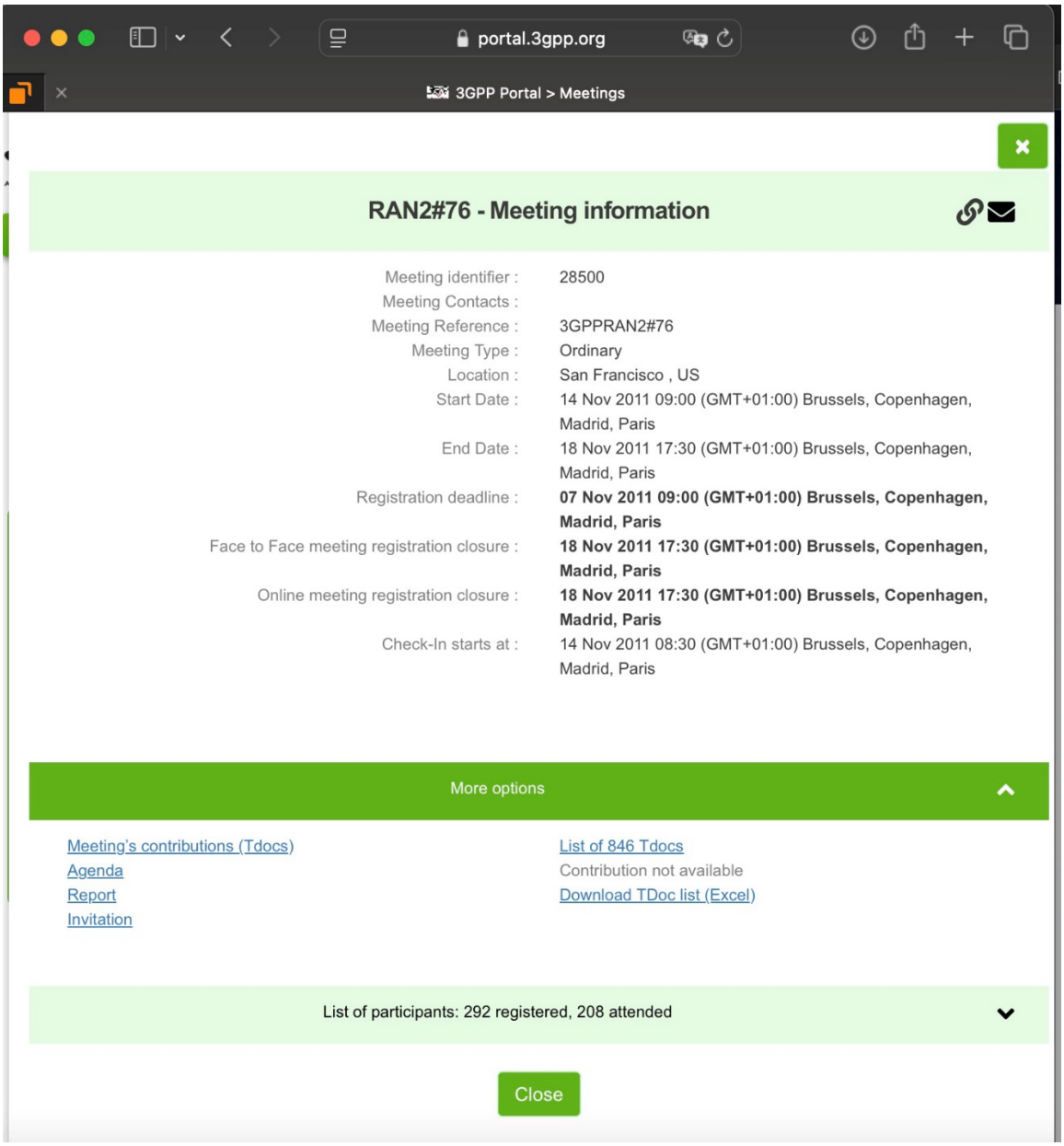
Options	RAR	MAC CE	RRC signalling
Signalling reliability	Medium	Medium	High
Delay	Short	Short	Longer
Extensibility	Limited	Limited	High

R2-115812 Signalling for TA group configuration.doc
241 KB
Information Show Less
Created 6. November 2011 at 22:20
Modified 6. November 2011 at 22:20

54. This last modified date is consistent with the November 6, 2011, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

55. The final meeting report of the RAN WG2 meeting #76 held on November 14-18, 2011, in San Francisco, USA, has assigned the TDoc number R2-120915 and 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 208 individuals (out of 292 registered participants). Exhibit 1008 is a true and accurate copy of the participant list from the RAN WG2 meeting #76, as included in the meeting report's zip file.

IPR2025-00720, OnePlus Ex. 1004
Page 28 of 700



56. The meeting report mentions R2-115812 on page 48 which clearly indicates that the document was registered for this meeting:

R2-115791 Signaling for TAG configuration; CATT; Disc;
R2-115812 Signalling for TA group configuration; Potevio; Disc;
R2-116181 TA group management; Alcatel-Lucent, Alcatel-Lucent S

57. 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]. R2-115812 is listed in row 155 which is another indicator that the document was registered for the meeting:

	Uploaded	status	Late	Tdoc	Title	Source
155	Yes	not treated		R2-115812	Signalling for TA group configuration	Potevio

58. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, Ex. 1007 is an authentic copy of 3GPP TDoc R2-115812 that was uploaded and made available via the 3GPP FTP server to the general public by November 6, 2011, at the latest.

2. TDoc R2-120218 ("Sharp")

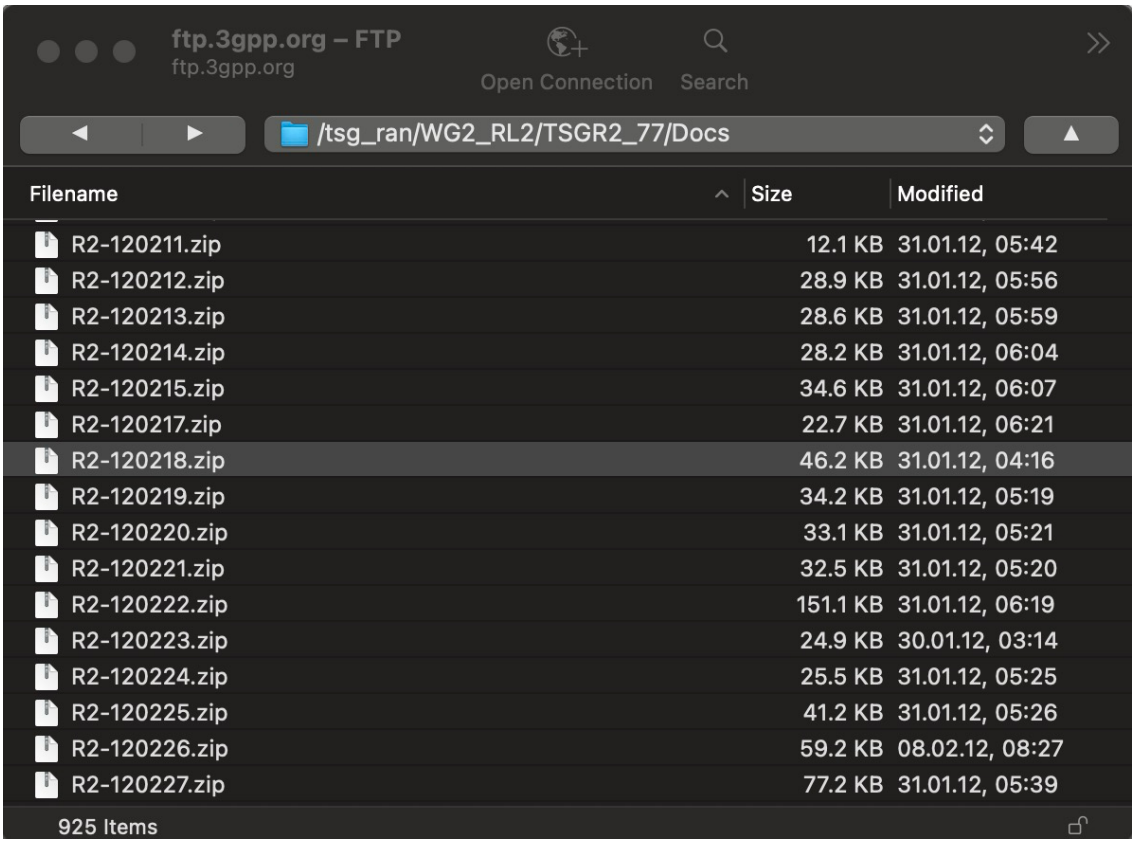
59. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1006 as a true and correct copy of 3GPP TDoc R2-120218, which represents a 3GPP document with the title "TA group handling". The document was authored by Sharp and discusses the handling of a TA group in a multi-TA scenario.

[3] Given the size of the document list, the Appendix only includes the columns relevant for this declaration: Uploaded, status, Late, Tdoc, Title, Source.

IPR2025-00720, OnePlus Ex. 1004
Page 30 of 700

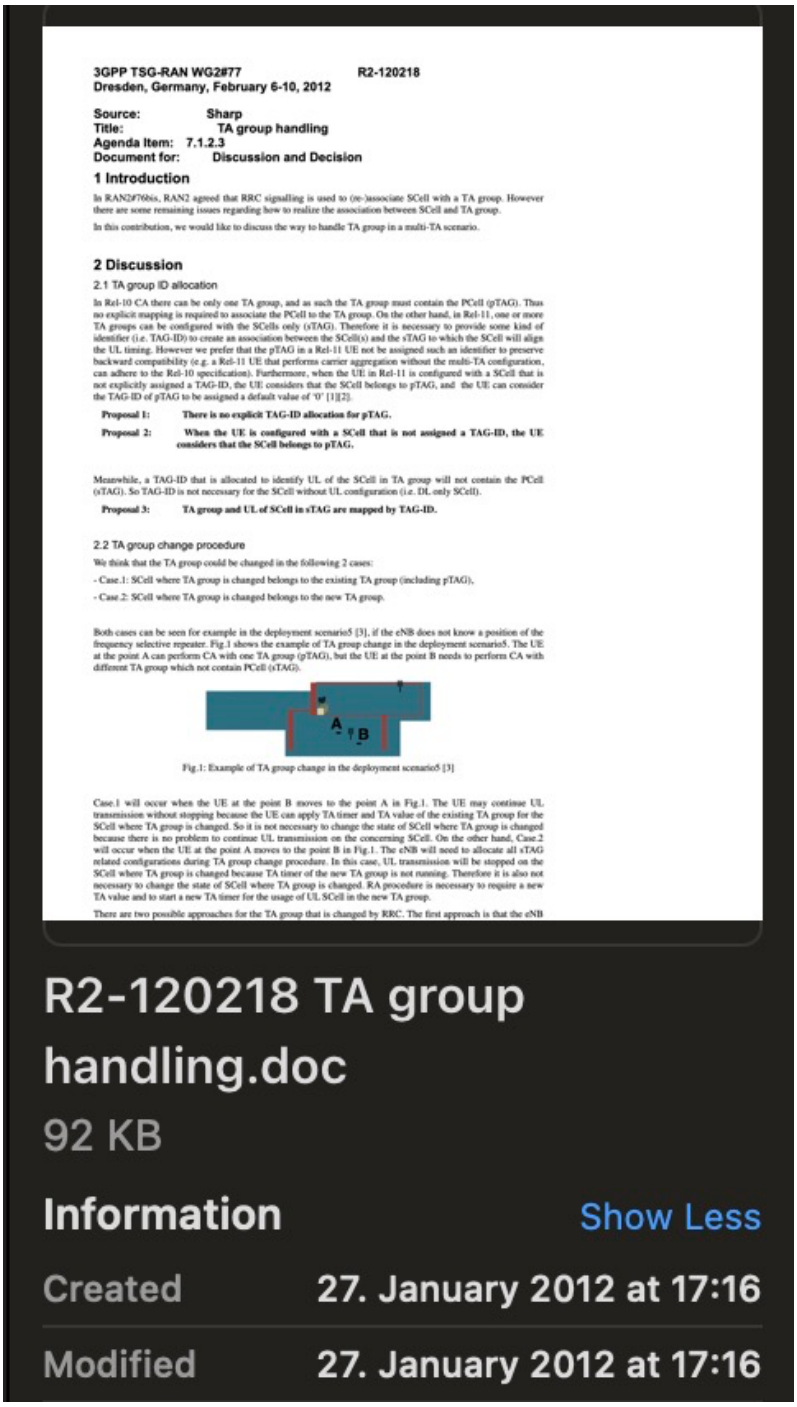
60. On its face, R2-120218 refers to the RAN WG2 meeting #77 held on February 6-10, 2012, in Dresden, Germany. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that R2-120218 was available either prior to or during or shortly after that meeting to all attending 3GPP members and to the general public.

61. The public availability of the document is confirmed by the date stamp, January 31, 2012, shown on the historic 3GPP FTP server for the corresponding downloadable file ("R2-120218.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20140327063746/http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_77/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_77/docs as shown in the screenshot below:



62. 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.

63. In addition, metadata information for the downloaded and extracted TDoc file states a last Modified date of "27. January 2012," as shown in the screenshot below.



3GPP TSG-RAN WG2#77 R2-120218
Dresden, Germany, February 6-10, 2012

Source: Sharp
Title: TA group handling
Agenda Item: 7.1.2.3
Document for: Discussion and Decision

1 Introduction

In RAN2#76bis, RAN2 agreed that RRC signalling is used to (re-)associate SCell with a TA group. However there are some remaining issues regarding how to realize the association between SCell and TA group.

In this contribution, we would like to discuss the way to handle TA group in a multi-TA scenario.

2 Discussion

2.1 TA group ID allocation

In Rel-10 CA there can be only one TA group, and as such the TA group must contain the PCell (pTAG). Thus no explicit mapping is required to associate the PCell to the TA group. On the other hand, in Rel-11, one or more TA groups can be configured with the SCells only (sTAG). Therefore it is necessary to provide some kind of identifier (i.e. TAG-ID) to create an association between the SCell(s) and the sTAG to which the SCell will align the UL timing. However we prefer that the pTAG in a Rel-11 UE not be assigned such an identifier to preserve backward compatibility (e.g. a Rel-11 UE that performs carrier aggregation without the multi-TA configuration, can adhere to the Rel-10 specification). Furthermore, when the UE in Rel-11 is configured with a SCell that is not explicitly assigned a TAG-ID, the UE considers that the SCell belongs to pTAG, and the UE can consider the TAG-ID of pTAG to be assigned a default value of '0' [1][2].

Proposal 1: There is no explicit TAG-ID allocation for pTAG.

Proposal 2: When the UE is configured with a SCell that is not assigned a TAG-ID, the UE considers that the SCell belongs to pTAG.

Meanwhile, a TAG-ID that is allocated to identify UL of the SCell in TA group will not contain the PCell (sTAG). So TAG-ID is not necessary for the SCell without UL configuration (i.e. DL only SCell).

Proposal 3: TA group and UL of SCell in sTAG are mapped by TAG-ID.

2.2 TA group change procedure

We think that the TA group could be changed in the following 2 cases:

- Case.1: SCell where TA group is changed belongs to the existing TA group (including pTAG),
- Case.2: SCell where TA group is changed belongs to the new TA group.

Both cases can be seen for example in the deployment scenario5 [3], if the eNB does not know a position of the frequency selective repeater. Fig.1 shows the example of TA group change in the deployment scenario5. The UE at the point A can perform CA with one TA group (pTAG), but the UE at the point B needs to perform CA with different TA group which not contain PCell (sTAG).

Fig.1: Example of TA group change in the deployment scenario5 [3]

Case.1 will occur when the UE at the point B moves to the point A in Fig.1. The UE may continue UL transmission without stopping because the UE can apply TA timer and TA value of the existing TA group for the SCell where TA group is changed. So it is not necessary to change the state of SCell where TA group is changed because there is no problem to continue UL transmission on the concerning SCell. On the other hand, Case.2 will occur when the UE at the point A moves to the point B in Fig.1. The eNB will need to allocate all sTAG related configurations during TA group change procedure. In this case, UL transmission will be stopped on the SCell where TA group is changed because TA timer of the new TA group is not running. Therefore it is also not necessary to change the state of SCell where TA group is changed. RA procedure is necessary to require a new TA value and to start a new TA timer for the usage of UL SCell in the new TA group.

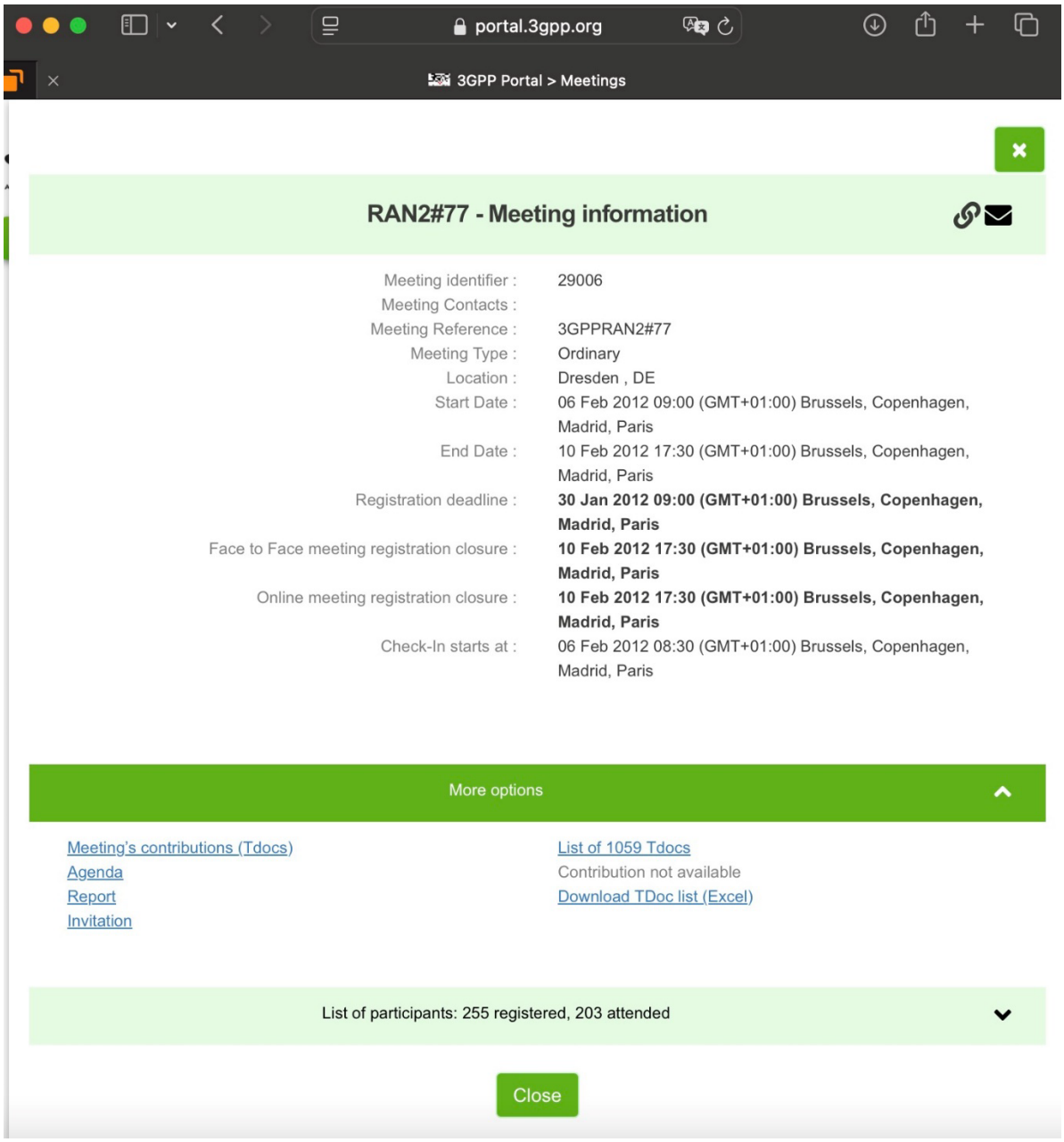
There are two possible approaches for the TA group that is changed by RRC. The first approach is that the eNB

R2-120218 TA group handling.doc
92 KB
Information Show Less
Created 27. January 2012 at 17:16
Modified 27. January 2012 at 17:16

64. This last modified date is consistent with the January 31, 2012, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly (in this case 2 working days) after completing them.

65. The final meeting report of the RAN WG2 meeting #77 held on February 6-10, 2012, in Dresden, Germany, has assigned the TDoc number R2-121973 and can be found in Appendix E. According to the 3GPP website at https://portal.3gpp.org/Meetings.aspx#/ which is shown by the screenshot below, that meeting was attended by 203 individuals (out of 255 registered participants). Exhibit 1018 is a true and accurate copy of the participant list from the RAN WG2 meeting #77, as included in the meeting report's zip file.

IPR2025-00720, OnePlus Ex. 1004
Page 34 of 700



66. The meeting report mentions R2-120218 on page 165 which clearly indicates that the document was registered for this meeting:

R2-120218 TA group handling Sharp Disc (moved from 7.1.2.3)

67. Furthermore, the meeting report includes in the zip file the meeting's document list of which an excerpt can be found in Appendix F[4]. R2-120218 is listed in row 220 which is another indicator that the document was registered for the meeting:

	Uploaded	status	Late	Tdoc	Title	Source
220	Yes	not treated		R2-120218	TA group handling	Sharp

68. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, Ex. 1006 is an authentic copy of 3GPP TDoc R2-120218 that was uploaded and made available via the 3GPP FTP server to the general public by January 31, 2012, at the latest.

3. TDoc R2-106856 ("Samsung")

69. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1021 as a true and correct copy of 3GPP TDoc R2-106856, which represents a 3GPP Change Request (CR) with the title "Introduction of Carrier Aggregation and UL/ DL MIMO". The document was authored by Samsung and proposes several additions and changes related to the introduction of carrier aggregation and MIMO.

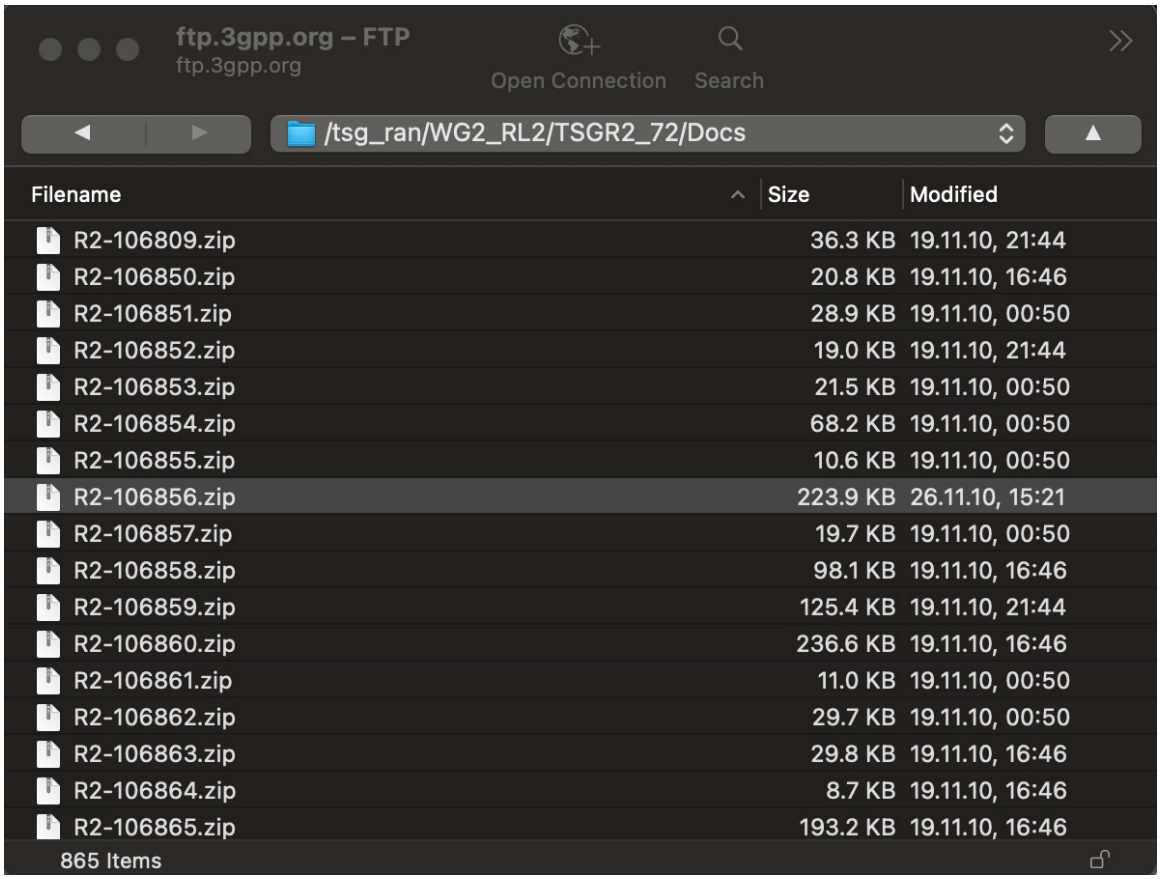
[4] Given the size of the document list, the Appendix only includes the columns relevant for this declaration: Uploaded, status, Late, Tdoc, Title, Source.

IPR2025-00720, OnePlus Ex. 1004
Page 36 of 700

70. On its face, R2-106856 refers to the RAN WG2 meeting #72 held on November 15-19, 2010, in Jacksonville, US. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that R2-106856 was available either prior to or during or shortly after that meeting to all attending 3GPP members and to the general public.

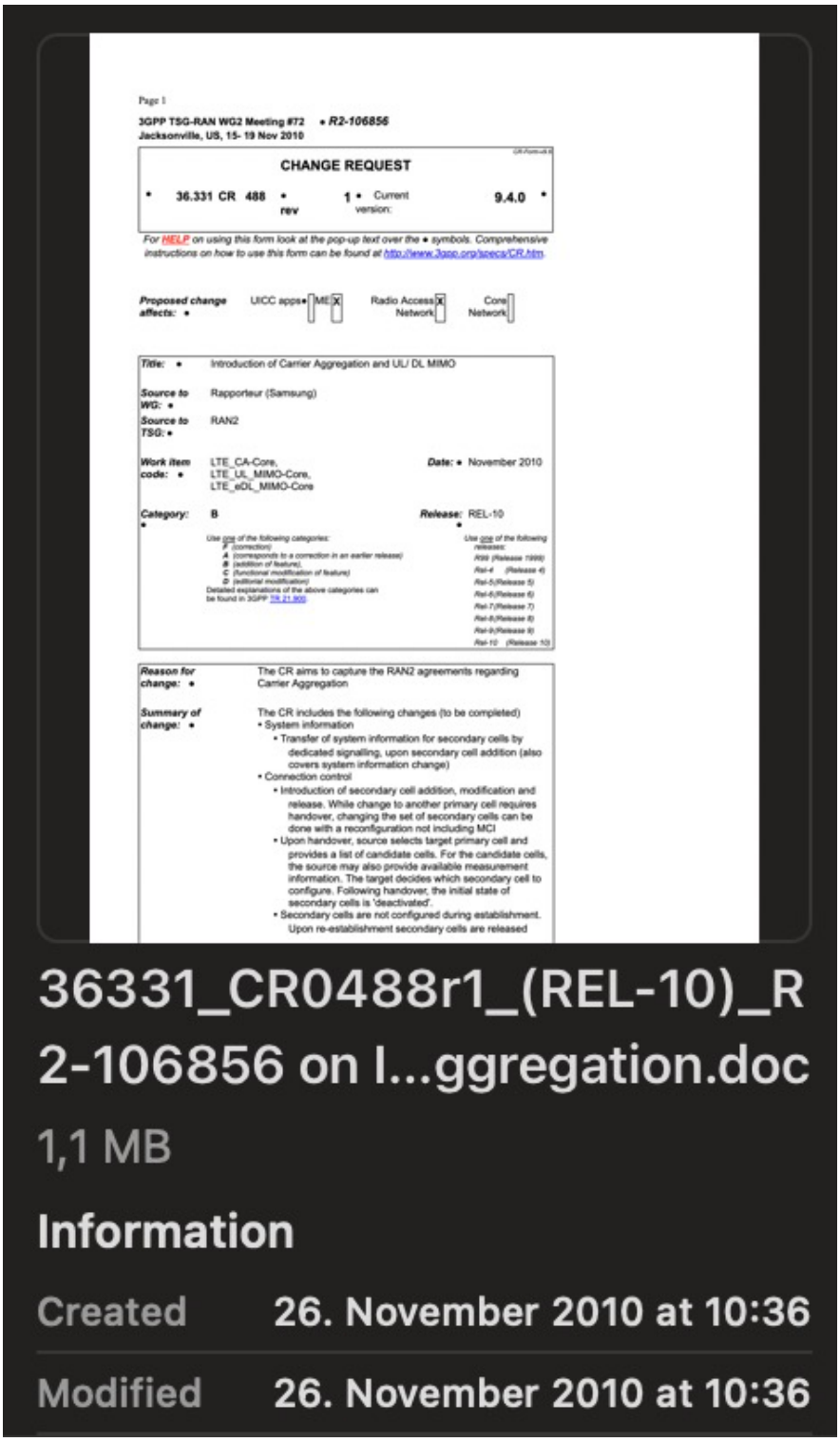
71. The public availability of the document is confirmed by the date stamp, November 26, 2010, shown on the historic 3GPP FTP server for the corresponding downloadable file ("R2-106856.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20140327061840/http://3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_72/Docs/. 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_72/docs as shown in the screenshot below:

IPR2025-00720, OnePlus Ex. 1004
Page 37 of 700



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 "26. November 2010," as shown in the screenshot below.



Page 1

3GPP TSG-RAN WG2 Meeting #72 • *R2-106856*
Jacksonville, US, 15- 19 Nov 2010

CHANGE REQUEST

*	36.331	CR	488	•	rev	1	•	Current version:	9.4.0	*

For HELP on using this form look at the pop-up text over the • symbols. Comprehensive instructions on how to use this form can be found at http://www.3gpp.org/specs/CR.htm.

Proposed change affects: • UICC apps• [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title: •	Introduction of Carrier Aggregation and UL/ DL MIMO
Source to WG: •	Rapporteur (Samsung)
Source to TSG: •	RAN2
Work item code: •	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core — **Date:** • November 2010
Category: •	B — **Release:** • REL-10

Use one of the following categories:
F (correction)
A (corresponds to a correction in an earlier release)
B (addition of feature),
C (functional modification of feature)
D (editorial modification)
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5(Release 5)
Rel-6(Release 6)
Rel-7(Release 7)
Rel-8(Release 8)
Rel-9(Release 9)
Rel-10 (Release 10)

Reason for change: •	The CR aims to capture the RAN2 agreements regarding Carrier Aggregation
Summary of change: •	The CR includes the following changes (to be completed) • System information • Transfer of system information for secondary cells by dedicated signalling, upon secondary cell addition (also covers system information change) • Connection control • Introduction of secondary cell addition, modification and release. While change to another primary cell requires handover, changing the set of secondary cells can be done with a reconfiguration not including MCI • Upon handover, source selects target primary cell and provides a list of candidate cells. For the candidate cells, the source may also provide available measurement information. The target decides which secondary cell to configure. Following handover, the initial state of secondary cells is 'deactivated'. • Secondary cells are not configured during establishment. Upon re-establishment secondary cells are released

36331_CR0488r1_(REL-10)_R2-106856 on l...ggregation.doc

1,1 MB

Information

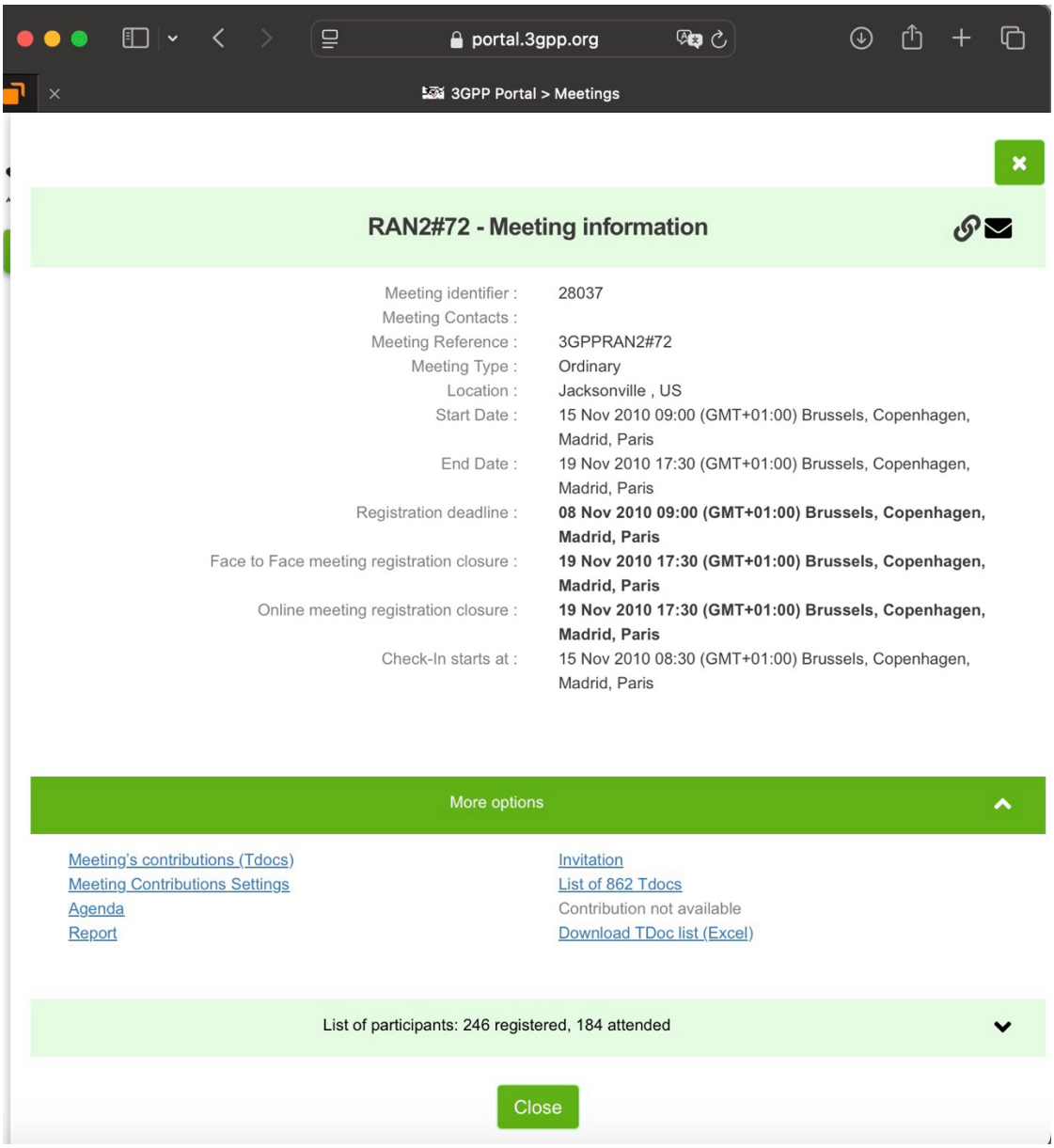
Created 26. November 2010 at 10:36

Modified 26. November 2010 at 10:36

74. This last modified date is consistent with the November 26, 2010, 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 #72 held on November 15-19, 2010, in Jacksonville, US, has assigned the TDoc number R2-110679 and 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 184 individuals (out of 246 registered participants).

IPR2025-00720, OnePlus Ex. 1004
Page 40 of 700



76. The meeting report mentions R2-106856 on page 8, 39, 40, 44, 45, 155, and 159. Below is an excerpt of page 40:

7.1.3.1 Running RRC CR

Rapporteur shall submit in principle agreed 36.331 CR, as well as any further non-contentious clarifications/corrections under this agenda item. Other companies can also submit non-contentious corrections to the 36.331 CR under this agenda item.

In principle agreed CR

R2-106147: Introduction of Carrier Aggregation Rapporteur (Samsung) CR 36.331 0488 - B related to email discussion [71b#07] REL-10 LTE_CA-Core
=> Agreed to be used as baseline for further work
=> Will see update including decision from this meeting in R2-106856. There is a draft available in the draft inbox. Will go for email approval up to thursday **[EMAIL DISC Samsung] [72#02]**
(All agreed 36.331 stage-3 changes will be included in stage-3 CR.)

77. Furthermore, the meeting report includes in the zip file the meeting's document list of which an excerpt can be found in Appendix H[5]. R2-106856 is listed in row 819 and is tagged as "agreed":

	B	C	D	E	F	G	M
	Uploaded	**status**	**Late**	**Tdoc**	**Title**	**Source**	**further information**
819	Yes	agreed		R2-106856	Introduction of Carrier Aggregation and UL/ DL MIMO	Rapporteur (Samsung)	captures additional agreements of RAN2 #72, e.g. of R2-106438, R2-106207, R2-106211 , R2-106439, R2-106456, R2-106457, R2-106329, R2-106878, R2-106877, R2-106857; email discussion [72#02]

78. Furthermore, the document was distributed via the public 3GPP_TSG_RAN_WG2 email exploder on November 26, 2010, as shown in Appendix I. Around that time, the 3GPP_TSG_RAN_WG2 email exploder had around 1019 subscribers as can be seen at https://web.archive.org/web/20100326093131/http://list.etsi.org:80/.

[5] Given the size of the document list, the Appendix only includes the columns relevant for this declaration: Uploaded, status, Late, Tdoc, Title, Source.

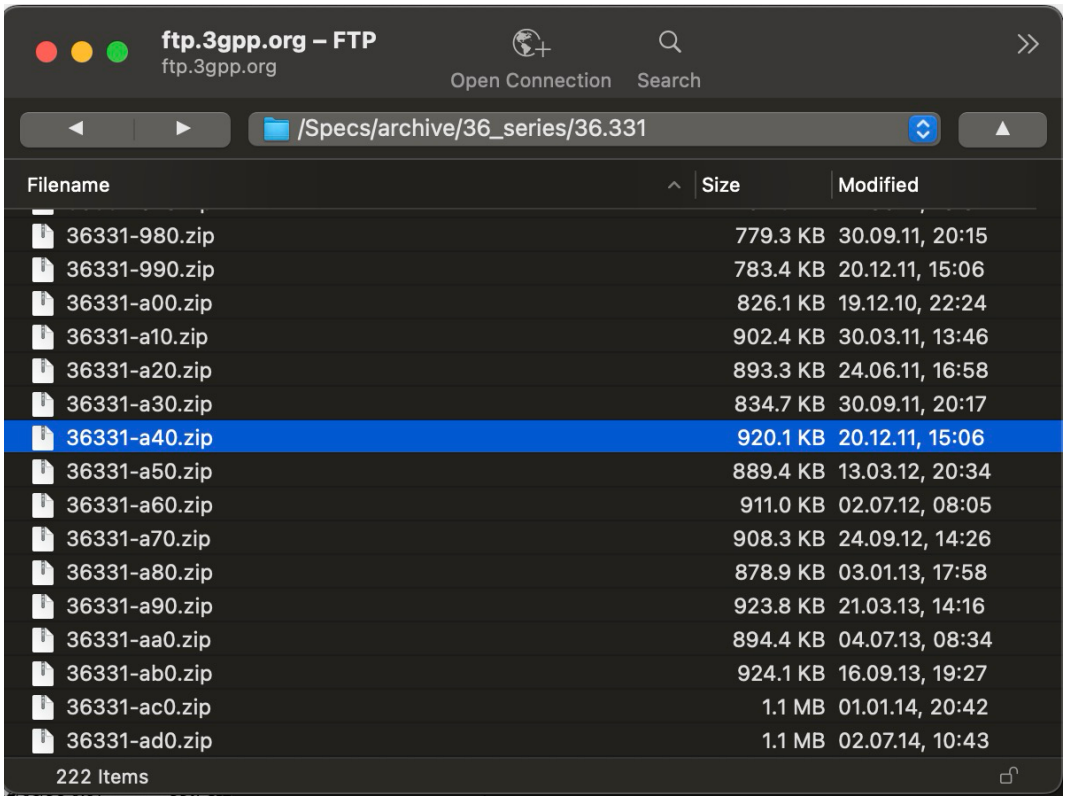
79. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, Ex. 1021 is an authentic copy of 3GPP TDoc R2-106856 that was uploaded and made available via the 3GPP FTP server to the general public by November 26, 2010, at the latest.

4. TS 36.331 V10.4.0

80. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1005 as a true and correct copy of version 10.4.0 of technical specification 3GPP TS 36.331 ("3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification (Release 10)"), which shows on its cover page "2011-12" as the year (2011) and month (December) during which this document was released by 3GPP..

81. The document was published and freely available on 3GPP's ftp server by December 20, 2011. This is confirmed by the date stamp shown on the historic 3GPP ftp server for the corresponding downloadable file ("36331-a40.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20140621152924/http://www.3gpp.org/ftp/Specs/archive/36_series/36.331. 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/36_series/36.331, as shown by the screenshot below:



82. In addition, metadata information for the downloaded and extracted specification file states a last Modified date of "20. Dec 2011", as shown in the screenshot below:

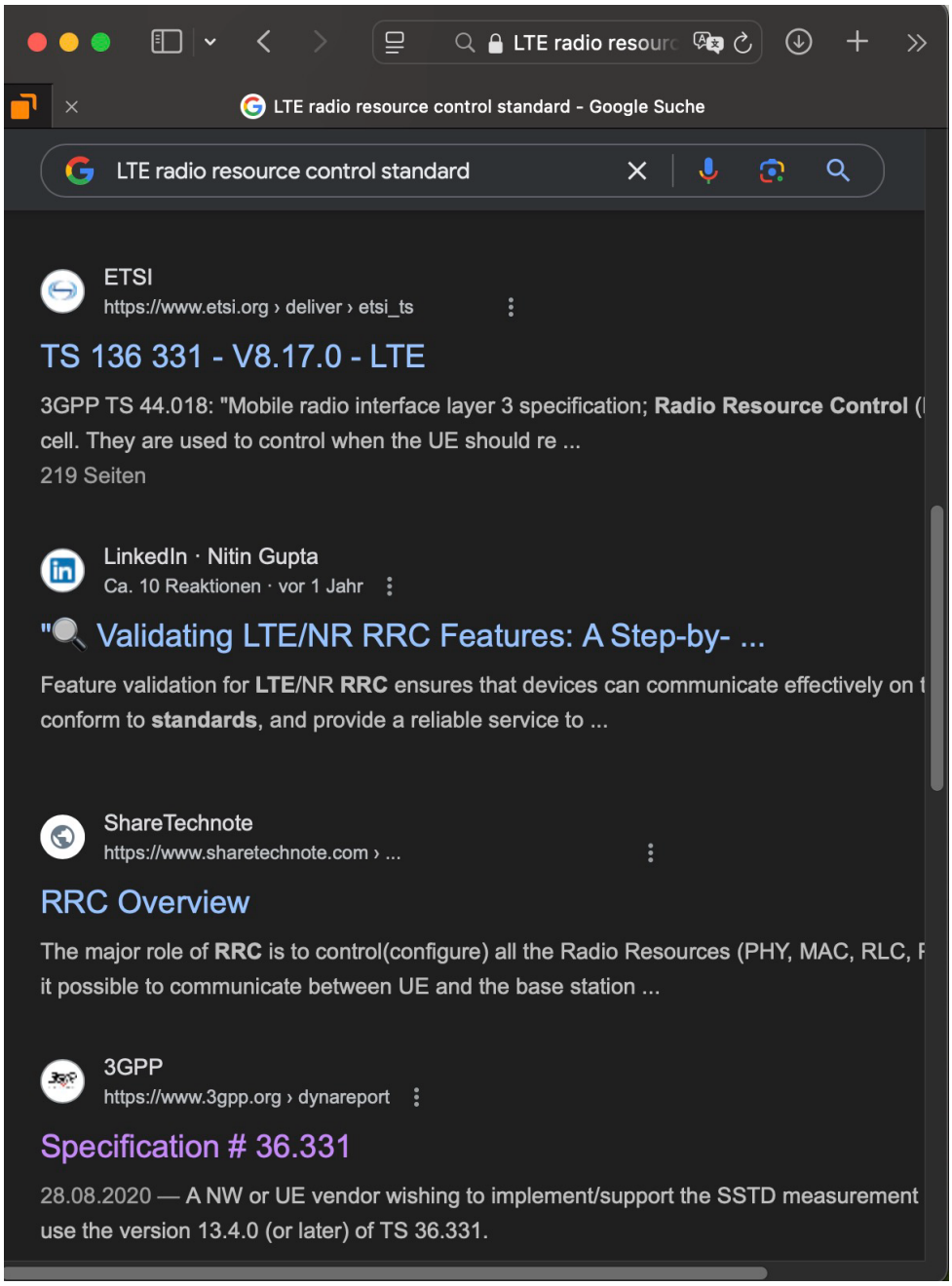
IPR2025-00720, OnePlus Ex. 1004
Page 44 of 700



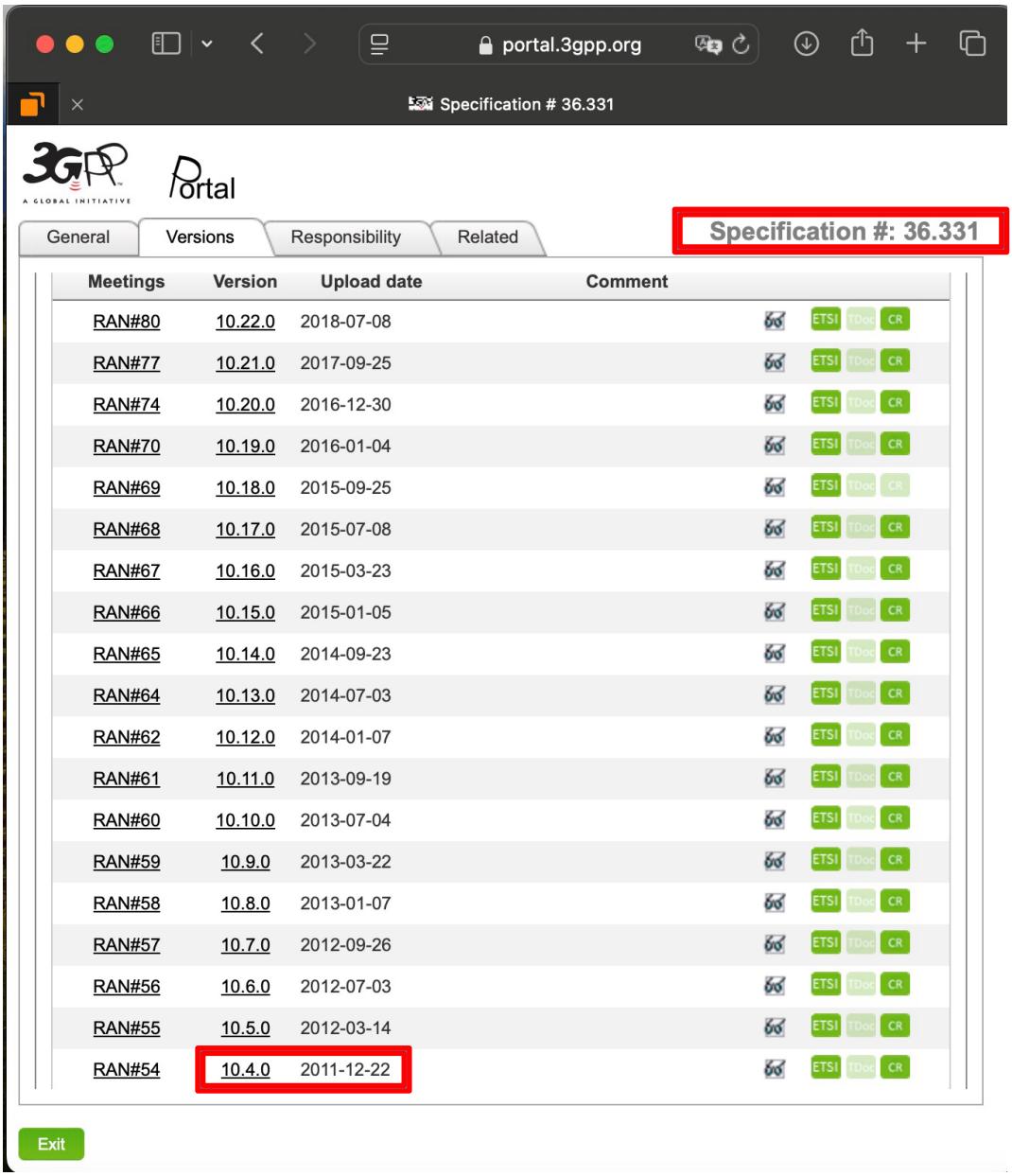
83. This last modified date is well aligned with the December 20, 2011, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

84. 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 "LTE radio resource control standard" provides the TS number "36.331" as one of the top results as can be seen in the screenshot below:

IPR2025-00720, OnePlus Ex. 1004
Page 46 of 700



85. Following the provided search result link "Specification # 36.331" leads to a 3GPP web page offering under the tab "Versions" download links to all versions of TS 36.331 including version 10.4.0, as shown by the screenshot below:



86. 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 36.331, including version 10.4.0, for download.

87. The above search was performed at the time of writing this report. According to my personal experience, in December 2011 or around that timeframe it would have been similarly straightforward to locate a path to download version 10.4.0 of TS 36.331.

88. By December 2011, in addition to a possible internet search, any interested person would have been able to locate TS 36.331 V10.4.0 via the 3GPP website in a number of ways. As one example, the 3GPP home page as of February 2011 provided a link to specifications as can be seen below[6]:



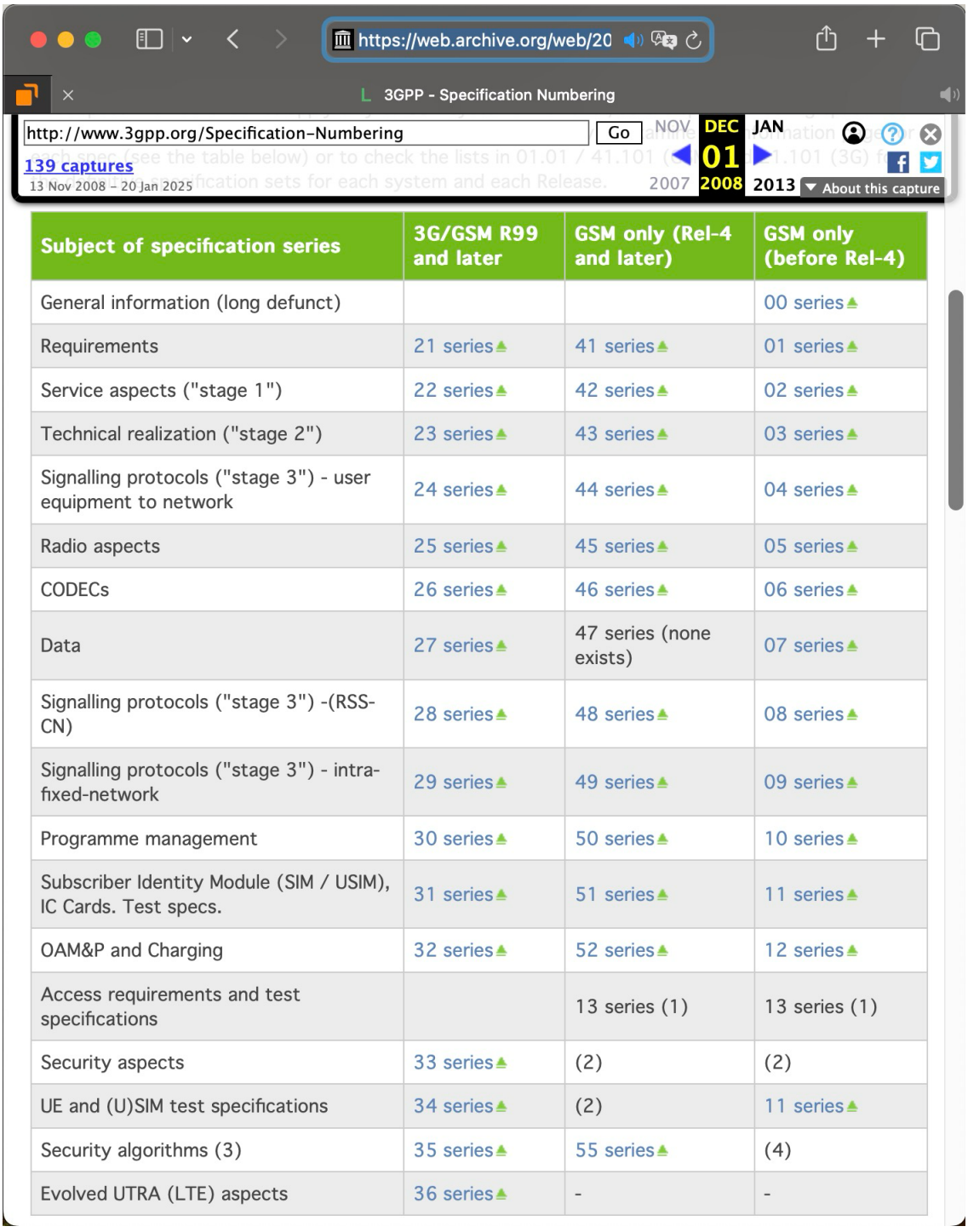
[6] https://web.archive.org/web/20110211204835/http://3gpp.org/

89. For example, the subjects of the individual specification series for the GSM (2G), 3G and LTE (4G) standards were explained on 3GPP's website by clicking on the "Specifications Numbering" link from the "Specifications" menu on the 3GPP home page identified above[7], as shown below:[8]

[7] The "Specifications Numbering" link from the recorded February 11, 2011, website is broken, however, the "Specifications Numbering" website can be viewed in earlier records from the Internet Archive as the one provided below.

[8] https://web.archive.org/web/20081201021150/http://www.3gpp.org:80/Specification-Numbering

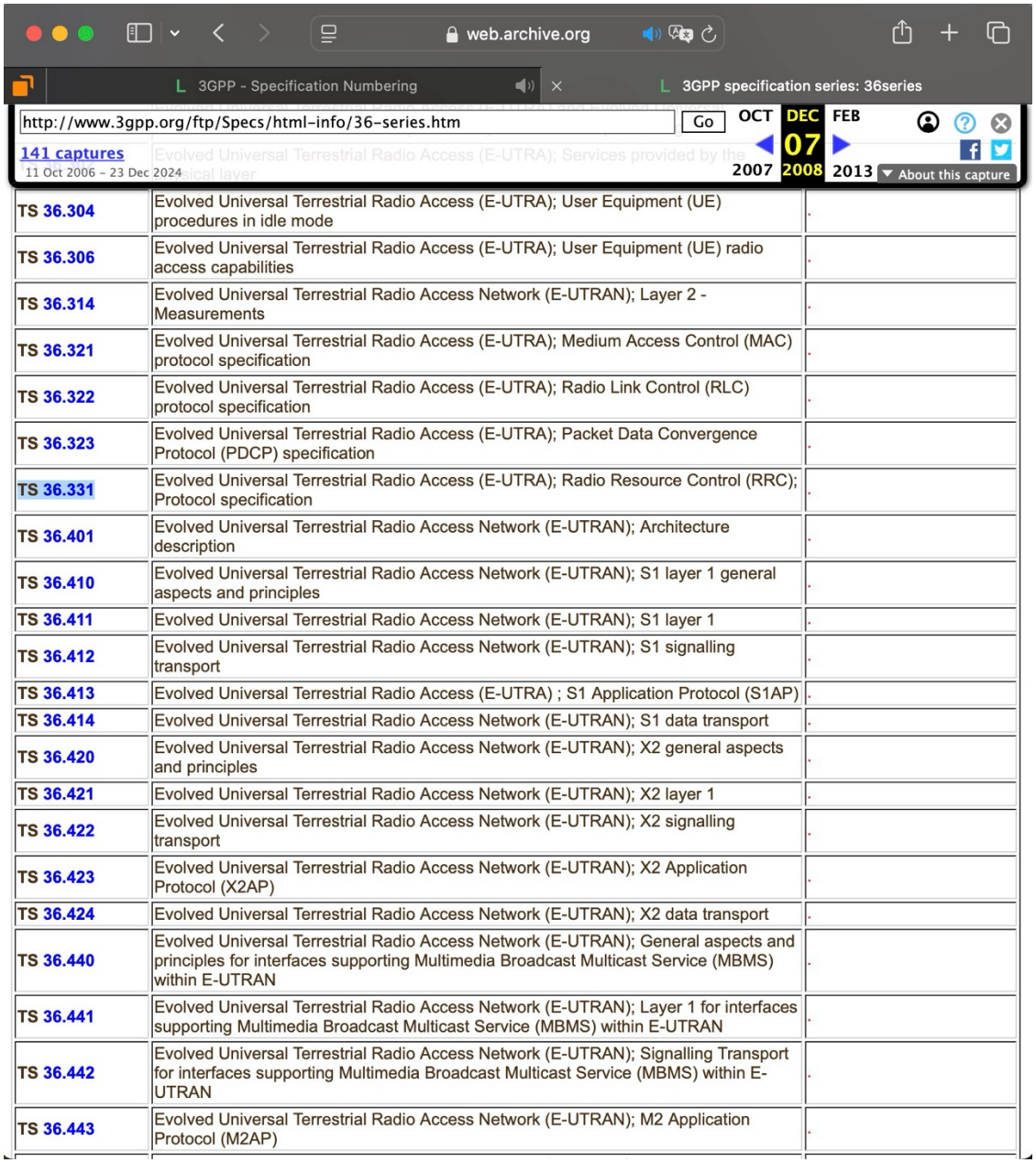
IPR2025-00720, OnePlus Ex. 1004
Page 50 of 700



Subject of specification series	3G/GSM R99 and later	GSM only (Rel-4 and later)	GSM only (before Rel-4)
General information (long defunct)			00 series
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)	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)
Evolved UTRA (LTE) aspects	36 series	-	-

90. For instance, the Evolved UTRA (LTE) aspects are covered in the "36 series," as shown above, and are further subdivided into separate sections or

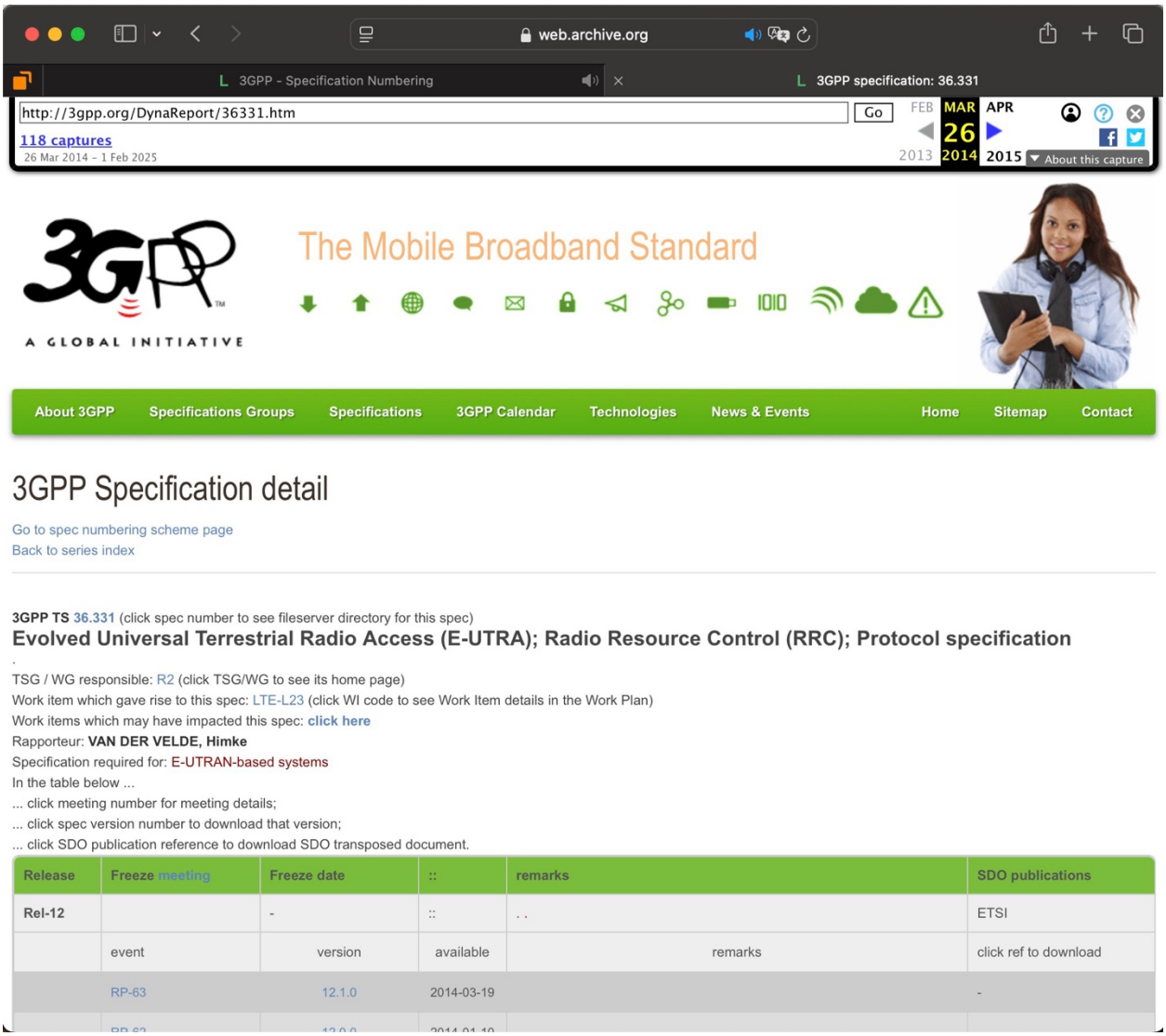
specifications. Following the "36 series" link led to a website[9] listing all the 36-series specifications as can be seen below:



TS 36.304	Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) procedures in idle mode	
TS 36.306	Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio access capabilities	
TS 36.314	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Layer 2 - Measurements	
TS 36.321	Evolved Universal Terrestrial Radio Access (E-UTRA); Medium Access Control (MAC) protocol specification	
TS 36.322	Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Link Control (RLC) protocol specification	
TS 36.323	Evolved Universal Terrestrial Radio Access (E-UTRA); Packet Data Convergence Protocol (PDCP) specification	
TS 36.331	Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification	
TS 36.401	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Architecture description	
TS 36.410	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 layer 1 general aspects and principles	
TS 36.411	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 layer 1	
TS 36.412	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 signalling transport	
TS 36.413	Evolved Universal Terrestrial Radio Access (E-UTRA) ; S1 Application Protocol (S1AP)	
TS 36.414	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 data transport	
TS 36.420	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 general aspects and principles	
TS 36.421	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 layer 1	
TS 36.422	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 signalling transport	
TS 36.423	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 Application Protocol (X2AP)	
TS 36.424	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 data transport	
TS 36.440	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); General aspects and principles for interfaces supporting Multimedia Broadcast Multicast Service (MBMS) within E-UTRAN	
TS 36.441	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Layer 1 for interfaces supporting Multimedia Broadcast Multicast Service (MBMS) within E-UTRAN	
TS 36.442	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Signalling Transport for interfaces supporting Multimedia Broadcast Multicast Service (MBMS) within E-UTRAN	
TS 36.443	Evolved Universal Terrestrial Radio Access Network (E-UTRAN); M2 Application Protocol (M2AP)	

[9] https://web.archive.org/web/20081207063329/http://www.3gpp.org/ftp/Specs/html-info/36-series.htm

91. A search by the subject matter "radio resource control" or "RRC" would have revealed that TS 36.331 is the relevant specification, and clicking on this TS number would have opened the following website[10] from where it was possible to download all available versions of TS 36.331 including version 10.4.0:



[10] https://web.archive.org/web/20140326134320/http://3gpp.org/DynaReport/36331.htm

Rel-10	SP-51	2011-03-23	::	. .	ETSI
	event	version	available	remarks	click ref to download
	RP-62	10.12.0	2014-01-07		RTS/TSGR-0236331vac0
	RP-61	10.11.0	2013-09-19		RTS/TSGR-0236331vab0
	RP-60	10.10.0	2013-07-04		RTS/TSGR-0236331vaa0
	RP-59	10.9.0	2013-03-22		RTS/TSGR-0236331va90
	RP-58	10.8.0	2013-01-07		RTS/TSGR-0236331va80
	RP-57	10.7.0	2012-09-26		RTS/TSGR-0236331va70
	RP-56	10.6.0	2012-07-03		RTS/TSGR-0236331va60
	RP-55	10.5.0	2012-03-14		RTS/TSGR-0236331va50
	RP-54	10.4.0	2011-12-22		RTS/TSGR-0236331va40
	RP-53	10.3.0	2011-10-03		RTS/TSGR-0236331va30
	RP-52	10.2.0	2011-06-24		RTS/TSGR-0236331va20
	RP-51	10.1.0	2011-03-30		RTS/TSGR-0236331va10
	RP-50	10.0.0	2010-12-21		RTS/TSGR-0236331va00
Rel-9	SP-46	2009-12-10	::	.	ETSI
	event	version	available	remarks	click ref to download
	RP-62	9.17.0	2014-01-07		RTS/TSGR-0236331v9h0

92. The above example illustrates that in 2011 it was straightforward for anyone interested without prior knowledge of the TS number to discover that TS 36.331 related to radio aspects of the LTE standard, specifically radio resource control, and that it was easy to find to download the document. The above example was one of several possible paths to locate TS 36.331 V10.4.0 in 2011.

93. 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 December 20, 2011, at the latest.

V. AVAILABILITY FOR CROSS-EXAMINATION

94. 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

95. 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

96. 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.

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

IPR2025-00720, OnePlus Ex. 1004
Page 55 of 700

Dated: April 28, 2025



Friedhelm Rodermund

IPR2025-00720, OnePlus Ex. 1004
Page 56 of 700

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

IPR2025-00720, OnePlus Ex. 1004
Page 58 of 700

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"*

IPR2025-00720, OnePlus Ex. 1004
Page 59 of 700

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

IPR2025-00720, OnePlus Ex. 1004
Page 60 of 700

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

IPR2025-00720, OnePlus Ex. 1004
Page 67 of 700

Appendix	Description
A	Curriculum Vitae of Friedhelm Rodermund
B	List of Appendices
C	Report of 3GPP TSG RAN WG2 meeting #76, San Francisco, USA, November 14 - 18, 2011
D	Document List of 3GPP TSG RAN WG2 meeting #76
E	Report of 3GPP TSG RAN WG2 meeting #77, Dresden, Germany, February 6 – 10, 2012
F	Document List of 3GPP TSG RAN WG2 meeting #77
G	Report of 3GPP TSG RAN WG2 meeting #72, Jacksonville, USA, November 15-19, 2010
H	Document List of RAN WG2 meeting #72
I	Email sent via 3GPP_TSG_RAN_WG2 email exploder on November 26, 2010, with R2-106856 attached

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

IPR2025-00720, OnePlus Ex. 1004
Page 70 of 700

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"*

IPR2025-00720, OnePlus Ex. 1004
Page 71 of 700

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

IPR2025-00720, OnePlus Ex. 1004
Page 72 of 700

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 #76, San Francisco, USA, November 14 - 18, 2011
D	Document List of 3GPP TSG RAN WG2 meeting #76
E	Report of 3GPP TSG RAN WG2 meeting #77, Dresden, Germany, February 6 – 10, 2012
F	Document List of 3GPP TSG RAN WG2 meeting #77

IPR2025-00720, OnePlus Ex. 1004
Page 80 of 700

Appendix C

TSG-RAN Working Group 2 meeting #77 **R2-120915**
Dresden, Germany, February 6 - 10, 2012

Agenda Item:	2.2
Source:	ETSI MCC
Title:	Report of 3GPP TSG RAN WG2 meeting #76, San Francisco, USA, November 14 - 18, 2011
Document for:	Approval

Report of 3GPP TSG RAN WG2 meeting #76

held in San Francisco, USA November 14 – 18, 2011

IPR2025-00720, OnePlus Ex. 1004
Page 82 of 700

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

http://www.3gpp.org

© 2012, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TTA, TTC).
All rights reserved.

IPR2025-00720, OnePlus Ex. 1004
Page 83 of 700

Contents

Organisation of the meeting 6
Statistics/Executive Summary 6
1 Opening of the meeting 8
1.1 Call for IPR 8
2 General 8
2.1 Proposed Agenda 8
2.2 Minutes of previous meeting 9
2.3 Reporting from other meetings 9
2.4 Other 9
2.4.1 Rapporteur changes 9
2.4.2 Planning 9
3 Incoming liaisons 10
3.1 Joint UMTS/LTE relevance 10
3.2 LTE relevance 12
3.3 UMTS relevance 12
4 UMTS/LTE joint: Rel-10 and earlier releases 13
4.0 In principle agreed CRs 13
4.1 Other 14
5 UMTS/LTE joint: Rel-11 19
5.1 WI: RAN overload control for Machine-Type Communications (RP-111373) 19
5.1.1 EAB mechanism 19
5.1.2 EAB information update 21
5.1.3 EAB modelling 22
5.1.4 Others 23
5.2 WI: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN (RP-111361) 24
5.2.1 QoS Verification 24
5.2.2 Availability of location information 26
5.2.3 Multi-PLMN support 27
5.2.4 Coverage Optimization 27
5.2.5 Other 27
5.3 WI: Other Work/Study Items 28
6 LTE: Release 10 and earlier releases 29
6.1 WI: Carrier aggregation (RP-100661), UL-MIMO, eDL-MIMO 29
6.1.0 In principle agreed CRs 29
6.1.1 Other 29
6.2 WI: Relays (RP-110911) 31
6.3 WI: MBMS enhancements (RP-101244) 31
6.4 WI: Minimisation of Drive Test (RP-100360) 32
6.5 WI: eICIC (RP-100383) 32
6.6 WI: TEI10 and earlier releases 34
6.6.0 In principle agreed CRs 34
6.6.1 Other 35
6.7 WI: Other LTE Rel-10 WIs 43
7 LTE Release 11 43
7.1 WI: Carrier Aggregation Enhancements (RP-111115) 43
7.1.1 General 43
7.1.2 Multiple timing advance 43
7.1.2.1 Timing- and Pathloss Reference 43
7.1.2.2 RACH procedure 46
7.1.2.3 TAT and TA Group handling 47

IPR2025-00720, OnePlus Ex. 1004
Page 84 of 700

7.1.2.4 Other 49
7.1.3 Other 50
7.2 WI: Enhancements for diverse data applications (RP-111372) 50
7.3 WI: Service continuity improvements for MBMS for LTE (RP-111374) 55
7.3.1 General 55
7.3.2 Assistance Information 55
7.3.3 Congestion and Admission Control 57
7.3.4 Other 59
7.4 WI: Network-Based positioning Support for LTE (RP-101446) 60
7.5 WI: Further Enhanced Non CA-based ICIC for LTE (RP-111369) 62
7.6 WI: Signalling and procedure for interference avoidance for in-device coexistence (RP-111355) 63
7.6.1 FDM/DRX Solution 63
7.6.1.1 General 63
7.6.1.2 FDM 65
7.6.1.3 DRX 65
7.6.2 Autonomous denial 67
7.6.3 Other 68
7.7 WI: RAN overload control for Machine-Type Communications 68
7.8 WI: Other Rel-11 WIs 68
7.9 SI: Hetnet mobility enhancements (RP-110709) 69
7.9.1 Calibration Simulations 69
7.9.2 Cell detection performance 70
7.9.3 Mobility state estimation performance 71
7.9.4 Other 72
7.10 SI: Other Rel-11 SIs 73

8 UTRA Release 9 and earlier releases 73
8.1 In principle agreed CRs 73
8.2 Others 75

9 UTRA Release 10 86
9.1 WI: LCR TDD MC-HSUPA (RP-090990) 86
9.1.1 In principle agreed CRs 86
9.1.2 Others 86
9.2 WI: 4C-HSDPA (RP-100991) 87
9.3 WI: RF pattern matching in UMTS (RP-091427) 87
9.4 WI: Minimisation of Drive Test (RP-100360) 87
9.5 WI: ANR for UTRA (RP-100688) 87
9.6 WI: Interfrequency detected set measurements (RP-101015) 87
9.7 WI: TEI10 88
9.7.1 In principle agreed CRs 88
9.7.2 Others 88
9.8 Other UTRA Rel-10 WIs/SIs 95

10 UTRA Release 11 95
10.1 WI: Further enhancements to CELL_FACH (RP-111321) 95
10.1.1 Stand-alone HS-DPCCH 95
10.1.2 DC-HSDPA Operation in CELL_FACH 95
10.1.3 2/10 ms TTI concurrent deployment 95
10.1.4 Fall-back to R99 PRACH 100
10.1.5 Per-HARQ process grants 102
10.1.6 Signalling based Interference control 102
10.1.7 UE battery life improvement and signalling reduction 102
10.1.8 Mobility from CELL_FACH to EUTRA 104
10.1.9 Others 107
10.2 WI: 8C-HSDPA (RP-101419) 107
10.2.1 CRs 108
10.2.2 Others 109
10.3 WI: RAN overload control for Machine-Type Communications (RP-111373) 110
10.4 WI: HSDPA Multiflow Data Transmission (RP-111375) 110
10.4.1 General considerations/issues 111
10.4.2 Interaction and compatibilty with other features 112
10.4.3 Mobility aspects 112

IPR2025-00720, OnePlus Ex. 1004
Page 85 of 700

10.4.4 Intra Node B aggregation 113
10.4.5 Inter Node B aggregation 114
10.4.6 Others 116
10.5 WI: Other Rel-11 WIs 116
10.5.1 ULTD – CL (RP-110374) 116
10.5.2 ULTD – OL (RP-110374) 119
10.5.3 Extending 850 MHz Upper Band (RP-111396) 121
10.5.4 Others 121
10.6 SI: Other Rel-11 SIs 121
10.7 WI: TEI11 122

11 Outgoing LSs and email discussions for UTRA 122
11.1 Agreed outgoing LSs of UTRA session 123
11.2 Email discussions for UTRA 123

12 Left-overs 124
12.1 LTE adhoc session 124
12.2 UMTS 124
12.3 Email Discussions 124

13 Outgoing LS and output to other groups for LTE/joint 125

14 Any other business 126

15 Closing of the meeting 127

Annex A: List of participants 128

Annex B: List of Tdocs 128

Annex C: Incoming liaison statements for TSG RAN WG2 #76 128

Annex D: Outgoing liaison statements of TSG RAN WG2 #76 131

Annex E: List of agreed CRs for RAN #54 132

Annex F: RAN WG2 meeting #76 post processing 143
Email discussions/approvals 143
CRs from other WGs to be agreed/reviewed by RAN2 before RAN #54: 147
Preparation of status reports for SIs and WIs under RAN2 leadership for RAN #53: 147

Annex G: Joint WG ad hocs 150
G.1 Joint WG ad hoc on on Extended Wait Timer, SRVCC capability and vSRVCC 150
G.2 Joint WG ad hoc on EAB requirements 150

Annex H: History 151

IPR2025-00720, OnePlus Ex. 1004
Page 86 of 700

Organisation of the meeting

Meeting:	3GPP TSG RAN WG2 #76	
Meeting location:	San Francisco, USA	
Duration:	Monday 14.11.2011 - Friday 18.11.2011	
Host:	North American Friends of 3GPP (NAF3)	
TSG RAN WG2 Chairman:	Henning Wiemann (Ericsson)	email: henning.wiemann@ericsson.com
TSG RAN WG2 Vice chairman:	Simone Provvedi (Huawei)	email: simone.provvedi@huawei.com
TSG RAN WG2 Vice chairman:	SeungJune Yi (LG Electronics)	email: seungjune.yi@lge.com
TSG RAN WG2 MCC Support:	Joern Krause (ETSI MCC)	email: joern.krause@etsi.org
Email reflector:	3GPP_TSG_RAN_WG2@LIST.ETSI.ORG	
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_76/Docs	
Parallel RAN2 ad hocs:	- UTRA (see agenda items 8-11, Tue - Fri noon): chaired by Simone Provvedi	
Joint ad hocs with other WGs:	- SA2, RAN2, CT1, RAN3 ad hoc on Extended Wait Timer, SRVCC capability and vSRVCC (see Annex G.1, Tue 19:00-21:00)	
	- RAN2, SA2, CT1, SA1 ad hoc on EAB requirements (see Annex G.2, Wed 8:00 - 9:00)	
next meetings:	TSG RAN #54,	06.12. - 09.12.2011 Berlin, Germany
	TSG RAN WG2 #77,	06.02. - 10.02.2012 Dresden, Germany
	TSG RAN #55,	28.02. - 02.03.2012 Xiamen, China
	TSG RAN WG2 #77bis,	26.03. - 30.03.2012 Jeju, Korea

Statistics/Executive Summary

TSG RAN WG2 #76 was held in San Francisco, USA, hosted by the North American Friends of 3GPP (NAF3), co-located with RAN1, RAN3, RAN4, RAN5, SA1, SA2, SA3 LI, SA5, CT1, CT3, CT4 and CT6, 2 weeks before TSG RAN #54. The RAN WG2 meeting was split in a UTRA part (see agenda items 8-11; Tue-Thu, Fri until noon) and a parallel LTE/LTE-Advanced part, with common UMTS/LTE/LTE-Advanced parts on Monday and Friday afternoon. In addition 2 ad hocs with other WGs were held on Tue evening (SA2, RAN2, CT1, RAN3 ad hoc on Extended Wait Timer, SRVCC capability and vSRVCC) and Wed morning (RAN2, SA2, CT1, SA1 ad hoc on EAB requirements).

- 208 participants (registered just before the meeting: 304)
- 900 Tdocs allocated with actually 846 available contributions
- 22 incoming liaison statements (3 for UTRA, 6 for LTE, 13 for joint aspects): 19 LSs were treated
- 13 outgoing liaison statements (3 for UTRA, 5 for LTE, 5 for joint aspects), 1 of them agreed by email
- 25 email discussions scheduled after RAN2 #76 (plus email discussions of RAN2 WI/SI status reports and 13 CRs from RAN3 to RAN2 specifications)
- REL-11 WI Core part: LTE Carrier Aggregation Enhancements (AI 7.1): Agreements are captured in "running/working" 36.300 REL-11 CR R2-116503 which was endorsed by email [76#07] but not submitted to RAN #54.
  Also 1 LS was sent to RAN1: R2-116552 on Parallel transmissions of PRACH and PUSCH/PUCCH/SRS.
- REL-11 WI Core part: LTE RAN Enhancements for Diverse Data Applications (see AI 7.2): TR 36.822 v0.2.0 R2-116559 and an email discussion [76#37] was planned until RAN2 #77 to agree on which evaluations on RRC Signalling and DRX to include in the TR.
- REL-11 WI Core part: Service continuity improvements for MBMS for LTE (see AI 7.3): Agreements are captured in "running/working" 36.300 REL-11 CR R2-116508 which was endorsed by email [76#09] but not provided to RAN #54. Two further email discussions on MBMS Assistant Information [76#38] and MBMS Congestion Handling [76#39], both until RAN2 #77. Also a follow-up LS R2-116526 was sent to SA4 on MBMS assistance information for service continuity.
- REL-11 WI Core Part: Network-Based Positioning Support for LTE (see AI 7.4): Still no consensus about a 36.305 CR. LS answers from RAN1 and RAN4 were received on Fri but could not be treated due to a lack of

IPR2025-00720, OnePlus Ex. 1004
Page 87 of 700

time. A 36.300 CR was technically endorsed in R2-116556 but not provided to RAN #54 due to the open 36.305 CR. Also an additional text proposal to 36.305 was shortly discussed.

- REL-11 RAN1 WI Core part: Further Enhanced Non CA-based ICIC for LTE (see AI 7.5): topic was not treated.
- REL-11 WI Core part: Signaling and procedure for interference avoidance for in-device coexistence (see AI 7.6): Agreements are captured in "running/working" 36.300 REL-11 CR R2-116510 which was endorsed by email [76#10] but not provided to RAN #54.
- REL-11 WI Core Part: Eight carrier HSDPA (see AI 10.2): CR set (REL-11: 25.302, 25.306, 25.308, 25.319, 25.321, 25.331) was agreed and will be provided to RAN #54 for approval. In addition LS R2-116476 on peak rate limitations in CT1 specifications for 8C-HSDPA was sent to CT1 (cc: CT4. RAN3).
- REL-11 WI RAN overload control for Machine-Type Communications (AI 5.1, 7.7, 10.3): Topic was only treated in joint UTRA/LTE session, i.e. AI 5.1. Also a joint session with SA1, SA2 and CT1 on EAB (Extended Access Barring) requirements was held on Wed morning (see Annex G.2 and R2-116549).
- REL-11 WI Core part: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN (AI 5.2): Topic was only treated in joint UTRA/LTE session. Agreements are captured in "running/working" 37.320 REL-11 CR R2-116547 which was endorsed by email [76#06] but not provided to RAN #54.
- REL-11 WI Core part: Uplink Transmit Diversity for HSPA: For CLTD (AI 10.5.1) a REL-11 CR set (25.302, 25.319, 25.306, 25.331) was agreed and provided to RAN #54 for approval.
  For OLTD (AI 10.5.2) a REL-11 CR set (25.319, 25.306, 25.331) was agreed and provided to RAN #54 for approval.
- REL-11 SI Study on HetNet mobility enhancements for LTE (see AI 7.9): TR 36.839 v0.4.0 R2-116545 was agreed by email [76#11]. Additional email discussion [76#20] on HetNet Mobility calibration simulations.
- Also a joint ad hoc with SA2, CT1 and RAN3 was held about the aspects Extended Wait Timer, SRVCC capability and vSRVCC (see AI G.1 and notes R2-116548).
- Among 339 change requests (CRs) in total: 113 agreed (63 for UTRA 25.xxx/34.xxx specs, 48 for LTE 36.xxx specs and 2 for joint 37.xxx specs) and 1 technically endorsed CR will be provided to RAN #54.

Note: The sequence in which the different topics appear in this report is related to the agenda of the meeting. However, the Tdocs do not necessarily appear in the sequence as they were treated in the meeting.

IPR2025-00720, OnePlus Ex. 1004

1 Opening of the meeting

TSG RAN WG2 chairman Henning Wiemann (Ericsson) opened the meeting RAN WG2 #76 on Monday morning 14.11.2011 at 09:00am.

On behalf of the host, the North American Friends of 3GPP (NAF3), Marc Grant (AT&T) welcomed the delegates to San Francisco and explained organisational issues.

RAN WG2 meeting rooms:
Main RAN2 room: Continental 6 (Ballroom level), planned for 220 participants, Mon-Fri
UTRA ad hoc room: Continental 7 (Ballroom level), planned for 50 participants, Tue-Fri noon

Other WGs: RAN1, RAN3, RAN4, RAN5, SA1, SA2, SA3 LI, SA5, CT1, CT3, CT4 and CT6 had their meeting in same hotel.

1.1 Call for IPR

Henning Wiemann (TSG RAN WG2 chairman) made the following call for IPRs and reminded the delegates of their obligations with respect to IPRs:

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 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 (http://webapp.etsi.org/Ipr/).**

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN2 chairmen.

2 General

2.1 Proposed Agenda

RAN2 chairman: **THANK YOU** to companies that submit contributions early before deadline (really appreciated). Will start to refrain from treating late documents.

R2-115660 Proposed agenda for RAN2 #76, San Francisco, USA, 14.11.-18.11.2011; Ericsson (RAN2 chairman); Agenda;
=> Agreed

IPR2025-00720, OnePlus Ex. 1004

Time-schedule, only indicative (i.e. topics might move forward/backward !):

Indicative Time-schedule	**Main room**	**UMTS room**
Mon 09:00 ->	[2],[3],[4],[5]	
Tue 08:30 -> 18:50	Rel-8,9,10 [6]	Rel-89 [8 non-TDD] 4C [9.2] TEI10 [9.7 non-TDD]
Tue 19:00 -> 20:30	Joint meeting with SA2 and CT1 on EWT, SR-VCC and vSR-VCC (see AI 4)	
Wed 8:00 -> 08:50	Joint meeting with SA1, SA2 and CT1 on EAB issues (see AI 5.1)	
Wed 9:00 ->	CA [7.1] EDDA [7.2]	Rel-8/9 [8 TDD] MC HSUPA [9.1] (TDD) TEI10 [9.7 TDD] FE FACH [10.1] ULTD [10.5]
Thu 8:30 ->	MBMS [7.3] feICIC [7.5] IDC [7.6] NBP [7.4]	Morning: Comebacks [10.4] Mflow After Lunch: Comebacks [10.2] 8C [10.5] Excl. ULTD [10.6] Other Rel11 SI [10.7] TEI11
Fri 8:30 ->	Other [7.8] Hetnet mob[7.9] Left-overs, Comebacks, [12][13][14]	Comebacks and leftovers
Fri: lunch -> until 5pm		

*Informal **adhoc on LTE HetNet** simulations planned on Wednesday afternoon (chaired by Jialin Zou (Alcatel-Lucent)) with the intention to discuss the initial large area calibration results and the way forward on HTN mobility simulation. The outcome of the adhoc will be a document with further agreements.*

2.2 Minutes of previous meeting

R2-115661 Draft report of RAN2 #75bis, Zhuhai, China, 10.10.-14.10.2011; ETSI MCC; Report; to be agreed on Friday of the meeting;
=> revised in R2-115719

R2-115719 Draft report of RAN2 #75bis, Zhuhai, China, 10.10.-14.10.2011; ETSI MCC; Report;
=> Documents is agreed in R2-116527

2.3 Reporting from other meetings

Nothing to report.

2.4 Other

2.4.1 Rapporteur changes

Spec **former rapporteur** **proposed new rapporteur**

No rapporteur changes.

2.4.2 Planning

For information: Main open Rel-11 WIs/SIs with RAN2 responsible for certain output to a certain RAN meeting are shown in the following table.

IPR2025-00720, OnePlus Ex. 1004
Page 90 of 700

Main RAN2 related WI/SIs	RAN Tdoc	Lead WG	WI or SI	RAN2 Agenda	Expected delivery to RAN	Remarks
UMTS + LTE						
RAN overload control for Machine-Type Communications	RP-111373	2	WI	4.3.1/ 7.7/10.3	Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#55	WI approved at RAN#53
Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN	RP-111361	2	WI	4.3.2	Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#57	WI approved at RAN#53
UMTS						
Further Enhancements to CELL_FACH	RP-111321	2	WI	10.1	Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#56	WID updated at RAN#53
8C-HSDPA	RP-101419	1	WI	10.2	All RAN2 CRs: RAN#54	
HSDPA multi-point transmission	RP-111375	2	WI	10.4	Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#56	WI approved at RAN#53
Uplink Transmit Diversity for HSPA	RP-110374	1 / 4	WI	10.5	Stage-2 CRs: RAN#52 Stage-3 CRs: RAN#54	
LTE						
CA enhancements	RP-111115	1	WI	7.1	Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#57	
Enhancements for diverse data applications	RP-111372	2	WI	7.2	TR36.822 at RAN#55 Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#57	
Service continuity improvements for MBMS for LTE	RP-111374	2	WI	7.3	Stage-2 CRs: RAN#54 Stage-3 CRs: RAN#55	WID updated at RAN#53 (no location information)
Network-Based positioning Support for LTE	RP-101446	2	WI	7.4	Stage-2 CRs: RAN#54 Stage-3 CRs: RAN#54	
Further Enhanced Non CA-based ICIC for LTE	RP-111369	1	WI	7.5	All CRs: RAN#56	WID updated at RAN#53 (second priority aspects postponed to March)
Signalling and procedure for interference avoidance for in-device coexistence	RP-111355	2	WI	7.6	Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#56	WI approved at RAN#53
Study on HetNet mobility improvements enhancements for LTE	RP-110709	2	SI	7.9	TR 36.839 to RAN for info RAN#53, for appr RAN#54	

3 Incoming liaisons

3.1 Joint UMTS/LTE relevance

Security Information in PWS

R2-115662 LS Reply to S3-110836 = R2-113735 on the length of security information in PWS (C1-114450; contact: Ericsson); CT1; LSin; LS04; cc: RAN2;; note: RAN2 answered S3-110836 = R2-113735 in R2-114814;
=> noted

R2-115677 Reply LS to R2-114814, C1-114450 = R2-115662, GP-111304 = R2-114854 on length of security in PWS (S3-111225; contact: RIM); SA3; LSin; LS04; to: RAN2;

RAN2 needs to reply

- Chairman wonders whether RAN2 can confirm “RAN WG2 confirm extending Public Warning System Security information to 75 bytes is also supportable in a backwards compatible manner in LTE”

IPR2025-00720, OnePlus Ex. 1004

- Ericsson thinks this has not been discussed. For secondary notification and CMAS the intention was to reuse PWS as it is. Ericsson wonders how we do that if we support security for PWS.
- Samsung wonders whether this signature would be at AS level or higher. Ericsson agrees that this needs to be discussed. Currently the UE needs to do the check first. Ericsson would prefer if it would be handled at higher level. NSN thinks that for CMAS the ATIS requirements need to be taken into account.

=> CBF: RIM will lead offline discussion and try to draft a reply LS on PWS. Draft LS can be provided in R2-116361 (RIM)

EWT

R2-115672 Reply to LS to C1-113759 = R2-114852 on the scope of extended wait time on AS layer (S2-114498; contact: HTC); SA2; LSin; cc: RAN2;; note: RAN2 #75bis postponed to sent an LS reply to C1-113759 = R2-114852.;

=> Noted for now. Will be discussed and might be treated in the joint meeting.

=> Will check whether we have to reply to SA2 and CT1 on EWT. See AI4.1

EAB

R2-115663 Reply LS To R2-114804 on EAB Requirements (C1-114451; contact: NSN); CT1; LSin; LS01; to: RAN2;

- NSN summarized all replies in R2-115943

=> Noted. Will be discussed further.

R2-115673 Reply to LS to R2-114804 on EAB Requirements (S2-114698; contact: Vodafone); SA2; LSin; LS01; to: RAN2;

- Samsung thinks the answers 1 and 3 are the opposite of what CT1 answers.
- NSN thinks that SA2 assumes that they are mainly talking about a configuration but the protocol will support as CT1 indicates. ZTE agrees that the feedback is slightly different. However, ZTE thinks that RAN2 should attempt to be future proof as suggested by SA2 in Answer 1. DoCoMo wonders whether SA2 tries to introduce multiple priorities within EAB.
- Huawei thinks that RAN2 already supports what SA2 requested in Answer 1.

=> Will be discussed further in the EAB session.

MDT

R2-115664 Reply LS to R2-114802 on Applicability of ePLMN to MDT (C1-114463; contact: Huawei); CT1; LSin; to: RAN2;

=> Noted

R2-115675 Reply LS to R2-114807 on MDT and RAN sharing (S5-113214; contact: NSN); SA5; LSin; to: RAN2;

- NSN thinks that bullet two applies to both, immediate and logged MDT whereas bullet three applies only to logged MDT.
- MediaTek wonders whether MDT is limited to PLMN in Rel-10. NSN confirms that this will only works for the primary PLMN. DT thinks in our specification there are no such restrictions. MediaTek agrees that this is a NW-only restriction.
- Samsung wonder how the eNB can determine which PLMN configured the logged MDT? NSN thinks that the pPLMN must be equal to the TCE's PLMN where the eNB forwards the logs to. DT thinks we don't need to discuss these NW-side restrictions.

=> This does not imply any further restrictions to the UE on where to provide its logs.

- DoCoMo thinks this agreement in SA5 is not going into the right direction. DT agrees that RAN2 should inform SA5 that this does not fit to the handling in RAN2. MediaTek thinks that we had related LSs and that SA5 discussed a "full solution". MediaTek assumes that SA5 is going for a simplified solution. Huawei assumes that SA5 will enhance this for Rel-11.
- Samsung thinks that this could result in that the eNB throws away a received log. NSN thinks that this is not the case as the UE has already checked the rPLMN match. DT would like to send an LS to SA5 and ask further question to make sure we have the same understanding.

=> CBF: NSN will organize some offline discussion preferably involving SA5 colleagues. If needed an LS to SA5 will be drafted by NSN and provided in R2-116362 (see LS out).

R2-115676 LS on MDT positioning (S5-113283; contact: Ericsson); SA5; LSin; LS02; to: RAN2; Huawei drafted a reply LS in R2-115899;

IPR2025-00720, OnePlus Ex. 1004

=> noted, will send a reply LS after discussing the topic in the MDT AI
=> After discussing EAB in this meeting (Monday), RAN2 has not yet concluded on the questions raised by SA5 and will therefore not respond from this meeting

SR-VCC

R2-115674 Reply LS to R2-114808 on SRVCC capability bit setting mismatch in AS and NAS (S2-114702; contact: Ericsson); SA2; LSin; to: RAN2;; note: SAES-SRVCC was a REL-8 WI (related to Voice);
=> Noted for now. Will be discussed in joint meeting.

R2-115665 LS on outstanding issues for video SRVCC (C1-114474; contact: Samsung); CT1; LSin; to: RAN2;
=> Noted for now. Will be discussed briefly in RAN2 and in the joint meeting.

MBMS

R2-115667 Reply LS to S4-110800 = R2-113746 on Radio metrics with respect to QoE (R1-113605; contact: Qualcomm); RAN1; LSin; cc: RAN2; topic is MBMS related;
=> Noted.

R2-115678 LS on MBMS FEC Evaluation Framework (S4-111114; contact: Qualcomm); SA4; LSin; to: RAN2;
- QC wonders whether for Rel-6, RAN2 or RAN1 provided the channel model. QC assumes this is more up to RAN1 to provide it.

=> Assume that this is for RAN1 to provide.
=> CBF QC: Will send an LS to SA4 and RAN1 indicating that we expect RAN1 to handle this. QC will provide a draft LS in R2-116363 (see LS out).

3.2 LTE relevance

CA

R2-115666 LS on additional carrier types for carrier aggregation enhancement (R1-113551; contact: Alcatel-Lucent); RAN1; LSin; cc: RAN2;
=> Noted

R2-115671 LS reply to R1-112867 = R2-114860 on TDD inter-band CA with different UL-DL configurations on different bands (R4-115437; contact: CATT); RAN4; LSin; cc: RAN2;
=> Noted

MBMS

R2-115679 Reply LS to R2-115647 on MBMS assistance information for service continuity (S4-111124; contact: Qualcomm); SA4; LSin; to: RAN2;
- NSN mentions that SA4 extended their WID and is allowed to work on service continuity.

=> Will discuss this further in the MBMS session on Thursday and then send an LS

Late LSs:
NBPS:

R2-115715 Response LS to R2-115646 on physical-layer measurement for network-based positioning (R1-114454; contact: Ericsson) RAN1 LSin REL-11 LCS_LTE-NBPS-Core

R2-115716 Reply LS to R2-115649 on Physical Layer Measurement for network positioning (R1-114456; contact: Alcatel-Lucent) RAN1 LSin REL-11 LCS_LTE-NBPS-Core

R2-115717 LS response to R2-115646 on Physical Layer measurement for network-based positioning (R4-116300; contact: Ericsson) RAN4 LSin REL-11 LCS_LTE-NBPS-Core
=> All 3 LSs received on Fri afternoon; all 3 LSs not treated

3.3 UMTS relevance

R2-115668 LS on RAN1 agreements on uplink Closed Loop Transmit Diversity for HSPA (R1-113613; contact: Huawei); RAN1; LSin; to: RAN2;
=> Noted

R2-115669 LS on RAN1 agreements on Further Enhancements for Cell_FACH (R1-113614; contact: Qualcomm); RAN1; LSin; to: RAN2;
=> Noted

R2-115670 LS on "per band OLTD capability" signalling (R4-114989; contact: Huawei); RAN4; LSin; to: RAN2;

IPR2025-00720, OnePlus Ex. 1004

- Huawei thinks that it is not necessary to reply as RAN2 has already taken this into account in the defined signaling.

=> Noted

Late LS

R2-115680 LS on CSFB awareness in UMTS (R3-113052; contact: Vodafone) RAN3 LSin REL-11 TEI11

received on Mon of RAN2 #76

=> LS was handled in UTRA session,

VDF: my understanding is that we don't have this indication

ALU: do we know why they are asking this.

VDF: to updated some counters (KPI) on CSFB.

ALU: In other features like SRVCC there is no counters

Renesas: I am not too sure of the purpose as well.

If Sys info container is used, we can have some indication form that on CSFB.

NSN: do we have a definition of CSFB in our spec

Renesas: yes

ALU: there pre-ridirection info will be missing, that is a possible other way to figure it out.

Panasonic: it's not exactly the same thing.

Renesas: I agree with panasonic, we cannot use that.

Ericsson: there is nothing explicit in RRC Connection Request as such, but there ius a set of IE set in RRC Connection Request that the RNC can use for this. The network can understand that this is a CSFB.

VDF: what IEs canb we put in the LS?

Ericsson: not sure I would like to list the IEs.

ALU: it could be useful

Chair: Wed morning after Coffee

=> The LS is noted. We will answer this week.

Final LS answer see R2-116429, see AI 11.1

4 UMTS/LTE joint: Rel-10 and earlier releases

Contributions submitted under this agenda item will be handled in a joint UMTS/LTE session. Documents should focus on Stage-2 aspects common for both UTRA and E-UTRA, but also common stage-3 aspects should be submitted here (e.g. 25/36.304).

4.0 In principle agreed CRs

R2-115690 Correction to UE handling of delay tolerant wait timer in RRC Connection Release; Renesas Mobile Europe Ltd.; CR; 25.331; 4809; F;

Relation to ongoing EWT discussion?

- No changes compared to the in principle agreed CR.

=> CBF Renesas: Will come back to this IPA CR once we have discussed the remaining open issues on EWT in order to avoid conflicting CRs.

- Samsung suggests to work on the cover page

=> Discuss the cover page on impact on network

- After offline discussion, Renesas reports that it might seem correct to indicate that there could be NW impact. It is therefore suggested to stick to R2-115690

=> CR is agreed

=> R2-116520 is withdrawn (it was intended to be a revision of R2-115690).

R2-115691 Corrections of PS keys handling upon PS ISHO; Renesas Mobile Europe Ltd.; CR; 25.331; 4810; F;

- Only updates in cover page.

=> CR is agreed

R2-115692 Corrections of PS keys handling upon PS ISHO; Renesas Mobile Europe Ltd.; CR; 25.331; 4811; A;

=> CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-115693 Corrections of PS keys handling upon PS ISHO; Renesas Mobile Europe Ltd.; CR; 25.331; 4812; A;
=> CR is agreed

R2-115714 CR to 37.320 on Immediate MDT handling at handover; Nokia Siemens Networks; CR; 37.320; 0038; F;
- No change
=> CR is agreed

R2-115707 Clarification of PCI range for CSG cells; Qualcomm Incorporated; CR; 36.331; 0812; F;
=> CR is agreed
After RAN2 #76bis it was detected that R2-115707 used the wrong CR number CR0821 instead of CR0812, therefore R2-115707 was revised in R2-116483 CR0812 rev 1.

4.1 Other

Including output of [75b#30] - Joint: Support of cell reselection enhancement [DoCoMo]
Including output of [75b#38] - Joint: Applicability of extended wait timer [ALU]

PSC/PCI Range
(EHNB-RAN2, leading WG: RAN2, REL-9, started: March 09, closed: March 10, WID: RP-091392)

R2-116284 Report of [75b#00] PSC range for CSG cells; LG Electronics Inc.; Report; result of email discussion [75b#00]; note: 25.331 REL-10 could not be in principle agreed by the email discussion deadline;
=> noted

R2-115824 On PSC/PCI range for CSG; TeliaSonera; Disc;
- DT thinks that this requires the PSC/PCI need to be coordinated. TS confirms. DT could agree with this solution if companies think that coordination of PSC/PCI is acceptable.
- QC thinks that this assumption would need to be documented.
- QC thinks that this proposal would allow this change for Rel-8 (magic sentence). If this is only about Rel-10, what is then the expected NW behaviour.
- Samsung shares the concern the backwards compatibility issue. Nokia does not see the problem. The Rel-8 UE would just not save as much battery as a Rel-10 UE. DT agrees.
- Huawei would like to know if the entire range of IDs would need to be aligned.
- DoCoMo thinks that is a configuration issue. The CSG could use the same PLMN as the macro. TS clarifies that the femto cells might be operated by different operators. DoCoMo thinks they could still broadcast the same PLMN ID.
- QC considers this as an optimization. The same can be solved if the macros always provides the correct PCI range. QC wants this to be confirmed. Samsung agrees. TS thinks that providing the PSC/PCI is optional. DT thinks that we discussed a lot and agreed that this should not be required from macros. QC is not requesting to mandate it. But in order to optimize, the macros could provide this information. Samsung agrees that the NW has the choice.

A) PSC/PCI split is applicable to pPLMN only? 5
B) PSC/PCI split applicable to any broadcast PLMN ID? 7

- Samsung thinks we should only introduce new functionality if there is a clear majority.
=> Will stick to the agreement that the PSC/PCI split is only applicable to the pPLMN ID

R2-116285 Discussion on PSC range for CSG cells; LG Electronics Inc.; Disc;
- see discussion captured for CR R2-116288.
=> noted

Open issues
A) PSC/PCI split is applicable to pPLMN only?
B) PSC/PCI split applicable to any broadcast PLMN ID?

1) For UTRAN: Allow using PLMN of neighbour cells based on SIB18?
2) Specify in 25.304 that PSC/PCI split applies to "all states except Any Cell Selection state"?

IPR2025-00720, OnePlus Ex. 1004

36.331 CRs:

R2-116288 CR to 36.331 PCI range for CSG cells; LG Electronics Inc.; CR; 36.331; (0841); F;
- Nokia prefers to keep the AnyCellSelection in the table as in the IPA CR. Samsung would slightly prefer the LG proposal. DT thinks that the IPA CR is clearer.
- QC would like to get confirmed that there is no technical difference.

=> Not agreed

R2-115825 Alternative to Clarification of PCI range for CSG cells; TeliaSonera; CR; 36.331; (0822); F;
=> Not agreed

25.331 CRs:

R2-116286 CR to 25.331 PSC range for CSG cells; LG Electronics Inc.; CR; 25.331; (4883); F;
=> Not agreed

R2-115826 Alternative to Clarification of PCS range for CSG cells; TeliaSonera; CR; 25.331; (4824); F;
=> Not agreed

R2-115876 Clarification of PSC range for CSG cells; Nokia Corporation; CR; 25.331; (4829); F;
- Nokia clarifies that several companies indicated interest to co-sign this CR.
- Samsung thinks that we should not specify part of the behaviour in a note and the rest in normative text. Nokia think it was difficult to achieve this.
- Ericsson supports this proposal and would also prefer to move the note into the normative text.
- Samsung wonders whether the normative text should only focus on the behaviour for the case that SIB18 is not present and a note for SIB18.
- DT wonders whether this would not result in too many different UE behaviours. ST-E thinks this is UE internal behaviour.

=> Agree that the UE may use the information provided in SIB18.
=> CBF Nokia: Update the CR to have both parts in normative text. An updated CR can be provided in R2-116364 CR4829. Will come back on Friday.

R2-116364 Clarification of PSC range for CSG cells; Nokia Corporation, Nokia Siemens Networks, Renesas Mobile Europe Ltd, Deutsche Telekom, ST-Ericsson, Ericsson, Qualcomm; CR; 25.331; 4829; F;
=> The CR is agreed

Extended Wait Timer

(NIMTC-RAN_overload, leading WG: RAN2, REL-10, started: Sep.10, closed: March 11, WID: RP-101026)

R2-116115 Report of the email discussion on [75b#38] - Joint: Applicability of extended wait timer; Alcatel-Lucent (rapporteur); Report; result of email discussion [75b#38];
- DT wonders whether this requires network behaviour. ALU as rapporteur suggests to agree on the intention and not define how to achieve this. So, we do not yet define network behaviour.
- Samsung and Ericsson think that the EWT can only be sent while the NAS procedure is still ongoing.
- NSN would like that the EWT is only applicable during the initial NAS procedure (right after establishment request). Vdf agrees that EWT is only to reject incoming UEs.
- NSN thinks that EWT should only be applicable to DTA.
- Samsung thinks that this should not imply network behaviour.

- What is the intended UE behaviour when receiving EWT?
  a) forward it to NAS if the UE supports DTA: 10
  b) forward EWT if the corresponding access was performed with DTA: 9

- Vodafone thinks that we should specify the UE behaviour.
- Renesas thinks that we should specify that if the EWT is received and the UE does not support it, the UE behaviour is unspecified. Vodafone thinks we should just forward it to higher layers.
- Samsung thinks the intention is not to tell CT1 to introduce further checks but just to tell them, that NAS might receive a EWT independently of the used cause. EWT will only take action if there is an ongoing NAS procedure (attach, TAU or service request). Otherwise, the timer will be ignored.
- Ericsson thinks we have to ensure testability.

IPR2025-00720, OnePlus Ex. 1004

- Nokia thinks we should remove the check of whether the UE supports EWT. DT agrees.
- Renesas would like to capture that EWT in response to other than DTA is not normal behaviour.
- Nokia wonders whether it needs to be captured in 306 that the UE supports EWT when indicating DTA.
- Samsung thinks that a UE indicating emergency call might still support EWT. Therefore, the only thing that can be said is that a UE setting DTA supports EWT.
- Nokia thinks that 306 mentions when the UE supports EWT. If the network sends it to a UE that does not support it the UE behaviour is consequently not specified. Samsung thinks that here we have not agreed that this is wrong network behaviour. NSN would consider it misbehaving behaviour. Samsung thinks that 36.331 does not leave any ambiguity. Nokia thinks it is erroneous behaviour if the NW does not know that the UE supports it. Renesas agrees that this is erroneous behaviour and this should be captured in 25.331.

Agreements
1 We confirm current Rel-10 behaviour that UE forwards the EWT to NAS if it supports EWT
2 We confirm that a UE indicating delay tolerant access supports the EWT.

=> Will send an LS to CT1 capturing the current network behaviour as captured in the agreement. ALU will draft an LS in R2-116365 to be used in the joint meeting. Should mention that there is no explicit capability for EWT.

R2-116160 Establishment Cause and Extended Wait Timer; Ericsson, ST-Ericsson; Disc;
R2-116116 Clarification of the Extended Wait Time usage; Alcatel-Lucent (rapporteur); CR; 36.331; (0832); F;
R2-116141 Clarification of the Extended Wait Time usage; Alcatel-Lucent; CR; 25.331; (4849); F;
All 3 Tdocs not treated

Inter-RAT cell reselection enhancements
(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: RP-080747)

R2-115872 Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 36.304; (0166); F; result of email discussion [75b#30];
=> revised in R2-116356

R2-116356 Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 36.304; 0166; F; result of email discussion [75b#30];
- STE agrees with the CRs but thinks there is a different wording between LTE and UTRAN. “Provided by System Information” is only present in the LTE part. STE suggests to remove this text. Samsung would like to keep the sentence to cover cases with other RATs such as GERAN. QC wonders why the sentence is not there in UTRAN? DoCoMo agrees with STE’s comment to remove that part.
- Panasonic, Samsung and NSN think we should keep the sentence.
- Samsung clarifies that the intention of the sentence is that the UE shall only apply Squal based reselection if it supports it for all other RATs indicated by the LTE system.
- NSN wonders why this addition is not needed for 25.304? Panasonic agrees that it should also be there.

=> Remove the change on change
=> Discuss further the 3-step ping-pong problem
=> Correct the summary of changes (currently contains the changes for UTRAN)
=> CBF DOCOMO: An updated CR can be provided in R2-116367, CR0166 R1

R2-116367 Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 36.304; 0166 R1; F;
=> CR is agreed

R2-115873 Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 36.304; (0167); A; result of email discussion [75b#30];
=> revised in R2-116357

R2-116357 Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 36.304; 0167; A; result of email discussion [75b#30];
=> Remove the change on change

IPR2025-00720, OnePlus Ex. 1004
Page 97 of 700

=> Discuss further the 3-step ping-pong problem
=> Correct the summary of changes (currently contains the changes for UTRAN)
=> CBF DOCOMO: An updated CR can be provided in R2-116368, CR0167 R1

R2-116368 Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 36.304; 0167 R1; A;
=> CR is agreed

R2-115874 CR to 25.304 on Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 25.304; (0298); F; result of email discussion [75b#30];
=> revised in R2-116358?

R2-116358 CR to 25.304 on Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 25.304; 0298; F; result of email discussion [75b#30];
=> Remove the change on change
- QC thinks there could appear a similar ping-pong problem if we don't have this sentence in 25.304. Samsung agrees that the same issue as for LTE exists.

=> Will discuss offline whether the same addition is also needed for 25.304.
=> Discuss further the 3-step ping-pong problem. This might be only a wording issue.
=> Correct the summary of changes (currently contains the changes for LTE)
=> CBF DOCOMO: Updated CR can be provided in R2-116369 CR0298 R1

R2-116369 CR to 25.304 on Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 25.304; 0298 R1; F;
=> CR is agreed

R2-115875 CR to 25.304 on Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 25.304; (0299); A; result of email discussion [75b#30];
=> revised in R2-116359?

R2-116359 CR to 25.304 on Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 25.304; 0299; A; result of email discussion [75b#30];
=> Will discuss offline whether the same addition is also needed for 25.304.
=> Discuss further the 3-step ping-pong problem. This might be only a wording issue.
=> Correct the summary of changes (currently contains the changes for LTE)
=> CBF DOCOMO: Updated CR can be provided in R2-116370 CR0299 R1

R2-116370 CR to 25.304 on Clarification of inter-RAT cell reselection enhancements; NTT DOCOMO, INC.; CR; 25.304; 0299 R1; A;
=> CR is agreed

=> CBF DOCOMO: Will draft an LS to GERAN2 to inform them about our decision. The draft LS can be provided in R2-116371 (DoCoMo)

Other

R2-115733 CS/PS Mode 1 enhancement to improve CSFB voice services; KT; Disc;
Release? WI?

- NSN wonders which CSFB mechanism KT has in mind (among the available flavours). Rel-9 with SI tunnelling with redirection? KT does not use measurements.
- DT wonders what the proposal means for RAN2. CT specifications already support keeping a UE on UTRAN for voice.
- DT thinks that the specifications for UTRAN/LTE interaction should be network based. NSN agrees.
- QC thinks that to make this proposal work, coordination between multiple groups is needed. QC cannot confirm the latency problems observed by KT.
- Huawei thinks that it is already possible to let the UE camp on UTRAN with dedicated priorities. So, no further work is needed.
- NSN thinks that there also other solutions such as PS HO already from Rel-8.
- DoCoMo thinks that existing mechanisms already support what KT wants to do.
- KT would like to raise the issue since they found these serious delays. QC agrees that if it turns out that there is a real issue, we should of course consider enhancements. But currently QC sees different numbers. Samsung understands that KT has an issue and would like to understand those problems.
- KT does not have a real solution but would like to handle the problem.
- Vodafone would support investigating whether there is a problem. Vodafone would also like to understand what KT suggests to do for short data bursts.

IPR2025-00720, OnePlus Ex. 1004

- DT thinks that this sort of service based mobility would require a separate study item and cannot be handled as Rel-8/9/10 change.
- NSN agrees that any potential new solution would need to be evaluated against all available solutions.
- Nokia is not sure that there is an issue but if there is Nokia would support investigating it further.

=> Noted

R2-115986 Removal of IE RAB info to replace for SR-VCC handover from UTRAN HSPA to UTRAN/GERAN CS; Intel Corporation; CR; 25.331; (4837); F;
- Panasonic wonders how the UE knows which VoIP bearer is to be SRVCCed. Intel thinks that the UE does not need to know.
- Not agreed (see discussion below)

R2-115987 Removal of IE RAB info to replace for SR-VCC handover from UTRAN HSPA to UTRAN/GERAN CS; Intel Corporation; CR; 25.331; (4838); A;
- Not agreed (see discussion below)

R2-115988 Removal of IE RAB info to replace for SR-VCC handover from UTRAN HSPA to UTRAN/GERAN CS; Intel Corporation; CR; 25.331; (4839); A;
- Not agreed (see discussion below)

R2-116324 SRVCC handover when more than one PS voice bearer exists; HTC; Disc;
- noted

Discussion
- Samsung agrees that the source RNC cannot determine which RAB to continue. Samsung also agrees that the IE does not allow indicating multiple bearers.
- Samsung thinks that the target should release all PS RABs with speech attribute. Then, Samsung thinks that the Intel CRs make sense.
- Renesas does not want the Intel CRs. The message which RAB to release needs to come from somewhere. QC shares this view.

=> Samsung: After offline discussion it is being concluded that there are several open issues.

1) How does the target know that it is an SRVCC handover
2) It is not clear how all the PS Speech RABs are released (by the target after the handover? Or implicitly by the UE during the SRVCC handover?)

- HTC suggests discussing this in the joint meeting. Chairman and NSN think that there will probably not time. NSN and Intel think we should look further into the RAN2 aspects and come back at next meeting.
- Renesas thinks that the network has to provide RAB to be released. This does not allow support for more than more than one voice bearer. The problem could be solved by accepting this limitation for up to and including Rel-10. HTC thinks that the problem exists from Rel-8 and should be solved from there. Huawei thinks that releases are frozen and they support the case with one voice RAB. NSN supports the proposal by Renesas to limit to one RAB.

=> Agree that Intra-UTRAN SRVCC for Rel-8/9/10 supports only a single voice RAB.

=> CBF HTC: Will send an LS to SA2 informing them about the signalling limitation (allowing only one voice RAB). They will have to adapt stage-2 to reflect this limitation. Draft LS can be provided in R2-116372 (HTC).

R2-116017 Small Corrections to 37.320; CATT; CR; 37.320; (0039); F;
- Nokia wonders whether in UTRAN we really have any CDMA2000 measurements. CATT clarifies that this could only be logged if the serving cell is EUTRAN. Nokia thinks the addition would make the text misleading and does not need to make this change for Rel-10. NSN agrees with Nokia that there are no CDMA2000 from UTRAN. The change would confuse this.
- Huawei supports the second change.
- CATT suggests adding “if the serving cell is EUTRAN.”. ALU supports the CR with this change.

=> With this change the CR is agreed in R2-116373 CR0039

====

IPR2025-00720, OnePlus Ex. 1004

Information about joint session [B] (EWT, SRVCC FGI, vSRVCC)
SA2, RAN2, RAN3, CT1

Tuesday evening, 2011-11-15, planned: 19:00 – ~20:00, chaired by Eric Guttmann (SA2)
Room: Continental 6/Ballroom level (RAN2 room)
The joint session will mainly be based on the latest LSs exchanged on the subjects. Chairmen might select some contributions submitted to WGs for presentation in the joint session.

Applicability Extended Wait Timer: RAN2 will discuss the issue on Monday and try to come to a conclusion and to agree a CR if possible. If not possible, the issue will be discussed in the joint session based on the LS from CT1 (C1-113759/R2-114852) and potentially based on the email discussion report (R2-116115).

SRVCC Capability and FGI mismatch between AS and NAS
This is not primarily a RAN2 issue and most contributions have been provided in SA2.

vSRVCC
This is related to LS C1-114474/ R2-115665. Two contributions have been submitted in RAN2 of which R2-115942 suggests how to solve the issues raised in the LS received from CT1 (C1-114474).

====

SRVCC Capability and FGI mismatch
To be treated in joint session with CT1, SA2, …
R2-115941 SRVCC Capability and FGI setting in NAS and AS; Nokia Siemens Networks; Disc; intended for joint WG meeting;
not treated in RAN2 but noted in joint WG ad hoc on Tue as S2-115180 (see Annex G.1: R2-116548)

vSRVCC
To be treated in joint session with CT1, SA2, …
(vSRVCC, leading WG: SA2, REL-11, started: Sep.10, target: Dec.11, WID: SP-100704)

Note that this is actually a Rel-11 topic.

R2-115942 vSR-VCC and UE behaviour; Nokia Siemens Networks, Nokia Corporation; Disc; intended for joint WG meeting;
not treated in RAN2 but noted in joint WG ad hoc on Tue (see Annex G.1: R2-116548)

R2-115753 Suggest WorkGroup worksplit for video-SRVCC (vSRVCC); Samsung; Disc; [Moved here from 7.8]
not treated, neither in RAN2 nor in joint WG ad hoc

see Annex G.1 for the joint WG ad hoc meeting

5 UMTS/LTE joint: Rel-11

5.1 WI: RAN overload control for Machine-Type Communications (RP-111373)

(SIMTC-RAN_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, target: March 12, WID: RP-111373)
SI output: TR 37.868 v11.0.0 (as provided to RAN53 in RP-111238).

5.1.1 EAB mechanism

Details of EAB mechanism (delay based, etc...)?

LTE mechanism

IPR2025-00720, OnePlus Ex. 1004

Is the bitmap sufficient? Or is a back-off needed?

R2-115799 Consideration on EAB content for LTE; CATT, CATR; Disc;
- Samsung thinks with solution 2 the UEs should re-check the barring but solution 1 would let the UE access after the time expired.
- Vodafone wonders whether the simulation is based on the assumption that 30000 UEs access at the same time. But by barring 90% one would reduce the number to 3000 UEs. And the, no additional delay spread would be needed.
- LG wonders why we need a timer in solution 2 since the UE anyway monitors system information.

Alternatives:
a) bitmap only (current baseline)
b) bitmap + delay for barred UEs
c) bitmap + delay for permitted UEs

Discussion
- ZTE suggests to apply the delay to the barred UEs and not require them to re-read SI.
- ZTE thinks that with the delay mechanism we would not need a fast SI update mechanism. An optional barring mechanism could be configured as soft-barring mechanism. DT thinks the bitmap is the main instrument for congestion handling. No additional optimization is needed.

a) bitmap only (current baseline): 12 companies
b) bitmap + delay: 11 companies

- Intel thinks we need to look at some simulation results.
- DT tends to agree that the time spreading could be an optimization but does not think it is needed at this stage. Vodafone agrees with DT. Intel thinks that lifting the barring for large number of UEs, will result in even more accesses.
- QC thinks that the interference caused by the accesses is a problem if no delay spreading is supported. QC would support making the mechanism optional.
- Huawei thinks that the MTC accesses can still be distributed quite well with e.g. a fast update mechanism. Vodafone thinks that the paging occasions would already spread out the accesses.
- Samsung thinks that the problem is that 10% of the UE is the minimum number accessing at the same time.
- NSN wonders whether any company will change opinion as outcome of this discussion. NSN suggests that we start with the bitmap approach.
- Renesas wonders whether companies would acknowledge that there might be a problem without a delay spreading mechanism but that we ignore the problem. DT thinks that there may be problems when considering 30000 accesses within a short time. But for more realistic numbers they don't expect any problems.

Agreements
1 Agree to use the bitmap based barring mechanism for LTE and UTRAN. That means a UE that is barred will be barred until the bitmap is updated in SIB.

If back-off, how to determine the back-off time? Fixed, Random or deterministic (pseudo random)?
R2-115772 Uniform access delay solution for EAB; ZTE Corporation; Disc;
R2-116073 Distributed Access Delay for EAB; Renesas Mobile Europe Ltd; Disc;
R2-115828 Further consideration on EAB content for LTE; Huawei, HiSilicon; Disc;
R2-115963 Consideration on the details of EAB mechanism; New Postcom; Disc;
R2-116056 Further discussion on EAB mechanism for MTC devices; ITRI; Disc;
R2-116063 EAB mechanisms for RAN overload control; Qualcomm Incorporated; Disc;
R2-116119 Further consideration on EAB mechanism; ETRI; Disc;
R2-116241 Access restriction for LTE EAB; Samsung; Disc;
All 8 Tdocs not treated

UMTS mechanism
R2-115829 Further consideration on EAB content for UMTS; Huawei, HiSilicon; Disc;
R2-115798 Consideration on EAB content for UMTS; CATT; Disc;

IPR2025-00720, OnePlus Ex. 1004

Both Tdocs not treated

Late or withdrawn

R2-116065 EAB uniform access delay for RAN overload control; Qualcomm Incorporated; Disc;
R2-116337 Considerations on EAB mechanism; Ericsson, ST-Ericsson; Disc;
R2-115945 Barring time for EAB; Nokia Siemens Networks, Nokia Corporation; Disc;

5.1.2 EAB information update

Including output of [75b#31] - Joint: SIB update mechanism for EAB [Huawei]

R2-115834 Summary of Email Discussion [75b#31] - Joint: SIB update mechanism for EAB; Huawei, HiSilicon; Report; result of email discussion [75b#31];

Proposals from email discussion:
Proposal 1: ***For LTE****:*
b.1) Preclude to mandate reading the EAB info ***before access****?*
b.3) Preclude reacquiring the EAB info when reading the notification of change in ***RAR****?*
Then RAN2 further discuss and ***choose one*** *out of the rest 2 solutions:*
a) Normal update mechanism (value tag based, subject to SI modification period)
b.2) ETWS like notification

Proposal 2: ***For UMTS****, adopt the following solution:*
a) Normal update mechanism (updated with Value Tag)?

Proposal 3: Defer the decision on where to provide the EAB info, until RAN2 reach the agreement on the amount of EAB information to be broadcast, taken into account the summary of this email discussion?

Discussion:

- Sharp does not agree to the proposal. Huawei thinks that this is an attempt to progress this work. Sharp thinks that also the ETWS mechanism requires some changes and additions and is therefore not very simple. Huawei does not intend to progress with the ETWS solution. Huawei would rather like to stick to the normal update mechanism. QC also does not see Huawei's proposal representing companies opinions from the email discussion.
- ALU thinks during Rel-8 we had long discussions and concluded that the update mechanism was considered sufficient since we had the delay spreading mechanism. If we do not have this now, the normal update mechanism is not sufficient. NSN thinks that one difference was that the normal ACB was supposed to be fair and this is apparently not required for EAB.
- Intel thinks that we should stick to the current simulation assumptions. NSN thinks the 30000 UE scenario is clearly unrealistic. Ericsson thinks it was assumed here that there is a large number of roaming UEs entering the cell. And those UEs are required to read SIB before access. ZTE thinks that upon entering, the UEs will not be barred since the network has not yet detected that they enter.

a) Normal update mechanism (value tag based, subject to SI modification period) is sufficient: 9 companies
b) Normal update is not sufficient and something more is needed: 14 companies

- Vodafone wonders what happens to the network while trying to update the system information. Vdf is particularly concerned about UMTS. Renesas wonders whether it is not possible to apply EAB earlier.
- NSN wonders why more is needed. Huawei assumes that the assumption is that there is a large number of UEs.
- Intel thinks for 5000 or 10000 UEs per cell we don't need EAB at all. So, here we are looking in higher load cases.
- Vodafone wonders how long it take for the UMTS mechanism to acquire system information. Renesas thinks it takes about 1.28 seconds. Huawei thinks it could be shorter.
- QC thinks the update mechanism should also be smart and not only fast. Therefore, the paging is not acceptable. Therefore, QC would prefer the "read before access" as for UTRAN SIB7.

IPR2025-00720, OnePlus Ex. 1004

b.1) Preclude to mandate reading the EAB info before access?
b.2) ETWS like notification
b.3) Preclude reacquiring the EAB info when reading the notification of change in RAR?

Agreements
For UMTS we use the normal update mechanism (updated with Value Tag)
The normal update mechanism is not sufficient. The detailed mechanism is FFS.

R2-116519 Way forward for the EAB info update mechanism for LTE, Huawei, Disc
[Late (Friday during meeting)]
- Vodafone thinks that we should conclude that a normal update mechanism for LTE is not sufficient. DOCOMO thinks we should not take this decision now. Huawei thinks that we should at least agree on the need for something beyond.

a) Normal update mechanism (value tag based, subject to SI modification period) is sufficient: 9 companies
b) Normal update is not sufficient and something more is needed: 14 companies
=> noted

R2-115944 MTC Traffic Modeling; Nokia Siemens Networks, Nokia Corporation; Disc;
R2-116282 Performance comparison of different EAB information update mechanisms; Intel Corporation; Disc;
R2-116244 EAB update mechanism; Samsung; Disc;
R2-115802 Considerations for EAB information update; CATR; Disc;
R2-115800 Considerations on EAB Transmission Mechanism; CATT; Disc; [Moved here from 5.1.1]
R2-116316 Considerations on Fast EAB Information Update; Institute for Information Industry (III), Coiler Corporation; Disc;
All 6 Tdocs not treated

Late or withdrawn
R2-116250 On EAB SIB update; Qualcomm Incorporated; Disc;

5.1.3 EAB modelling

Based on feedback from SA1/CT1 (C1-114451) and SA2 (R2-115673): Lifetime of the "UE configured for EAB"? Can applicability of AC-11/15 vary from one connection establishment to another? Impact on AS/NAS interface modelling?

Applicability of EAB
Where to determine that the EAB check is to be performed? AS or NAS? Coupled to delay-tolerant-access?
Where to determine if EAB category matches? AS or NAS?
Agree that AS informs NAS when the access is barred by EAB?

R2-116039 UE AS-NAS Model for EAB; Ericsson, ST-Ericsson; Disc;
R2-115773 Impacts of independent configurations for EAB and for 'delay tolerant; ZTE Corporation; Disc;
R2-115832 EAB applicability; Huawei, HiSilicon; Disc;
R2-115801 Application of EAB; CATT; Disc; [Moved here from 5.1.1]
R2-116094 Further details on EAB; MediaTek; Disc; [Moved here from 5.1.1]
R2-115946 EAB Modelling between NAS to AS; Nokia Siemens Networks, Nokia Corporation; Disc;
R2-115964 Consideration on the remaining issues about EAB mechanism; New Postcom; Disc;
R2-115966 The interaction between AS and NAS; New Postcom; Disc;
R2-116057 Discussion on Access Prioritization by EAB; ITRI; Disc;
R2-116281 Further discussion on EAB for RAN overload handling; Intel Corporation; Disc;
R2-116287 Further Discussion on EAB; LG Electronics Inc.; Disc;
All 11 Tdocs not treated

R2-116509 On EAB applicability in AS; ZTE, Qualcomm; Disc [Late]
- CATT assumes that the drawbacks listed for Alt.1 will also apply for Alt3 (reading of SIB).
- ZTE assumes that in Rel-10/11 the two indicators will always be set 1:1. Vdf thinks we reached the current agreement since we wanted the possibility to set them independently in the future. Vdf thinks that it might be correct that the call type is not the best choice but would suggest that we stick to the main agreement of having two separate indications from NAS to AS.

IPR2025-00720, OnePlus Ex. 1004
Page 103 of 700

- Huawei thinks it will be difficult to define a new call type or similar indicator in UTRAN. Huawei thinks we should couple delay tolerant and EAB. ALU thinks we should stick to the decisions we took in the joint meeting. Ericsson is surprised, too. ALU agrees to the point that there is no call type in UTRAN. Call type is specified by CT1 and ALU expects them to define a suitable indicator that AS will received. QC thinks conclusions at the joint meeting were taken too quick and we should not attempt to be future compatible. LG suggests to respect the decision from the joint meeting. ALU thinks the separate indicator approach would avoid further checks and logic in AS. ZTE could be OK with alternative 1 if we make sure that we do no further checks in AS
- Ericsson reminds that this is the way we introduced the delay tolerant indicator and we should handle EAB in the same way.
- NSN agrees that we have to discuss the technical details but should not revert the decision.
- ZTE and Ericsson suggest not to use the call type (neither for EUTRAN not UTRAN) but ask CT1 to define a separate indicator. Renesas agrees that the call type is not a good idea. Renesas thinks alternative 1 is in line with the agreements.
- ZTE thinks it will have an impact on RAN3. ALU thinks there is not necessarily.

=> Will stick to the agreement from the joint meeting that NAS provides two indicators to AS.

=> Will indicate to CT1 that we noticed that there could be problems with using the call type (at least for UTRAN) and that it would be acceptable from a RAN2 perspective to introduce a new indicator. But we leave the decision to CT1. Include RAN3. (ZTE). Draft LS can be provided in R2-116522 (CT1)

EAB or ACB first?

R2-116134 EAB mechanism; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; [Moved here from 5.1.1]
R2-115833 EAB and ACB, which one first?; Huawei, HiSilicon; Disc; [Moved here from 5.1.4]
R2-115965 EAB procedure; New Postcom; Disc;
All 3 Tdocs not treated

Late or withdrawn

R2-116040 UE AS-NAS Model for EAB; Ericsson, ST-Ericsson; Disc;
withdrawn

5.1.4 Others

====
Information about joint session [C] (EAB Issues)
RAN2, SA1, SA2, CT1

Wednesday morning, 2011-11-16, planned: 08:00 – 08:45, chaired by Henning Wiemann (RAN2)
Room: Continental 6/Ballroom level (RAN2 room)
The actual scope of the joint session will be decided depending on the progress in the RAN2 EAB session on Monday. The two main topics will be …

Applicability of EAB
See LS in R2-114804 and feedback received from CT1 (R2-115663/C1-114451) and SA2 (R2-115673).
Several contributions have been submitted on how to model the interface between AS and NAS and whether or not to apply restrictions such as a 1:1 mapping between "delay tolerant access" and "subject to EAB". It is also being discussed to which extent the AS protocol should support dynamic switching between access barring levels (normal, EAB, emergency, …). Contributions will be chosen based progress in RAN2.

EAB parameters for RAN sharing
See related LS in R2-115644.
The following two contributions could be discussed in a joint session to get a better understanding of the expected overhead (R2-116074) and the benefit (R2-115912) of broadcasting individual EAB parameter sets per PLMN.
====

R2-115943 EAB Related Issues for Joint Meeting; Nokia Siemens Networks, Nokia Corporation; Disc; intended for joint WG meeting; Related to Joint session, [Moved here from 4.1]
not treated in RAN2 but noted in joint WG ad hoc on Wed (see Annex G.2: R2-116549)

EAB parameters for RAN sharing

IPR2025-00720, OnePlus Ex. 1004

Related to Joint session
Options: a) No distinction of PLMN, b) 6-bit bitmap for PLMN applicability or c) multiple sets of parameters?
R2-116074 System Information Overhead Considerations for EAB; Renesas Mobile Europe Ltd; Disc; [Moved here from 5.1.2]
not treated

R2-115912 EAB issues; Vodafone; Disc; [Moved here from 5.1.3]
not treated

Signalling optimizations for per-PLMN distinction
R2-115771 Shared networks support for EAB; ZTE Corporation; Disc; [Moved here from 5.1.1]
not treated

R2-115830 EAB parameters in shared network; Huawei, HiSilicon; Disc; [Moved here from 5.1.1]
not treated

see Annex G.2 for the joint WG ad hoc minutes

Continuation until next meeting

- ✉ **Email discussion [76#31] until next meeting on the details of the information update procedure. Can try to discuss impact of a new SIB or an existing SIB (Huawei).**
- ✉ **Email discussion [76#32] to capture agreements until next meeting. Attempt to start with running stage-3 CRs 25.331 and 36.331 (Huawei).**

5.2 WI: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN (RP-111361)

(eMDT_UMTSLTE-Core, leading WG: RAN2, REL-11, started: Sep.11, target: Sep.12, WID: RP-111361)

5.2.1 QoS Verification

Use cases and requirements? Which additional metrics are needed for which purpose? How to realize them?

General Requirements
R2-115909 MDT Requirements for QoS Improvements; Vodafone, Deutsche Telekom, NTT DoCoMo, Orange, Teliasonera, Telecom Italia, MediaTek; Disc;

- NPC wonders whether location information would be considered mandatory in Rel-11. Vdf thinks that even for Rel-10 the main purpose is to get information with location information. Having an accurate location information is of course preferable.
- Renesas wonders what the proposal 1 would mean. Does it mean that we add something or is it already supported. MTK thinks that no such thing is currently specified.
- Ericsson thinks the paper mentions normal UEs and by logging the location and the data volume of many such UEs one would obtain this information.
- Vdf thinks that we might log the generated data and not only the transferred data. Secondly, we need the location information. Samsung thinks that we should not start making such distinction.
- Samsung thinks this first proposal could be achieved if it is possible to associate a transferred amount of data with a location.
- LG thinks we should keep it simple only log the transferred data.
- TI sees also a need to detect mismatch between generated/buffered and transferred data. MTK thinks this should be captured as part of the user experience. NPC would like to focus on the actually transferred data. DoCoMo would like to understand if further enhancements are needed or possible and therefore mention that it is FFS whether there is a mismatch between generated and transmitted data. Ericsson thinks the transfer is crucial and not when and how much data was generated.
- Vodafone wants to understand where the raw data is being generated and not related to QoS metrics. Samsung thinks that companies are hesitant to agree on something if the consequences are not clear.
- NSN supports agreement 1. But NSN would agree with Samsung and MTK that capturing the data generation should be further discussed.

IPR2025-00720, OnePlus Ex. 1004

- DT is more interested in the data transferred as they want to know where capacity is used. Data which is not transferred did not consume any capacity.
- Huawei would like to know whether proposal 1 means that it would be logged in the UE or in the network. MTK thinks we don't need to discuss this now.

Proposal 2:
- NSN wonders what group of UEs means. Vdf thinks it refers to trace or management based MDT. NSN understands that we collect data per UE. But the proposal indicates that we collect data somehow for a group. MTK thinks the group of UEs can be removed.
- LG wonders whether the goal is to collect this information per UE or per DRB? Vdf thinks it should be per UE. LG thinks it is too early to decide whether it should be per UE or per DRB.
- Ericsson wonders whether the QoS refers to the RAN part or end-to-end? Vdf indicates that only the RAN impact should be covered. MTK thinks we should rely on measurements available in the AS. But it may be so that measurements provide information about e2e QoS experience.

Agreements
1 Will support the use case to obtain in the network information of where data traffic is transferred in different locations within a cell.
2 MDT functionality is required to assess the QoS experience for a specific UE together with location information. The relevant QoS measurements to assess user experience are FFS.
3 The main purpose of the QoS measurements is to reflect the impact of the RAN on the user experience.

Metrics

R2-115918 MDT Throughput Measurement; Vodafone, Mediatek, Telecom Italia, NTT DoCoMo; Disc;

Proposal 1:
- LG whether the scheduled IP TP measurement is really sufficient for MDT. E.g. it does not reflect VoIP. MTK agrees with the comment but thinks it is a good baseline as it reflects the case when the radio interface is limiting.
- LG thinks that the eNB relies on the HARQ feedback to determine the Scheduled IP TP and wonders if this is accurate enough. MTK agrees with the comment and thinks it can be discussed further whether enhancements are needed.
- NSN thinks it would be good to capture the objective of a certain metric is. This is because the suitable measurement depends on what the objective is. Other objectives might require other measurements. TI thinks it will be difficult to discuss all those objectives but rather assumes that they will be implicit in the proposed measurements. QC supports the NSN view that we should discuss use cases. We should also look at what we discussed and concluded in the study item.

Proposal 2
- Samsung wonders whether the scheduled IP throughput is suitable.
- NPC thinks that the scheduled IP throughput is problematic with respect to the location information.
- MTK thinks we should start with this baseline and then consider how to correlate this measurement with location information.

Proposal 3
- Vodafone's understanding is that there is no aligned measurement for UTRAN. MTK clarifies that there is no place in RAN2 specifications listing L2 measurement definitions.

Agreements
1 Throughput measurement where the radio interface is the bottleneck link shall be supported for MDT rel-11. It shall be possible to correlate those with geographical location (for UMTS and LTE).
2 For LTE, the 'scheduled IP throughput' measurement per QCI (as defined in TS 36.314) in the eNB can be used as a baseline for defining the MDT throughput measurement. FFS how to associate location information with this measurement.
3 FFS which throughput measurement to use for UMTS.

R2-116217 Measurements for QoS verification; Interdigital; Disc;
R2-115886 Impact of mobility in MDT QoS verification; Huawei, HiSilicon; Disc;

IPR2025-00720, OnePlus Ex. 1004

R2-116148 Accessibility measurements for MDT; Ericsson, ST-Ericsson; Disc;
R2-116020 Measurement Types for QoS Verification; CATT; Disc;
R2-115736 Consideration on QoS verification for MDT; China Unicom; Disc;
R2-115949 QoS measurement and location association for MDT; Kyocera; Disc;
R2-116247 Throughput and loss rate measurements for MDT QoS verification; LG Electronics Inc.; Disc;
All 7 Tdocs not treated

Other
R2-115737 Consideration on UE in CONNECTED state for MDT; China Unicom; Disc;
R2-115776 More Consideration on MDT QoS verification; ZTE Corporation; Disc;
Both Tdocs not treated

Late or withdrawn
R2-116019 Measurement Types for QoS Verification; CATT; Disc; see R2-116020 instead;
R2-116138 Location Information for QoS measurements; NTT DOCOMO, INC.; Disc;
Both Tdocs are withdrawn

5.2.2 Availability of location information

More than best effort location information? If so, how? Immediate and/or Logged MDT? MDT (preferably) be activated for UEs that already run location services?

R2-116135 Requirements, Priority and Solution for MDT Location Information Enhancement; NTT DOCOMO, INC., MediaTek, Vodafone; Disc;
Proposal 1:
- Huawei wonders whether this priority should apply only to immediate MDT. DoCoMo thinks that enhanced location information is also considered important for logged MDT.
- Nokia thinks that for logged MDT we must keep the power consumption in mind.
- DT thinks that both, immediate and logged is important but some enhancements might be more applicable to immediate.
- Samsung wonders whether we want to stick to the principle we had so far that the UE should not be required to perform additional measurements. MTK thinks that there are approaches still applying this principle but it should also possible to order additional measurements. DT thinks that we should honour the Rel-10 principle to not order additional measurements. Nokia agrees with DT. MTK thinks that SA5 told us in an LS that requested location information should be supported. Ericsson thinks that it does not fit together to require increasing the availability of logs while still avoiding additional measurements.
- Chairman thinks that using only UEs which have location information available will result in biased results as those are typically the outdoor UEs with GPS available. MTK confirms that for indoor UEs one would have to use other location mechanisms and explicitly request them. But MTK agrees with Nokia that we have to keep the solutions simple.
- Samsung thinks that users may revoke their consent if they realize high battery consumption.
- ALU wonders whether the UE has a chance not to perform requested location measurements. MTK thinks they would be mandated.
- Samsung wonders whether for logged MDT it means that we would require a UE to enter RRC connected.
- Motorola would not like that the network can request location information. Ericsson considers this possibility as essential. QC thinks that operators need to select UEs carefully.

Agreements
1 We will attempt to enhance availability of detailed location information for immediate and logged MDT.
2 It should be possible to avoid MDT measurements that do not have detailed location information available.
3 For UEs in RRC Connected it should be possible to request additional location information for MDT purpose (i.e., “on-demand” location information for MDT).
FFS whether this applies also for UEs in IDLE, i.e., logged MDT. If supported for logged MDT, this should not require the UE to enter RRC Connected to obtain location information.

IPR2025-00720, OnePlus Ex. 1004

FFS whether restrictions when to use this need to be defined.

R2-116246 Rel-11 MDT enhancement on location information; Samsung; Disc;
R2-116207 Positioning enhancements for MDT; Ericsson, ST-Ericsson; Disc;
R2-115884 Position enhancement for IMM MDT; Huawei, HiSilicon; Disc;
R2-116022 Location Info Enhancements for Rel-11 MDT; CATT; Disc;
R2-116283 Positioning Enhancements for MDT; Intel Corporation; Disc;
R2-116293 Enhancement of Detailed Location Information; LG Electronics Inc.; Disc;
All 6 Tdocs not treated

Late or withdrawn
R2-116290 Enhancement of Detailed Location Information; LG Electronics Inc.; Disc;
withdrawn

5.2.3 Multi-PLMN support

Based on reply LS from CT1 on "Applicability of ePLMN to MDT"
Need for MDT/RLF across PLMNs? Explicitly signal the applicable PLMNs or determine by rules?

Is log indication and log retrieval supported in EPLMNs?
Is RLF reporting supported in EPLMNs?
Is MDT logging supported in EPLMNs?
Need to explicitly configure PLMNs in which to perform MDT or a rule (e.g. EPLMNs in same country)?
If explicit configuration is preferred, do it on AS or NAS level?

R2-116117 ePLMN handling for MDT and RLF in Rel-11; Alcatel-Lucent; Disc;
R2-115928 Logged MDT continuity across PLMNs; Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera; Disc;
R2-116166 Continuation of MDT upon PLMN change; Samsung; Disc;
R2-115927 RLF reporting across PLMNs; Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera; Disc;
R2-116023 MDT Continuity between Different PLMNs; CATT; Disc;
R2-115887 The applicability of EPLMN to MDT and RLF report; Huawei, HiSilicon; Disc;
R2-116298 Continuity of MDT across multiple PLMNs; LG Electronics Inc.; Disc;
All 7 Tdocs not treated

5.2.4 Coverage Optimization

Use cases and requirements?

Measurements for coverage optimization
R2-115885 Consideration on coverage optimization; Huawei, HiSilicon; Disc;
R2-116064 Discussion on Coverage map; LG Electronics Inc.; Disc;
R2-116341 Priorities for MDT coverage optimization; MediaTek; Disc;
All 3 Tdocs not treated

Log Size Reduction
R2-115984 Log size reduction of MDT; New Postcom; Disc;
R2-116044 MDT enhancement; Pantech; Disc;
Both Tdocs not treated

5.2.5 Other

Logging across RATs
R2-116294 MDT performance at early LTE deployment scenario; LG Electronics Inc.; Disc;
[Moved here from 5.2.4]
not treated

R2-115809 Inter-RAT aspects of Logged MDT; NEC; Disc;
not treated

Other
R2-115808 Accuracy of detailed location information; NEC; Disc;

IPR2025-00720, OnePlus Ex. 1004

R2-115950 MDT logging stoppage based on battery threshold level; Kyocera; Disc;
Both Tdocs not treated

R2-116518 Introduction of MDT enhancements (Running stage-2 CR)
revised in R2-116547 during email discussion [76#06]

Continuation until next meeting

- ✉ **One week email discussion [76#06] to agree a running stage-2 CR capturing agreements on MDT made so far (based on version in R2-116518). (MediaTek)**
- ✉ **Email discussion [76#33] until next meeting on Scheduled IP-Throughput measurements and how to used them (in continuation of the agreement made in this meeting) (MediaTek)**
- ✉ **Email discussion [76#34] until next meeting on location information enhancements. Two tracks (MediaTek)**

5.3 WI: Other Work/Study Items

For Rel-11 WI/SIs for which RAN2 is not prime responsible WG, e.g. (FS_EHNB_enh, SID: RP-110456) or (e850_UB-Core)
Note: TEI11 has not been opened yet!

e850_UB-Core
(e850_UB-Core, leading WG: RAN4, REL-11, started: Dec.10, target: Dec.11, WID: RP-111396)

R2-116082 Support of multiple frequency bands in a cell; Ericsson, ST-Ericsson; Disc;
Proposal 1:
- Huawei wonders if we should discuss the number (8) before receiving a response from RAN4

Proposal 2:
- DoCoMo think there is not need to indicate the UL-CarrierFreq for each additional frequency band. Ericsson agrees that the UE could also signal this.
- Huawei is not sure the additionalSpectrumEmission is needed. Ericsson thinks there could be different Ns values defined for different bands. Huawei thinks for the same area the same value should apply.

Proposal 3:
-

Proposal 4:
- Samsung and Nokia wonder why there would need to be an extension part if a cell belong only to band 26.

General:
- QC would like to wait for the RAN4 LS. Ericsson suggests to have the following agreements and to re-visit if it does not match the RAN4 requirement.

Tentative Agreements pending for RAN4 LS
1 Introduce extension in SIB1 (EUTRA) and SIB5/5bis/SIB6 (UTRA) to signal a list of additional frequency band indicators in a cell. FFS how many additional frequency band indicators
2 Introduce extension in SIB5 (EUTRA) and SIB11/SIB11bis/SIB12 (UTRA) to indicate additional frequency band indicators that the list of neighbour cells belongs to.

=> CBF Ericsson: Should take RAN4 feedback into account. Should discuss further offline about proposals 2 and 4 from R2-116082. Can also discuss whether different bands can have different priorities (based on answer from RAN4).

R2-115746 Analysis of RRC functions for supporting equivalent bands; NTT DOCOMO, INC.; Disc;
R2-116075 Mobility to Neighbour Cells Supporting Multiple Bands; Renesas Mobile Europe Ltd; Disc;
R2-116170 Introducing support for multi-bands cells; Samsung; Disc;
All 3 Tdocs not treated

CRs:
R2-116083 Support of multiple frequency bands in a cell; Ericsson, ST-Ericsson; CR; 36.331; (0828); B;

IPR2025-00720, OnePlus Ex. 1004
Page 109 of 700

R2-115911 Multiple frequency band indicators per cell; Ericsson, ST-Ericsson; CR; 25.331; (4834); F;
Both CRs not treated

SONenh2_LTE_UTRA-Core
(SONenh2_LTE_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, target: Sep.12, WID: RP-111328)

R2-116169 Inbound mobility to shared CSG cell; Samsung; Disc;
not treated

TEI11
R2-115811 On absolute priorities cell reselection and UTRAN measures; TeliaSonera; Disc;
R2-115814 36.304 Correction to absolute priority cell reselection; TeliaSonera; CR; 36.304; (0165); F;
R2-115816 36.331 Correction to absolute priority cell reselection; TeliaSonera; CR; 36.331; (0821); F;
R2-115818 25.304 Correction to absolute priority cell reselection; TeliaSonera; CR; 25.304; (0297); F;
R2-115820 25.331 Correction to absolute priority cell reselection; TeliaSonera; CR; 25.331; (4823); F;
All 5 Tdocs not treated

R2-115940 UE RRC mobility states mismatch between UTRAN and E-UTRAN; Research In Motion UK Limited; Disc;
not treated

6 LTE: Release 10 and earlier releases

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: RP-080747)

6.1 WI: Carrier aggregation (RP-100661), UL-MIMO, eDL-MIMO

(LTE_CA-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-100661)
(LTE_UL_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: June 11, WID: RP-100959)
(LTE_eDL_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: March 11, WID: RP-100196)

6.1.0 In principle agreed CRs

R2-115706 UE soft buffer handling in MAC; Ericsson; CR; 36.321; 0516; F;
- Alternative proposals discussed in R2-116015 discussed first.
- Alternative behaviour agreed below.

=> revised in R2-116374

6.1.1 Other

Soft Buffer Handling
R2-116015 UE soft buffer handling for retransmission with different size; LG Electronics Inc., Nokia Siemens Networks, Huawei, HiSilicon, ZTE, Panasonic, Samsung; Disc;
-

R2-116350 Soft Buffer Handling in MAC; Ericsson, ST-Ericsson; Disc;
- LG wonders whether the only concern is the undefined UE behavior in response to PDCCH. Ericsson agrees. LG has no strong view but would like to simplify the text. Ericsson would rather like to keep it as it is.
- NSN thinks that observation 1 contradicts the rest of the document. NSN shares observation 1 and therefore thinks that no explicit handling is needed. Ericsson is more concerned about changing the behavior among MAC and L1.
- Panasonic thinks that the LG proposal does not change the UE behavior. Ericsson thinks that it would change the MAC behavior. Panasonic thinks that does not matter. Ericsson thinks we should not mix functionality between layers. L1 should decide whether PDCCH was decodable and MAC should act accordingly. Ericsson thinks the MAC specification currently describes that a feedback is always provided to L1.
- LG thinks that removing this part from normative text makes the specification more future proof.

IPR2025-00720, OnePlus Ex. 1004

- Ericsson would be OK to change the normative text to a note but that should capture the behavior allowed today. LG thinks there are 3 options. LG thinks that this behavior was not preferred by most companies. LG thinks one could also leave everything to UE implementation. NSN would also be OK with the third option below. Nokia is fine with any of the options. Huawei thinks that with the change agreed in the last meeting, the UE would actually have to decode the newly received data and remove the previously stored data from the soft buffer. It would have to send a NACK. LG thinks this is taken care of.
- LG thinks the consequence of the third option is that the UE will discard the data. But from the spec it is not clear how to treat it as a retransmission.
- Samsung thinks we should not discuss which one is the best. We should focus on which one is acceptable by most companies.

Options:
- a) NOTE: If the UE receives a retransmission with a TB size different from the last valid TB size signalled for this TB, the UE behavior is left up to UE implementation.
- b) NOTE: If the UE receives a retransmission with a TB size different from the last valid TB size signalled for this TB, it is left up to UE implementation whether to consider it to be a new transmission or act as if no data was received.
- c) NOTE: If the UE receives a retransmission with a TB size different from the last valid TB size signalled for this TB, the UE may treat it is a new transmission or retransmission.

a) 11 companies
b) 0 companies
c) 3 companies

Agreements
=> Will go for a note:
NOTE: If the UE receives a retransmission with a TB size different from the last valid TB size signalled for this TB, the UE behavior is left up to UE implementation.

=> Ericsson will provide an updated CR in R2-116374, CR0516 R1

R2-116374 Soft Buffer Handling in MAC; Ericsson, ST-Ericsson; Disc; CR0516 R1
=> The CR is agreed

R2-115784 UE soft buffer handling in TDD; CATT; Disc;
- Samsung wonders whether it is common understanding that a UE has 8 soft buffers even if it has more HARQ processes. Samsung would like to confirm with RAN1 before deciding anything. CATT thinks from RAN1 specification only specifies the minimum total soft buffer size.
- Motorola thinks RAN1 already discussed this and addresses it in 36.213 section 7.1.8. Therefore, Motorola thinks that no change is needed. CATT thinks that section only describes how to store the soft buffer per serving cell and not per HARQ buffer. The TDD overbooking case would still happen.
- LG thinks this should be discussed in RAN1 and they can send us an LS if they see a need. CATT thinks this is a RAN2 issue. Samsung thinks there could be some RAN2 issues but we should discuss it based on RAN1's input.
- Motorola wonders whether this is also a Rel8 problem. CATT thinks it could happen from Rel-8. Motorola thinks this was already discussed in Rel-8 and it was agreed to leave it for UE implementation how to manage the soft buffer.

=> Noted. Can discuss further offline.

R2-115785 UE soft buffer handling in TDD; CATT; CR; 36.321; (0518); F;
=> Not agreed

Other

R2-116176 Clarification on setting of dedicated NS value for CA by E-UTRAN; Samsung; CR; 36.331; (0839); F;
- Huawei thinks that RAN4 is discussing this and additionalSpectrumEmissionPCell may turn out not to be needed at all. Therefore, we should wait for RAN4. Samsung thinks the proposal reflects the current status in RAN2. IDT thinks we agreed to refer only to RAN4 specifications. IDT would also prefer to wait for RAN4 decision. Ericsson agrees. It could turn out that the current text is sufficient.

Proposal 2:

IPR2025-00720, OnePlus Ex. 1004

- Intel suggests to add “in case of intra-band CA” to the second proposal

Proposal 3
- Samsung thinks the setting of parameters is clarified in RRC. In particular the last sentence is something that should be specified in RAN2 independent of what RAN4 decides. Huawei thinks it really depends on how the parameter is used in RAN4. Samsung thinks that we define the signalling.

=> Not agreed

R2-115921 Clarification on physical layer parameter values requirement; Qualcomm Incorporated; CR; 36.306; (0075); F;
- Samsung agrees to the intention of the CR but would like to improve the note to make it clearer.
- Huawei wonders how the eNB can no the maximum bit rate of that UE. QC clarifies that the UE can anyway not reach the maximum throughput defined for 20+20 when operating in 10+20 MHz. The intention is to clarify that a such a UE does not need to down-grade its category.
- DoCoMo wonders whether there is a problem if another bandwidth is defined by RAN4 later? QC thinks that this is about the point in time when the band is defined. QC thinks that the requirement should be met based on the maximum bandwidth defined for the corresponding band.

=> Can discuss further offline and come back if more support.

R2-116267 UE behaviour regarding TTI bundling and SCell release; HTC; Disc;
[Moved here from 6.6.1]
- LG does not understand the issue the paper is trying to address. LG thinks the change of the procedure would not impact the behavior.
- Ericsson wonders whether the change is needed since it already clear the UE should configure TTI bundling while SCells are configured. Therefore, no need to enhance procedure text. Samsung thinks the proposed change is not correct.

=> Noted

R2-115971 36.300 CRxxxx_Corrections of CA Bands (Rel-10); New Postcom; CR; 36.300; (0407); F;
- NSN thinks that the values are just examples and it is an informative annex. No need to change.

=> Not agreed

6.2 WI: Relays (RP-110911)

(LTE_Relay-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-110911)

No contributions.

6.3 WI: MBMS enhancements (RP-101244)

(MBMS_LTE_enh-Core, leading WG: RAN2, REL-10, started: June 10, closed: March 11, WID: RP-101244)

R2-115922 UE category in the presence of MCH reception; Qualcomm Incorporated; Disc; related CR in R2-115923 and related draft LSout in R2-115924;
- NSN wonders how the network should take this into account. Should the NW assume that the MBMS is always scheduled. Should the NW take into account only one MCH or multiple. QC agrees it introduces some NW restrictions. But QC thinks that only MCH on the UE’s PCell needs to be taken into account.
- Samsung supports the proposal.
- Huawei wonders what the expected UE behaviour is when the network does not take it into account.
- NSN thinks that the eNB knows whether the UE is MBMS capable but it does not know whether the UE receives MBMS.
- NSN thinks that for Rel-10 we remove one MCH transmission from the UE’s capability. For Rel-11 we could potentially be more accurate if we know which MBMS carriers the UE is receiving on.

IPR2025-00720, OnePlus Ex. 1004

- Samsung thinks we should consider MBMS transmission on serving cells. But it is more about network behaviour whether and which MBMS transmission to take into account.
- Intention is to clarify that the UE does not need to accommodate for the sum of MCH bits and the bits according to table 4.1-1.
- Samsung supports the CR.
- Samsung thinks that scheduling restrictions should be left out.
- Huawei would like to clarify that the UE must primarily reserve its processing capability to SCH reception. Otherwise, we would introduce a scheduling restriction. QC thinks that it is not possible to introduce new behaviour now for Rel-10.

=> noted

R2-115923 UE category in the presence of MCH reception; Qualcomm Incorporated; CR; 36.306; (0076); F;

=> Not agreed. More discussion needed.

✉ **Email discussion [76#35] until next meeting to discuss UE category in presence of MCH reception. (QC)**

If agreed, see proposed LS to RAN1 about the change above in R2-115924 (AI 13).

6.4 WI: Minimisation of Drive Test (RP-100360)

(MDT_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: RP-100360)

RLF

R2-116211 LS on RLF reporting and user privacy; Nokia Siemens Networks; LSout;

- Huawei thinks we have discussed this in Rel-10 and there is no privacy issue. Huawei also thinks that SA5 does not define how TCE collects reports. Therefore, Huawei is not sure whether we should send an LS about Rel-10.
- Ericsson also wonders whether these questions need to be discussed in RAN2. NSN thinks that so far the discussions have always been initiated by RAN2.
- Samsung clarifies that at the moment we only indicate in the PLMN. NSN does not think there is a relation to the EPLMN issue.
- NSN thinks that there has not been an agreement. NSN thinks the alternative would be to capture that “from RAN2 perspective there is no need for User Consent for RLF”. NEC thinks that RAN2 could not conclude this.
- ALU wonders what would happen if SA3 would indicate that there is a security concern. Would it impact RAN2 behavior? NSN thinks it might have an impact if SA3 indicates that user consent is needed.
- MTK thinks that RAN2 is the place to discuss this. And since it is a security issue it would make sense to send an LS to SA3. Vdf thinks it is not a big issue for Rel-10 but it might become an issue for Rel-11.

=> Discuss offline whether we should send an LS as well as the content.

=> After offline discussion NSN reports that the general view is that if there is impact due to user consent this would primarily impact SA5. Therefore the LS should also originate from SA5.

=> LS is withdrawn

6.5 WI: eICIC (RP-100383)

(eICIC_LTE-Core, leading WG: RAN1, REL-10, started: March 10, closed: June 11, WID: RP-100383)
Including output of [75b#34] - LTE: MBSFN and measurement resource restrictions [Ericsson]

MBSFN measurement restrictions

R2-116088 Summary of e-mail discussion [75b#34] LTE: MBSFN and measurement resource restrictions; Ericsson; Report; result of email discussion [75b#34];

- Ericsson reports that the discussion continued after the email discussion resulting in the 5th option.

1 The UE shall assume that all the subframes indicated are non-MBSFN subframes.
2 The UE may assume that all the subframes indicated are non-MBSFN subframes.
3 The UE may assume that all MBSFN configurable subframe are MBSFN subframes.
4 Not including a second sentence and rely on Rel-8/9 behaviour.

IPR2025-00720, OnePlus Ex. 1004

5 Mandate that the network always includes a neighbour cell list. (the UE behaviour for the case that the cell list is provided was already agreed last meeting)

- Ericsson thinks that the 5th option would solve the problem. There could be a backwards compatibility problem.
- QC prefers option 3 but would also be OK with 4 or 5.
- Samsung thinks that option 5 was discussed during the meeting and would be OK with it. Samsung does not see a backwards compatibility issue.
- LG is concerned about option 3. Would prefer option 1 or 2 but can also accept option 5.
- ZTE wonders what the difference between option 3 and 4 is. QC clarifies that option 4 leaves it completely for UE implementation. ZTE sees no difference between 3 and 4.
- DoCoMo is also fine with 4 or 5.
- NSN is concerned about mandating behaviour at this point in time. NSN would rather prefer option.
- Samsung thinks we made the information option only for signalling optimization. Samsung does not see a problem with option 5.
- Huawei would be OK with option 5.
- CMCC thinks that option 5 limits network implementation. A network could handle this with network implementation.
- NSN would prefer to go for option 4.
- Renesas thinks that option 5 allows indicating all cells since it is a PCI range. QC thinks that the difference between 1 and 5 is that the network can indicate the cells of which it "guarantees" non-MBSFN subframes.
- Renesas wonders if option 5 means that we remove Rel-10 behaviour. QC sees no ASN.1 change.
- Samsung clarifies that we don't change ASN.1 but just include the condition that the network always includes it.
- NSN wonders whether it is really acceptable to mandate this network behaviour. DoCoMo would be OK with this restriction.

a) Option 1: 4 companies
b) Option 4: 4 companies
c) Option 5: 7 companies

=> Will mandate that the network always includes a neighbour cell list. (the UE behaviour for the case that the cell list is provided was already agreed last meeting)
=> Ericsson will provide an updated CR in R2-116376, CR0840
=> Ericsson: Will send LS to RAN4 informing about the decision taken in RAN2 on MBSFN measurement restrictions. The draft LS can be provided in R2-116377 (Ericsson)

R2-116178 Clarification on MBSFN and measurement resource restrictions; Ericsson, ST-Ericsson; CR; 36.331; (0840); F;
=> revised in R2-116376

R2-116376 Clarification on MBSFN and measurement resource restrictions; Ericsson, ST-Ericsson; CR; 36.331; 0840; F;
=> Remove "e.g., with NeighCellConfig set to 00 as defined in Section 6.3.6"
- Huawei suggests to change "MBSFN subframes" to "restriction pattern" in the cover page
=> Change consequences if not approved to "The UE measurement behaviour is not defined if measurement restrictions are configured for eICIC purpose."
=> With this change the CR is agreed in R2-116511m CR0840, R1

R2-116333 UE behavior about measurements for eICIC with MBSFN subframes; Qualcomm Incorporated; Disc;
not treated

Other

R2-115980 Alignment between paging occasions and subframe patterns; Research In Motion UK Limited; Disc;
- ZTE wonders whether this addresses IDLE, CONNECTED. RIM clarifies that it is for connected.
- ZTE wonders if the paging occasion is not protected, does this cause a problem for the UE? RIM sees a problem. ZTE thinks that the common understanding is that nothing is

IPR2025-00720, OnePlus Ex. 1004

needed. Samsung agrees that only medium bias is supported in Rel-10 and therefore there is no problem to receive paging. RIM thinks in Rel-11 scenarios there may be more interference.
- DoCoMo thinks it is a configuration matter. So, it is even possible to ensure the mapping. Consequently, no need to specify this. RIM understands that in macro-pico there cannot be many protected subframes. So it might be a problem.

=> Noted. No support

R2-115978 Monitoring paging in active time in HetNet scenario; Research In Motion UK Limited; Disc;
=> Noted. No support

R2-115979 Alignment between SPS and Subframe pattern; Research In Motion UK Limited; Disc;
=> Noted. No support

R2-115982 Release of measSubframePatternConfigNeigh upon reestablishment; Research In Motion UK Limited; Disc;
- Samsung thinks we discussed this 2 meetings ago and no need for changes was seen. Also for the parallel message transmission we discussed delays of 14 ms during which this "problem" might apply.

=> Noted. No support

6.6 WI: TEI10 and earlier releases

6.6.0 In principle agreed CRs

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: RP-080747)

R2-115704 CSI/SRS reporting at DRX state transitions; Panasonic; CR; 36.321; 0514; F;
=> CR is agreed

R2-115705 CSI/SRS reporting at DRX state transitions; Panasonic; CR; 36.321; 0515; A; Note: REL-8/9 optional while REL-10 mandatory with different approach, i.e. no REL-10 CR;
CQI masking was missing. Proposed to be replaced by R2-115888.
=> Replaced by R2-115888

R2-115700 Optionality of SR Masking; Qualcomm Incorporated, Nokia Siemens Networks, Nokia Corporation; CR; 36.306; 0071; F;
=> CR is agreed

R2-115701 Optionality of SR Masking; Qualcomm Incorporated, Nokia Siemens Networks, Nokia Corporation; CR; 36.306; 0072; A; implicitly in principle agreed with REL-9 cat.F CR in R2-115177;
=> CR is agreed

R2-115698 Corrections to channel model; Huawei, HiSilicon; CR; 36.302; 0029; F;
=> CR is agreed

R2-115699 Corrections to enhancedDualLayerTDD; CATT; CR; 36.306; 0070; F;
=> CR number of other affected specification to be added.
=> With this change the CR is agreed R2-116379, CR0070, R1

R2-115709 Corrections to enhancedDualLayerTDD; CATT; CR; 36.331; 0814; F;
=> CR number of other affected specification to be added.
=> With this change the CR is agreed R2-116380, CR0814, R1

R2-115708 Clarifications to Default Radio Configurations; Potevio; CR; 36.331; 0813; F;
=> CR is agreed

R2-115710 Miscellaneous small corrections; Samsung; CR; 36.331; 0815; F;
=> CR is agreed

(LCS_LTE, leading WG: RAN2, REL-9, started: Dec. 08, closed: June 10, WID: RP-091389)

R2-115702 Optionality of UE Rx-Tx time difference report; Panasonic; CR; 36.306; 0073; F;

IPR2025-00720, OnePlus Ex. 1004
Page 115 of 700

=> Tracked changes on the cover sheet need to be accepted.
=> With this change the CR is agreed in R2-116381, CR0073 R1

R2-115703 Optionality of UE Rx-Tx time difference report; Panasonic; CR; 36.306; 0074; A;
=> Tracked changes on the cover sheet need to be accepted.
=> With this change the CR is agreed in R2-116382, CR0074 R1

R2-115711 Clarification of packed encoding rules of LPP; Qualcomm Incorporated; CR; 36.355; 0065; F;
=> CR is agreed

R2-115712 Clarification of packed encoding rules of LPP; Qualcomm Incorporated; CR; 36.355; 0066; A; implicitly in principle agreed with REL-9 cat.F CR in R2-115278;
=> CR is agreed

6.6.1 Other

Can also discuss "Korean Public Safety System" in this agenda item
Including output of [75b#32] - LTE: CSI and SRS reporting at unexpected DRX state change [Ericsson]
Including output of [75b#33] - LTE: ANR FGI bit [ALU]
Including output of [75b#35] - LTE: FGI bit handling for FDD/TDD dual mode UE [QC]

Update of in principle agreed CR

R2-115888 CSI/SRS reporting at DRX state transitions; Panasonic; CR; 36.321; (0521); A; intends to replace in principle agreed R2-115705 ?;
=> The CR number should be added
=> With this change the CR is agreed in R2-116378, CR0521

R2-116383 CSI/SRS reporting at DRX state transitions; Panasonic; CR; 36.321; 0526; A;
=> CR is agreed

CSI and SRS reporting at unexpected DRX state change

R2-116351 Summary of email discussion [75b#32] CSI and SRS reporting at unexpected DRX state change; Ericsson; Report; result of email discussion [75b#32];
- LG wonders whether we should stick to the principle agreed in the agreement. LG considers all proposals realizing this behaviour as too complicated. NSN tend to agree with LG that the CRs become quite complicated. Huawei agrees. DoCoMo agrees. MediaTek agrees that the CR looks complicated. CATT agrees. QC agrees. Fujitsu agrees
- RIM would prefer to stick to the agreement from last meeting but have a simple CR.

=> noted

R2-115744 CSI and SRS reporting at unexpected DRX state change; Ericsson, ST-Ericsson; CR; 36.321; (0517); F; result of email discussion [75b#32]; note: email discussion did not achieve consensus about this CR;
revised in R2-116360

R2-116360 CSI and SRS reporting at unexpected DRX state change; Ericsson, ST-Ericsson; CR; 36.321; 0517; F; result of email discussion [75b#32]; note: email discussion did not achieve consensus about this CR;
withdrawn

R2-116034 CSI and SRS reporting in relation to DRX; Samsung; CR; 36.321; (0524); F;
=> revised in R2-116353

R2-116353 CSI and SRS reporting in relation to DRX; Samsung, Panasonic; CR; 36.321; 0524; F;
not treated

R2-116232 CSI/SRS reporting at DRX changes; LG Electronics Inc.; CR; 36.321; (0525); F;
not treated

R2-116027 Cases to consider for CSI/SRS <-> DRX; Samsung; Disc;
not treated

R2-116230 CSI/SRS reporting at DRX changes; LG Electronics Inc.; Disc;
- Samsung thinks we took the agreement in the last meeting for a reason: Avoid double decoding. Option 1 would have the double-decoding problem, Option 2 would increase the interference, Option 3 does not seem to work as is since a Rel-10 UE according to this

IPR2025-00720, OnePlus Ex. 1004

option would not send CSI/SRS in conditions where a Rel-8/9 you has to send it. Backwards compatibility is an issue.
- Panasonic thinks that there is no big complexity between option 1 presented by LG and the proposal 2 in the email discussion. It is only specification complexity.
- Ericsson suggests to agree to the CR proposed by Samsung
- Huawei would be OK to cope with the double-decoding problem. NSN could also accept option 1. Ericsson cannot accept option 1. The problem should be fixed in Rel-10.
- Huawei thinks that the Samsung/Panasonic CR would require a new NW implementation compared to Rel-8/9.
- Ericsson would also be OK to always mandate transmitting CSI/SRS when it coincides with UL transmission, i.e., not only in the transition period (independent of active time). Huawei thinks this requires also updated NW behaviour.
- Ericsson thinks the whole purpose is to make the behaviour predictable.

- Option 1: to stick to Rel-8/9 behaviours: 17
- Option 2: in the 4 subframes after any DRX Active Time, the UE shall transmit CSI/SRS according to configuration: 5
- Option 3: stick to the agreement from the last meeting (CR suggested by Samsung/Panasonic): 3

=> Will stick to Rel-8 behaviour
=> Need a CR in accordance with the CRs agreed for Rel-8/9 (R2-115704). CR can be provided by Panasonic in R2-116383, 36.321, CR0526, Rel-10

FGI Bits for ANR

R2-116118 Report of the email discussion on [75b#33] - LTE: ANR FGI bit; Alcatel-Lucent (rapporteur); Report; result of email discussion [75b#33];
-

R2-116124 Clarification of the event B1 and ANR related FGI bits; Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE; CR; 36.331; (0833); F; result of email discussion [75b#33];
=> CR number in the cover page needs to be added
=> With this change the CR is agreed in R2-116384 CR0833

R2-116125 Clarification of the event B1 and ANR related FGI bits; Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE; CR; 36.331; (0834); A; result of email discussion [75b#33];
=> CR number in the cover page needs to be added
=> Change to Rel-9 on cover page
=> With this change the CR is agreed in R2-116385 CR0834

R2-116126 Clarification of the event B1 and ANR related FGI bits; Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE; CR; 36.331; (0835); A; result of email discussion [75b#33];
=> CR number in the cover page needs to be added
=> Change to Rel-9 on cover page
=> With this change the CR is agreed in R2-116386 CR0835

FGI bit handling for FDD/TDD

R2-116318 Report of [75b#35] - LTE: FGI bit handling for FDD/TDD dual mode UE; Qualcomm Incorporated; Report; result of email discussion [75b#35];
- CATT would prefer to leave this up to UE implementation (e.g. rely on Detach/Attach). If there are not many differences CATT would prefer to report a common set of features.
- CMCC thinks the goal of the discussion was to find out that there is an issue, i.e., why a certain functionality would require separate capabilities for FDD and TDD. But CMCC does not find such discussion in the report.
- QC wonders whether this means reporting a minimum common set. Huawei thinks that currently companies just assume that a problem may occur but it is not clear why it is likely to occur. QCs analysis is based on IOT opportunity that they see today.
- Nokia thinks that mandating a common minimum set would mean that operators could not deploy features before they are available in both modes. Temporarily, Nokia expects that TDD and FDD will not have fully aligned functionality (for IOT)
- CMCC does not see any difference in time-line between FDD and TDD and therefore does not want to discuss solutions. Samsung thinks that this is also about deployment scenarios. Even if there is no difference in IOT opportunities, it is impossible to test a

IPR2025-00720, OnePlus Ex. 1004

function that is only supported in a single-mode network. Huawei thinks that if there is no IOT problem there is consequently no problem to test the features within one mode. Only the mobility-related features could be affected by such problems. Samsung wonders what the difference is between discussing/addressing only mobility related features or discussion all features. QC shares the concerns raised by Samsung.
- QC thinks that there could also be problems in a multi-vendor RAN.
- Ericsson would prefer to minimize changes on existing specifications. If it was possible to limit the discussion to mobility related features. Then, it could be possible to just duplicate the affected FGI bits.
- NSN assumes that network vendors implement based on operators' requirements. And NSN does not assume that operators want to align their feature requests. Huawei since that even though there might be different requirements among operators, overall all features will be available for IOT. NSN wonders whether it can be guaranteed that VoIP will be introduced simultaneously in TDD and FDD networks.
- QC agrees with the Chairman that we should also discuss technical solution candidates in case we or RAN plenary decide to have some solution. QC would like a technically endorsed solution better sooner than later. Nokia would also prefer to discuss technical solutions and provide RAN with a view on these technical solutions and let them decide whether there is a need. CMCC suggests that companies that want to split FGIs send company contributions to plenary. DoCoMo would like to avoid company contributions. DoCoMo would prefer RAN2 to discuss technical solutions. QC agrees with DoCoMo. NSN agrees that dumping everything to RAN is not a good idea. Technical discussion should be done in RAN2 and the discussion on what level of split is needed could be left to RAN.
- QC thinks that we in RAN2 should discuss this.
- Vdf thinks that if we come to the conclusion that a solution is needed they would like to minimize the number of FGIs that may be different.
- ZTE thinks we should not spend meeting time in RAN2 now but only if RAN plenary tells us to. NSN thinks we did already spent a lot of time on technical solutions.
- MediaTek thinks that FGI was traditionally treated by RAN. MediaTek thinks we should send an LS to RAN raising the problem. Samsung thinks we should something to RAN including some technical details so that RAN has a basis to discuss. Samsung thinks if we could list a few solutions and indicate how complicated which solution is.

Rel-8, Idle Mode
- NSN thinks that when TDD and FDD eNBs are connected to different MMEs, the UE capabilities are anyway updated when changing from TDD and FDD.
- NSN thinks that when TDD and FDD eNBs are connected to a common MME there could be a better solution than Detatch/Attach.
- QC explains that their chipset already supports dual mode from Rel-8.

R2-115947 Handling of UE Capabilities supporting both TDD&FDD in the Network; Nokia Siemens Networks, Nokia Corporation; Disc;
- Samsung thinks I-2 (capability update with TAU) seems good for IDLE mode. For connected mode Samsung thinks the solution C-3 (minimum set during handover) looks interesting but might not work for legacy target eNBs. NSN agrees but does not see a big problem since legacy eNBs do not yet support inter-mode handovers. NSN wonder whether we do not anyway have to update the signaling between eNBs. Samsung understands that there would be no extension. The target could see from the current configuration that there is a mode change and could request new capabilities from the UE. NSN clarifies that also other connected mode solutions (providing multiple bitmaps) would also have impact on the eNB. Samsung thinks that in principle this is a nice solution. Only if in the future there would be a need for very frequent inter-mode handovers, the frequent fetching of capabilities might not be so nice. But that could be for Rel-12 or later.
- ZTE wonders whether the purpose of the TAU procedure is to remove the capabilities from the MME. NSN confirms that the consequence is that the MME does not provide capabilities to the eNB so that the eNB has to request them again from the UE. For inter-MME mobility the capabilities are not transferred, i.e., they are removed implicitly. But for intra-MME mobility, the UE would have to tell the MME explicitly to invalidate the capabilities. Samsung thinks we should forget about inter- and intra-MME case. The UE should just always rely on sending TAU when changing mode and when supporting different FGIs/capabilities in the new mode.

IPR2025-00720, OnePlus Ex. 1004

- QC thinks we should not go too much into details of the solutions.
- Broadcom wonders how the TAU solution would work with the restriction. NSN confirms that this would impact SA2 and we would of course not decide this in RAN2 but rather send an LS.
- QC explains that the TAU solution ensures that the capability "cache" in the MME is cleared. Upon next IDLE to Connected transition the eNB has to request the capabilities from the UE. Samsung clarifies that there is no period in between where the eNB would have the wrong capabilities.
- ZTE wonders which the minimum set in connected mode option a) would be. Samsung clarifies that we are talking about a period of maybe 40-50 ms after the handover. But if VoIP continuation is important maybe some bits should be kept.
- CMCC does not want to rule out any solutions at this point in time.

IDLE mode:

a) TAU: When the UE reselects to a cell of a different mode it invalidates the UE capabilities in the MME by sending a "EUTRAN capability change" in the TAU request.

Connected mode (for UEs setting FGI30=true):

a) UE may use different sets. But the target eNB detects that an inter-mode handover takes place, it uses a minimum set of capabilities and requests updated capabilities from the UE.
b) Multiple capability sets (ASN.1 impact)

=> Will send an LS to RAN describing the problem seen by some companies with respect to TDD/FDD capabilities. We will describe what is possible/required today (Detach/Attach in Idle; common set of capabilities in Connected (when FGI30=true)) and what the problems with those are. Will include the candidate solutions listed above but highlight that there are other solutions. Should also indicate (roughly) the complexity (ASN.1 impact or not; impact on legacy network (if any)

=> QC: A draft LS to RAN on FDD/TDD FGI handling can be provided in R2-116387 (QC)

R2-116037 E-UTRA capability handling for dual mode UEs (FDD/TDD); Clearwire; Disc;
R2-116028 UE capability handling for FDD/TDD UE; Samsung; Disc;
R2-116029 UE capability handling for FDD/TDD UE; Samsung; CR; 36.300; (0408); F;
R2-116035 UE capability handling for FDD/TDD UE; Samsung; CR; 36.331; (0826); F;
All 4 Tdocs not treated

- QC suggests having an Email discussion on the possible technical solution if RAN plenary decides that a solution is needed.

✉ **Email discussion [76#36] until next meeting to discuss how to realize handling of FDD/TDD capabilities. This email discussion will only be kicked-off after the RAN-54 if RAN agrees that a solution is needed. (QC)**

SPS

Ambiguity:

R2-116031 Correction on determining SPS occasions; Samsung, Ericsson, LG Electronics Inc., Nokia Siemens Networks, Qualcomm; CR; 36.321; (0523); F;

- CATT supports the CR and would like to have it from Rel-8
- New Postcom also supports this CR
- Panasonic suggests a magic sentence. Samsung thinks that the release has been discussed and the consensus offline was to go for Rel-10. Motorola thinks if we agree the RRC CR there is no need for the magic sentence since the Rel-8/9 UE could not use the problematic values anyway. Ericsson agrees with Motorola.

=> We stick to Rel-10 CR without magic sentence.

=> CR is agreed in R2-116388 CR0523 (with CR number in cover page)

R2-116032 Clarification on SPS intervals; Samsung, Ericsson, LG Electronics Inc., Nokia Siemens Networks, Qualcomm; CR; 36.331; (0824); F;

- CATT does not want to restrict the parameter range for TDD. CATT assumes if the eNB can handle it, it may still use these values. Samsung wonders how the eNB could handle it. Samsung agrees that it is not desirable to have restrictions but on the other hand these values are not so common either. NSN thinks that the Rel.8/9 formula is a one-shot

IPR2025-00720, OnePlus Ex. 1004

formula that does not look at wrap around. Therefore, SPS opportunities would appear in all radio frames.
- CATT thinks 30 ms is a typical value for video. NSN thinks that is does not work. So there is no point in hiding the problem.
- Samsung thinks the only way to address the CATT concern would be to apply the MAC CR also to Rel-8 and 9. ALU wonders how this could work with Rel-8 UEs out in the field.
- CATT wonders how video streaming would be supported? Ericsson thinks that it does not matter since in practice we don't have 30 ms periodicity in Rel-8/9

=> CR is agreed in R2-116389 CR0824 (with CR number in cover page)

R2-116033 Clarification on SPS intervals; Samsung; CR; 36.331; (0825); A;
=> CR is agreed in R2-116390 CR0825 (with CR number in cover page)

Reconfiguration:

R2-115891 Details on SPS reconfiguration; Panasonic; Disc;
- Ericsson wonders whether with the agreed MAC CR above, the behavior should be clear. Panasonic thinks that we would still need to discuss whether solution 1 or 2 would need to be applied. But the main question is whether we have to support it at all. Ericsson does not necessarily think that such a restriction is needed and thinks that the first interpretation is correct.
- Nokia wonders how reconfiguration would work given that we now agreed on counting the subframes. Therefore, Nokia supports the proposal. LG agrees. CATT and Huawei support the proposal. NSN thinks that it is probably dangerous for the eNB but wonder whether we really need to specify that it should not be used.
- ZTE wonders whether intra-cell handover can be used. Panasonic agrees but this would imply stopping SPS.
- Samsung thinks that we could specify it in RRC in the field description by saying that the EUTRAN does not provide this IE while SPS is activated. Huawei would like to capture it in procedural text. Samsung is also OK with that approach.

=> No need for the UE to support SPS reconfiguration i.e. sps-Config does not need to be supported when SPS is activated. Therefore, the eNB does not provide sps-Config while SPS is activated.

R2-115852 36.331 CR SPS reconfiguration; Huawei, HiSilicon; CR; 36.331; (0823); F;
- Samsung thinks this is not the way we usually specify this in RRC.
- Ericsson wonders whether this needs to be applied to all configurations or only to the problematic cases with 30, 60, … sf. Samsung thinks that also changing the number of processes could be problematic. Huawei would also like to have this limitation in general covering the entire IE.
- DoCoMo wonders whether we should allow it for the reconfiguration with mobility control info to ensure that the NW does not need to deactivate prior to handover.

=> LG wonders for which releases we should have this CR and would prefer from Rel-8. Samsung agrees.
=> We will capture this in the field description in RRC
=> A Rel-10 CR can be provided in R2-116391 CR0823, Cat A (Huawei)
=> A Rel-8 CR can be provided in R2-116392 CR0842, Cat F (Huawei)
=> A Rel-9 CR can be provided in R2-116393 CR0843, Cat A (Huawei)

R2-116392 36.331 CR SPS reconfiguration; Huawei, HiSilicon; CR; 36.331; 0842; F; Rel-8
=> CR is agreed

R2-116393 36.331 CR SPS reconfiguration; Huawei, HiSilicon; CR; 36.331; 0843; A; Rel-9
=> CR is agreed

R2-116391 36.331 CR SPS reconfiguration; Huawei, HiSilicon; CR; 36.331; 0823; A; Rel-10;
=> revised in R2-116523

R2-116523 36.331 CR SPS reconfiguration; Huawei, HiSilicon; CR; 36.331; 0823 R1; A; Rel-10
=> CR is agreed

R2-115786 Discussion on SPS; CATT; Disc;
R2-115787 Clarification on SPS; CATT; CR; 36.321; (0519); F;
R2-115968 36.321_CRxxxx_SPS occasion clarification (Rel-10); New Postcom; CR; 36.321; (0522); F;
All 3 Tdocs not treated

IPR2025-00720, OnePlus Ex. 1004

Parallel message transmission at re-establishment

R2-116089 Parallell reception of RRC messages during Re-establishment; Ericsson, ST-Ericsson; CR; 36.331; (0829); F;
=> revised in R2-116354

R2-116354 Parallell reception of RRC messages during Re-establishment; Ericsson, ST-Ericsson, Alcatel-Lucent; CR; 36.331; 0829; F;
- Not agreed

R2-116172 Parallel message transmission upon connection re-establishment; Samsung; Disc; 36.331;
- Ericsson wonders why all the listed changes would be needed. Ericsson thinks that no details need to be specified. We also don't have these sorts of clarifications for the initial establishment case. Samsung thinks that according to the current specification the parallel message would be discarded. Ericsson thinks that several companies indicated last meeting that the current specification would already support parallel message for the reestablishment case. Panasonic thinks that changes to L2 message handling would be required.
- Ericsson thinks that even though the procedures look slightly different exactly the same principle could be used.
- Samsung thinks the performance requirement only specifies the initial establishment case.
- ALU wonders what the issue with the handover is. Samsung wants to avoid that messages are lost. A message based on old security could trigger reestablishment. This could happen when a message overtakes another one. ALU does not think this note could solve any such ambiguities. Huawei agrees with ALU that there is no such handover problem.
- Huawei sees some problems for the reestablishment but would not like to restrict any other messages.

Discussion:
- DoCoMo thinks that shorter reestablishment time is not so important and wonders whether an optimization is needed. Therefore, DoCoMo tends to agree with Samsung.
- DoCoMo agrees with ALU that it will be difficult for the NW to avoid the handover problem. DoCoMo thinks that some additional UE behavior (discard all messages after receiving HO command) could be discussed.
- Ericsson thinks that if a UE strictly follows the specification it supports the parallel message transmission. Some UEs don't do it today and therefore Ericsson is willing to limit it for Rel-8/9. However, this should not justify having a limitation also for Rel-10 and later. Samsung does not agree that UEs following the current specification would support it. QC supports Samsung's understanding. There is no testing for this parallel message transmission.
- MediaTek thinks we always designed LTE to be as latency efficient as possible. Even if some UEs in Rel-8/9 have problems we should at least for Rel-10 try to improve it. MediaTek also thinks that some operators are not happy with reestablishment delays. So, we should try to improve it.

a) the UE shall support parallel message reception from Rel-10 (not in Rel-8/9): 8 companies
b) the UE does not need to support parallel message reception in Rel-8/9/10: 14 companies

=> For Rel-8/9/10 the UE does not need to support parallel message reception for RRCConnectionReestablishment

R2-116174 Clarification on parallel message transmission upon connection re-establishment; Samsung; CR; 36.331; (0838); F; cat.A REL-9/REL-10 missing?;
- NSN thinks that the change does not reflect the agreement and needs to be changed.
- NSN would like to formulate it differently.
- Samsung wonders whether we can also conclude on the handover case. ALU thinks for the handover case the UE behavior is clearly understood. No change is needed. Panasonic wonders whether we should specify that the UE may discard something.

=> CR should only capture the reestablishment case
=> Can discuss how to capture the agreement. An updated CR can be provided in R2-116395, CR0838 (Samsung)

R2-116395 Clarification on parallel message transmission upon connection re-establishment; Samsung; CR; 36.331; 0838; F; cat.A;
=> CR is agreed
=> Rel-9 shadow CR can be provided in R2-116550 CR0844

IPR2025-00720, OnePlus Ex. 1004

=> Rel-10 shadow CR can be provided in R2-116551 CR0845

R2-116550 Clarification on parallel message transmission upon connection re-establishment; Samsung; CR; 36.331; 0844; F; cat.A;
=> CR is agreed

R2-116551 Clarification on parallel message transmission upon connection re-establishment; Samsung; CR; 36.331; 0845; F; cat.A;
=> CR is agreed

Other

R2-115774 Correction on notation of SRS transmission comb; ZTE Corporation; CR; 36.331; (0816); F;
- NSN thinks that the CR looks correct.

=> It should be mentioned on the cover sheet that RAN1 changed the notation for Rel-10 and we are aligning it.
- Ericsson wonders whether the CR is based on the Rel-10 specification. ASN.1 looks like Rel-9.

=> An update addressing the issues listed above can be provided in R2-116396, CR0816

R2-116396 Correction on notation of SRS transmission comb; ZTE Corporation; CR; 36.331; 0816; F;
=> Change “RAN#66bis” to “RAN1#66bis”
=> With this change the CR is agreed in R2-116513, CR0816, R1

R2-115778 Clarification on "handover to E-UTRA"; ZTE Corporation; CR; 36.331; (0818); F;
- Ericsson thinks that all changes are editorial. NSN agrees. ZTE thinks that the second change is not editorial. Currently intra-LTE HO case is missing in the field description. NSN wonders whether there is any ambiguity. It is already covered.
- CATT would like to agree on the second change.

=> Not agreed

R2-115777 Clarifications of reception of the Paging message in RRC_CONNECTED; NTT DOCOMO, INC.; CR; 36.331; (0817); F;
- Nokia agrees to the intention but thought it was already obvious from the specification. Nokia thinks it is not needed to clarify this in Rel-8 but rather in Rel-10. QC would also support the CR from Rel-10. LG thinks this clarification is helpful for the implementation. Samsung also thinks that this was already obvious. Also because we did not specify any relaxation. Motorola thinks no CR is needed.

=> RAN2 agrees to the observation but sees no need to capture it in the specification (already clear).
=> Not agreed

R2-115779 Clarifications of reception of the Paging message in RRC_CONNECTED; NTT DOCOMO, INC.; CR; 36.331; (0819); F;
=> RAN2 agrees to the observation but sees no need to capture it in the specification (already clear).
=> Not agreed

R2-115780 Clarifications of reception of the Paging message in RRC_CONNECTED; NTT DOCOMO, INC.; CR; 36.331; (0820); A;
=> RAN2 agrees to the observation but sees no need to capture it in the specification (already clear).
=> Not agreed

R2-116038 Clarification of list sizes in measurement configuration stored by UE; Ericsson, ST-Ericsson; CR; 36.331; (0827); F;
- Samsung thinks that one part of this clarification is already covered by the note. Therefore, the first sentence might not be needed. For the second change we should use a reference to our own specification.
- Huawei thinks that RAN4 only specifies the minimum requirements. Does this change mean that UE only supports the minimum requirement. ST-E agrees to this understanding.
- Samsung is not sure there is a need for this clarification. ST-E agrees that the first sentence is not needed but sees a need for the second sentence. ST-E thinks the sizes in ASN.1 appear very explicit and might be misinterpreted.
- Huawei wonders what happens if the RAN4 requirements are changed?

=> Agree to have a CR with the second sentence. Should change the reference to section 11.1 where we also specify requirements. An updated CR can be provided in R2-116397 CR0827 (Ericsson)

IPR2025-00720, OnePlus Ex. 1004

R2-116397 Clarification of list sizes in measurement configuration stored by UE; Ericsson, ST-Ericsson; CR; 36.331; 0827; F;
- ALU wonders whether there is really an impact on the network.
=> The box should not be ticked and the impact analysis should be updated.
- NSN suggests to update he wording of the cover page. Is “at least” really needed.
=> Update wording on the cover page
=> An update can be provided in R2-116516, CR0827 R1 (Ericsson)

R2-116516 Clarification of list sizes in measurement configuration stored by UE; Ericsson, ST-Ericsson; CR; 36.331; 0827 R1; F;
- Typo corrected in R2-116521

R2-116521 Clarification of list sizes in measurement configuration stored by UE; Ericsson, ST-Ericsson; CR; 36.331; 0827 R2; F;
=> CR is agreed

R2-116163 CR to 36.331 on cdma2000 references; Nokia Siemens Networks; CR; 36.331; (0836); F;
- Huawei thinks the second change is not needed since the reference is not related to RRC. NSN explains on the cover sheet that the old version is deprecated and it was agreed earlier to have CRs when a referenced point-release of 3GPP2 changes. Huawei thinks that the editor’s not is only applicable for the first change.
- ALU wonders at which point we would stop making changes when 3GPP2 deprecates releases. NSN thinks we should update it since this process ensures that we become aware of changes that might cause potential inter-operability issues.
- NSN thinks that alternatively we could remove the version number and implicitly refer to the latest release.
=> Can discuss offline the CR to 36.331 on cdma2000 references. Which is the best way to solve this. Can come back during this week. (NSN)
=> After offline discussion NSN reports that we should follow the way CT1 handles this. Based on that, we could have these updates. But there could be further open issues (CDMA2000 band classes) and it is suggested to think about this further and to make all updates later.
=> R2-116506 (was supposed to be the revision of R2-116163) was withdrawn
=> R2-116507 (was supposed to be the revision of R2-116164) was withdrawn

R2-116164 CR to 36.331 on cdma2000 references; Nokia Siemens Networks; CR; 36.331; (0837); A;
- up to offline discussion.

R2-116249 Correction to the number of soft channel bits; Nokia Siemens Networks, Nokia Corporation, NTT DOCOMO, LG Electronics Inc., Samsung, Fujitsu; CR; 36.306; (0077); F;
- NSN clarifies that also for BCCH we need a soft buffer.
=> The CR is agreed in R2-116398, CR0077

R2-116327 Clarification of first bit in BIT STRING definitions; Qualcomm Incorporated; CR; 36.355; (0067); F;
=> The CR is agreed in R2-116399, CR0067

R2-116329 Clarification of first bit in BIT STRING definitions; Qualcomm Incorporated; CR; 36.355; (0068); A;
=> The CR is agreed in R2-116500, CR0068

R2-116133 36.304_CR_xxxx Correction to IRAT cell re-selection procedure; Samsung; CR; 36.304; (0169); F;
- Nokia wonders whether the intention is only to change the GERAN behavior (for UTRAN it is also clear from the reference). If so, Nokia thinks the change is not correct. DT agrees with Nokia that the change would be incorrect for the GERAN case. Huawei agrees.
- Huawei thinks this issue was discussed in Rel-8 and it was agreed to add the reference.
=> Not agreed

Late or withdrawn

R2-116104 FGI bit handling for TDD/FDD dual mode UEs; Renesas Mobile Europe Ltd.; Disc; withdrawn

R2-116322 Further discussion on FDD/TDD dual mode UEs; Qualcomm Incorporated; Disc; not treated

IPR2025-00720, OnePlus Ex. 1004

R2-115854 36.321 CR SPS Occasions Calculation; Huawei, HiSilicon; CR; 36.321; (0520); F;
R2-115920 RRC connection re-establishment during SMC procedure; Qualcomm Incorporated; Disc;
R2-116093 Clarification on RLF reporting; MediaTek; Disc;
R2-116291 PDSCH in MBSFN subframes; Samsung; Disc;
All 4 Tdocs are withdrawn

6.7 WI: Other LTE Rel-10 WIs

e.g. (SONenh_LTE-Core, leading WG: RAN3, REL-10, started: March 10, closed: June 11, WID: RP-101004)

No contributions.

7 LTE Release 11

7.1 WI: Carrier Aggregation Enhancements (RP-111115)

(LTE_CA_enh-Core, leading WG: RAN1, REL-11, started: March 11, target: Sep.12, WID: RP-111115)
Agreement status is reflected in running stage-2 CR: R2-115595 (after RAN2-75bis)

7.1.1 General

E.g. Running Stage-2 CR
R2-115695 36.300 CR introducing LTE Carrier Aggregation Enhancements (status after RAN2 #75bis); Nokia Corporation; CR; 36.300; B;
output of email discussion [75b#01]; "running CR", CR will not be provided to RAN #54, so no CR number will be allocated for RAN2 #76;

revised in R2-116503 (see email discussion [76#]07)

7.1.2 Multiple timing advance

7.1.2.1 Timing- and Pathloss Reference

What is the timing reference for an SCell? What is the pathloss reference for an SCell? Need for RLM on SCells that are associated with an SCell-only TA group?

Timing Reference
Timing Reference (for initial Msg1 timing and for maintaining timing lock):
a) PCell?
b) SIB2-linked SCell?
c) Scheduling cell?
d) Configured by eNB?
e) Autonomous selection by UE (in same TAG)?

R2-115803 Timing and Pathloss reference; Nokia Siemens Networks, Nokia Corporation; Disc;
Proposal 2
- ZTE wonders whether the timing reference changes whenever a new RA is performed. NSN confirms that the latest RA determines. Samsung wonders whether it is needed to tie the timing reference to the RA SCell? As long as it is well defined, it is sufficient. NSN thinks this is one way of defining it and eNB is in full control. IDT sees some advantage with this approach as there will never be a jump in timing. Samsung wonders whether this would be problematic if the eNB probes RA on all SCells to test whether TAs are still aligned.
- Ericsson wonders what happens if that SCell is deactivated. NSN thinks that the eNB is in control and can change to another cell before deactivating the current timing reference.

R2-116067 Discussions on timing reference for SCell(s) in sTAG; Samsung; Disc;

IPR2025-00720, OnePlus Ex. 1004

- NSN wonders whether a UE performing RA over another SCell, would the UE still use the dedicated SCell as timing reference. Samsung confirms. Panasonic wonders whether there are problems when the UE switches to another timing reference (upon deactivation). Would the UL timing jump when the DLs have different timing. Samsung does not consider this a problem. And it is not a unique problem to this solution. IDT does not agree that all solutions have this problem. By using the SCell on which RA was used, the jump would be under control.

R2-116085 Timing reference for SCell time alignment; Ericsson, ST-Ericsson; Disc;

- Nokia wonders whether this means that the UE does not send the preamble at the time of receiving the SCell downlink but rather at the expected time of the transmission time of the PCell. Ericsson confirms.
- Nokia wonders whether it can be assumed that all DL transmission points from all antennas are simultaneous. Ericsson thinks that RAN4 has agreed on that they must be in a very short time frame 1,3µs. Motorola thinks it can be up to 31.3µs for RRHs.
- Panasonic wonders whether this is also for timing lock or only for initial timing reference. Ericsson confirms that it applies in general.
- CATT wonders whether this mechanism requires UL and DL delay to be the same. Ericsson thinks it would work even if there is some difference between UL and DL propagation delay.
- Huawei wonders whether Ericsson assumes that autonomous adjustment of SCells is disabled. Ericsson thinks that the UL transmission timing still follows the downlink timing of the PCell. ZTE thinks that today the UE would adjust the TA value autonomously but with this mechanism it would not.

Discussion:
b) SIB2-linked SCell where the RA was performed?: 15 companies
c) Any SCell in the TAG, explicitly configured by eNB?: 3 companies
d) The activated SCell with the lowest index in the TAG?: 4 companies
e) The only SCell configured with configured RA => Not an option
f) combination of b) and d)

- Ericsson thinks that also with option d) there would be no significant jumps since the maximum downlink timing difference is very small (as defined by RAN4). Huawei agrees.
- Ericsson wonders whether e) is not an unnecessary restriction to the eNB. Nokia thinks this should be up to the eNB to configure only one RA. Nokia thinks this is a subset of b). So, we could go for b) and the eNB could use it as e).
- Samsung wonders what happens if the deactivation timer for a timing reference expires? NSN thinks for the error case (eNB did not expect timer to expire) the same problem exists for option d). Samsung indicates that the difference is that there is still a timing reference in option d). It is just not known to the eNB at this point in time.
- Ericsson thinks that option d) seems to have advantages over option b) since it does not require RA when deconfiguring the timing reference. Samsung agrees and thinks that option d) can still be configured to behave like option b).
- Huawei thinks that error case handling for the chosen option is still not clear and would like to add an FFS. Chairman thinks that in general companies can revisit decisions if problems are identified and that also applies here.

Agreements
1 UL timing is same for all the serving cells within the group (all UL SCells transmit simultaneously)
2 There is at any point in time one DL timing reference per group which is used as reference for the TA command and to lock the UL transmission to (same as PCell for Rel-10).
3 The SCell used as downlink timing reference must be known by the network.
4 The SCell used as downlink timing reference must be in the same time alignment group.
5 The SIB2-linked SCell where the RA was performed is used as timing reference for all UL SCells in the time alignment group. (error cases still need more discussion)

Pathloss Reference and RLM on SCells
Pathloss Reference (for an SCell belonging to an SCell-only TA group)
a) PCell?

IPR2025-00720, OnePlus Ex. 1004

b) SIB2-linked SCell?
c) Scheduling cell?
d) Configured by eNB?

Radio Link Monitoring for SCell that is used as pathloss reference or timing reference?

R2-116086 On Pathloss reference and RLF/RLM on SCells; Ericsson, ST-Ericsson; Disc;
- Ericsson confirms IDTs and Samsungs understanding that the pathloss reference of an SCell with different timing than the PCell cannot use the PCell as timing reference.

R2-116110 Downlink Pathloss Reference and RLM for SCells of a Secondary TA Group; InterDigital Communications; Disc;
Proposal 1:
- ITRI wonders whether inter-band cells cannot be grouped into one TA groups. IDT thinks this is the case that they cannot.

Discussion:
a) PCell => cannot be used for SCells of an SCell-only TA group
b) The pathloss reference for an UL SCell in an SCell-only TA group is the SIB2-linked DL SCell?: 17
c) eNB may configured a common pathloss references for all SCells in a TAG (if not configured, the UE would use the SIB2 linked)?: 5

- Samsung thinks that the PCell could still be used if the interference on all SCells in the TAG is good high to obtain pathloss. IDT and ZTE think that if we have a SCell with very high interference there is not point in having the SCells. Ericsson thinks that according to RAN4 requirements the SIB2-linked SCell can always be used as pathloss reference for range extension up to -6dB. Huawei agrees. NSN agrees. For Rel-10 it was introduced primarily to reduce the need for multiple pathloss estimation.
- Panasonic wonders whether b) means that different UL SCells have different pathloss references. Huawei confirms.
- Huawei thinks that SCells from different bands could be in the same TA group but they could not share a pathloss reference. Therefore, c) does not work. Ericsson agrees.

Need for RLM on SCells belonging to a SCell-only TA group?
- IDT thinks that the UE must be sure that it has a valid pathloss reference before performing a RA on an SCell. IDT would like to ask RAN4. IDT thinks the difference to Rel-10 is that we now have the preamble transmission. Huawei thinks since we only have PDDCH ordered RA there is no difference to Rel-10. Ericsson agrees.
- LG would like to verify with RAN4 whether timing accuracy can be guaranteed without SCell RLM. Huawei thinks that RLM was not designed for ensuring timing accuracy.
- DoCoMo thinks that we should focus on the case that the eNB fails to monitor the UE and to actively stopping UL transmission if needed. DoCoMo considers it too early to rule out RLM on SCells. NSN is OK to leave it open for now.

Agreements
1 As a baseline, the pathloss reference for an UL SCell in an SCell-only TA group is the SIB2-linked DL SCell (cannot be configured).
It is FFS whether it is also possible to explicitly configure the pathloss reference within the same TA group.

R2-116248 Consideration on radio link failure handling on SCell; Huawei, HiSilicon; Disc;
R2-115739 Timing reference cell selection for TA group; New Postcom; Disc;
R2-115758 Pathloss and DL timing reference for MTA; ZTE Corporation; Disc;
R2-115788 Timing and pathloss reference in sTAG; CATT; Disc;
R2-115815 Timing reference for sTAG; Potevio; Disc;
R2-115840 Timing Reference for SCell-only TA group; Huawei, HiSilicon; Disc;
R2-115842 Pathloss Reference for SCell-only TA group; Huawei, HiSilicon; Disc;
R2-115879 The DL Timing reference cell for SCell TA group; Panasonic; Disc;
R2-115895 Timing reference for sTAG; HT mMobile Inc.; Disc;
R2-115953 Timing reference and Pathloss reference; Sharp; Disc;
R2-115970 Timing and Pathloss Reference for SCell; Research In Motion UK Limited; Disc;
R2-115981 Number of TAGs and timing references; New Postcom; Disc;
R2-116045 Reference for Timing and Path loss with TAG management; Pantech; Disc;

IPR2025-00720, OnePlus Ex. 1004

R2-116055 Initial Timing Reference and Pathloss Reference for SCell UL; ITRI; Disc;
R2-116090 Discussion on specific pathloss/timing reference cell; MediaTek; Disc;
R2-116109 Downlink Timing Reference for SCells of a Secondary TA Group; InterDigital Communications; Disc;
R2-116179 Timing reference for SCell TA group; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
R2-116180 Pathloss reference for SCell TA group; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
R2-116218 Timing and Pathloss References for SCell; ETRI; Disc;
R2-116222 Timing and pathloss reference in Scell TA group; LG Electronics Inc.; Disc;
R2-116271 Timing and pathloss reference for SCell to support MTA and inter-band CA; Intel Corporation; Disc;
R2-116300 Pathloss reference for SCell; Samsung; Disc;
R2-116314 draft LS on Pathloss Reference for SCell-only TAG; Huawei; LSout;
All 23 Tdocs not treated

7.1.2.2 RACH procedure

MSG2 location for SCell RA(waiting for RAN1 LS!)? CBRA on SCells?

Msg2 location for SCell RA
Waiting for RAN1 Reply LS?

- DoCoMo wonders whether we really need cross carrier scheduling given that we jus decided that SIB2 DL can always be used as timing and pathloss reference. Huawei think that that applied only to CRS but not to PDCCH. Ericsson clarifies that the same threshold applies for CRS and PDCCH. Chairman thinks the same RAN4 performance requirement applies for CRS and PDCCH. NSN thinks that for CRS one can use shift to reduce the interference. That makes CRS more robust.

PDCCH for Msg2 on same cell as Msg1 (SIB2-linked):
a) Msg2 PDCCH addressed to RA-RNTI (CSS) on the same SCell as Msg1?
PDCCH for Msg2 on different cell than Msg1 possible (PDCCH-less SCell-only TA group supported):
b1) Msg2 PDCCH addressed to RA-RNTI (CSS) on the PCell?
b2) Msg2 PDCCH is addressed to RA-RNTI (CSS) on a scheduling P/SCell of the SCell of Msg1?
b3) Msg2 PDCCH is addressed to C-RNTI (USS) on the PCell or on an SCell configured with PDCCH?"

R2-115804 RA procedure on SCell; Nokia Siemens Networks, Nokia Corporation; Disc;
R2-116068 Discussions on Msg2 location for SCell RA; Samsung; Disc;
R2-115743 Random Access Response on an SCell; Ericsson, ST-Ericsson; Disc;
R2-115835 Solutions for Corss-Scheduled Msg2; Huawei, HiSilicon; Disc;
All 4 Tdocs not treated

R2-115754 MSG2 Position for MTA RA; ZTE Corporation; Disc;
R2-115817 Considerations on CBRA on SCell and Msg2 for SCell RA; Potevio; Disc;
R2-115880 Message 2 reception indicated by C-RNTI; Panasonic; Disc;
R2-115969 Random Access Response in multiple TA; Research In Motion UK Limited; Disc;
R2-115973 Discussion on Msg2 for SCell RA; New Postcom; Disc;
R2-116112 MSG2 Reception for RACH Procedure for SCells; InterDigital Communications; Disc;
R2-116219 Contention based RA procedure in Multi-TA; Sharp; Disc;
All 7 Tdocs not treated

CBRA on SCells
Waiting for RAN1 Reply LS?
R2-116299 CBRA on SCell; Samsung; Disc; [Moved here from 7.1.2.3]
R2-115789 CBRA on SCell; CATT; Disc;
R2-116111 MSG1 Transmission for RACH Procedure for SCells; InterDigital Communications; Disc;
All 3 Tdocs not treated

Parallel transmission of RACH and PUCCH/PUSCH/SRS
a) RA preamble and PUSCH?
b) RA preamble and PUCCH?
c) RA preamble and SRS?

IPR2025-00720, OnePlus Ex. 1004

R2-116184 Simultaneous transmissions of RACH and PUCCH/PUSCH/SRS; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
- Renesas thinks that RA on SCell will happen rarely.
- Samsung wonders what the difference to Rel-10 is. Samsung thinks that for Rel-10 we have similar situations but the power scaling is not specified. Why would we specify for Rel-11? Renesas thinks also in Rel-10 there are no restrictions and the eNB may request RA simultaneously with UL PUSCH on SCell. LG agrees that there is no big difference between Rel-10 and Rel-11 and see no need to support parallel transmission.
- Panasonic shares NSN's view. For Rel-11 there is the use case that a RA is needed to time align an SCell. That is a difference compared to Rel-10. Ericsson agrees that this is a quite frequent case which would cause a decrease in throughput if parallel transmission is not supported. Huawei would prefer a simpler solution.
- Panasonic agrees with Samsung that it could be in eNB control but it should be clear that it would cause restrictions to not support parallel transmissions and having to account for it in the eNB. We should indicate this to RAN1 since they will have to decide anyway. ZTE agrees. MTK agrees. QC agrees that we should send an LS to RAN1 in which we explain what restriction would occur in which cases. NSN agrees.

What could be the priority order for allocating power?
- Ericsson: RACH – PUCCH – PUSCH
- Samsung: PUCCH – PUSCH – RACH

=> Will send an LS to RAN1 indicating in which cases parallel transmission of RACH, PUCCH, PUSCH, SRS could be useful (scenarios). Indicate what would be required if parallel transmission is not supported. A draft LS will be provided in R2-116501 (ALU)

R2-115882 Parallel PRACH and PUSCH/PUCCH transmission; Panasonic; Disc;
R2-115782 RACH procedure on SCell; Renesas Mobile Europe Ltd.; Disc;
R2-115932 Parallel Transmission of Preamble and UL Data; Ericsson, ST-Ericsson; Disc;
R2-116311 Collision between PUCCH and SCell PRACH; Fujitsu; Disc;
R2-115755 Discussion on Scell RACH collide with other UL transmission; ZTE Corporation; Disc; [Moved here from 7.1.2.4]
All 5 Tdocs not treated

Other triggers for RA
R2-115890 Initiating RA procedure on SCell; HT mMobile Inc.; Disc;
R2-116225 Scell RACH trigger; LG Electronics Inc.; Disc;
Both Tdocs not treated

RA Failure on SCell
Report RA Failure to higher layers when detecting RA problems?
Declare TAT out-of-sync when detecting RA problems?
R2-116308 Failure of RACH on SCell; Samsung; Disc;
R2-115793 SCell RA failure; CATT; Disc;
R2-116310 Remaining issues on SCell RA procedure; Fujitsu; Disc;
All 3 Tdocs not treated

Other
R2-116309 Trigger of RA procedure on SCell(s); Fujitsu; Disc;
not treated

Late or withdrawn
R2-116297 CBRA on SCell; Samsung; Disc;
R2-116306 Failure of RACH on SCell; Samsung; Disc;
R2-115974 Discussion on Msg2 for SCell RA; New Postcom; Disc;
All 3 Tdocs are withdrawn

7.1.2.3 TAT and TA Group handling

Signalling for configuration and reconfiguration of TA groups (RAR, MAC or RRC)?
Is the type-0 SRS configuration for the SCell released upon SCell-TAT expiry? Is TAT configuration kept when no SCells remain in a TA group?

IPR2025-00720, OnePlus Ex. 1004

Signalling for TA Group handling

a) RAR is used to (re-)associate SCell with TA group?
b) MAC CE is used to (re-)associate SCell with TA group?
b) RRC signalling is used to (re-)associate SCell with TA group?

R2-115805 TA group signalling; Nokia Siemens Networks, Nokia Corporation; Disc;
- NPC thinks that for most cases the network could already determine the suitable TA group without performing RA. NSN wonders for which cases it is not needed. NSN thinks in most cases there will be only one SCell in a group. Ericsson assumes that we only introduced grouping since we expect more than one SCell in a group.

Proposal 1:
- Panasonic wonders what the timing- and pathloss reference is before the RAR is received. NSN clarifies that the timing reference would be the SIB2 linked DL.

R2-116087 TA grouping mechanism; Ericsson, ST-Ericsson; Disc;
- Renesas agrees that TA group handling is a MAC issue and should be handled there.
- Ericsson explains that the groups/timers are configured in RRC but MAC associated the SCells with the groups. Huawei wonders whether this could result in empty groups. Ericsson confirms.

R2-115827 Signalling for the TA Group Management; Huawei, HiSilicon; Disc;
- NPC thinks that the longer RRC delay could lead to more interference while the UE still applies the old TA. Huawei thinks the detection of that the SCell should be associated with another group will take much longer.
- Ericsson thinks since MAC layer handles TA values it should also be responsible for handling TA groups. Huawei thinks for the initial grouping the RRC does not need any information from MAC about TA values. Ericsson thinks that for splitting a group, knowledge about the TA value is needed. Huawei thinks that for this case it is anyway required to configure a new group with RRC. Ericsson assumes that the group may already be there.
- QC wonders whether the eNB can really know to which group the SCell belongs. But in general QC agrees that RRC should be good. Samsung agrees that this should be quite static information. Panasonic agrees that TA group change should be rare. ZTE agrees that if we need to reconfigure then RRC would still be sufficient.
- NSN thinks that if the assumption is that the eNB can always know which group to associate with, then RRC signalling would be enough.
- Ericsson thinks that e.g. in the case of repeaters it is not possible to based the grouping decision on deployment.
- Nokia clarifies that according to RAN4 requirements the UE is not allowed to adjust its transmission timing two quickly (e.g. when entering repeater coverage). So, even with RRC signalling there should be enough time to adjust and reconfigure.
- Ericsson is also a bit concerned about the RRC overhead.
- Ericsson wonders what the argument is against MAC signalling. ZTE thinks that the main reason is to keep the solution simple. Ericsson thinks for the cases where TA group needs to be changed, MAC is simplest.
- Ericsson wonders how RRC would receive TA information from MAC. QC thinks that RRC layer can obtain information from all other layers. QC thinks that TA grouping can be considered semi-static and for that we usually use RRC.

Agreements
1 RRC signalling is used to (re-)associate SCell with a TA group

R2-115738 Considerations on TA group (re)configuration; New Postcom; Disc;
R2-115756 TA group reconfiguration; ZTE Corporation; Disc;
R2-115791 Signaling for TAG configuration; CATT; Disc;
R2-115812 Signalling for TA group configuration; Potevio; Disc;
R2-116181 TA group management; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
All 5 Tdocs not treated

Configuration management

Keep or release type-0 SRS configuration for the SCell released upon SCell-TAT expiry?

IPR2025-00720, OnePlus Ex. 1004

How to ensure that TAT is not running when the last SCell of the group is removed from the TAT group? Release TAT configuration? Or explicitly stop timer?
At SCell-only TAT expiry SCell is not deactivated?

R2-115740 Considerations on SCell-only TAG and corresponding TAT; New Postcom; Disc;
- noted

R2-116069 Discussions on TAT and TA Group handling; Samsung; Disc;
Proposal 1:
- NSN wonders that given we use RRC for group handling, the TA value could also be removed. Nokia thinks this is a stage-3 detail. Samsung is OK to discuss this aspect later.

Proposal 2:

Discussion:
- Samsung would like to align with the SRS handling in Rel-10. Huawei is not sure this is the same thing since there is no CSI but only SRS on SCells. Ericsson asks whether for PCell TAT expiry we do not also release the SRS configuration of the SCell.
- IDT has a preference to release the configuration and thinks it is not clear there would be a real gain. In that case, alignment with other functionality is also a clear benefit.

a) Upon SCell-TAT expiry the UE releases the type-0 SRS configuration for the SCell: 17 companies
b) Upon SCell-TAT expiry the UE keeps the type-0 SRS configuration for the SCell: 7 companies

Agreements
1 Upon SCell-TAT expiry the UE releases the type-0 SRS configuration for the SCell

R2-115757 TAT management; ZTE Corporation; Disc;
R2-115843 Release type-0 SRS configuration upon SCell-TAT expiry; Huawei, HiSilicon; Disc;
R2-115783 Discussion on TAT and TAG handling; Renesas Mobile Europe Ltd.; Disc;
R2-115790 SCell TAT expiry; CATT; Disc;
R2-115806 SRS configuraiton upon TAT expiry; Nokia Siemens Networks, Nokia Corporation; Disc;
R2-115813 SRS configuration and TAT handling for sTAG; Potevio; Disc;
R2-115883 type-0 SRS resources after Scell TA timer expiry; Panasonic; Disc;
R2-115893 Discussion on open issues related to SCell-TAT; HT mMobile Inc.; Disc;
R2-116054 UE Actions when the TAT associated with sTAG Expires; ITRI; Disc;
R2-116084 SCell TA timer handling; Ericsson, ST-Ericsson; Disc;
R2-116270 TAT handling upon the removal of the last SCell in sTAG; LG Electronics Inc.; Disc;
R2-116312 Type-0 SRS and TAT configurations handling issues; HTC; Disc;
R2-116340 TA group configuration and reconfiguration; HTC; Disc;
All 13 Tdocs not treated

Other
R2-116182 TAT expiry of SCell TA group and TAT maintenance; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
R2-116053 Discussion on the UL transmission timing in a TAG; ITRI; Disc;
R2-116046 Confirmation of TA validity; Pantech; Disc;
All 3 Tdocs not treated

Late or withdrawn
R2-116224 Signaling for TA group (re-)configuration; LG Electronics Inc.; Disc;
R2-116339 Reconfigure TA grouping; HTC; Disc;
Both Tdocs are withdrawn

7.1.2.4 Other

Other issues related to Multiple TA

Time Alignment Command MAC CE for SCells
R2-115747 MAC Downlink Signalling for Multiple TA; Nokia Siemens Networks, Nokia Corporation; Disc;
[Moved here from 7.1.2.3]
R2-115810 TA command in Rel-11; Potevio; Disc;

IPR2025-00720, OnePlus Ex. 1004

R2-115792 TAC MAC CE; CATT; Disc;
R2-116113 MAC Timing Advance Command Control Element for SCells; InterDigital Communications; Disc;
All 4 Tdocs not treated

PHR
R2-115807 PHR triggers and reporting in the context of multiple TA; Nokia Siemens Networks, Nokia Corporation; Disc;
R2-116303 Discussions on PHR for SCell in Rel-11; Fujitsu; Disc;
R2-116227 PHR and TAT; LG Electronics Inc.; Disc;
All 3 Tdocs not treated

Other
R2-116143 Support for Remote Radio Head operation; Motorola Mobility; Disc;
R2-115977 PUCCH on SCell; New Postcom; Disc;
R2-116228 RACH applicability and TA group; LG Electronics Inc.; Disc;
R2-116251 Handling of deactivation timer for multiple TA; ASUSTeK; Disc;
All 4 Tdocs not treated

7.1.3 Other

Not related to multiple TA

Cell-Specific TDD Configuration
R2-115823 DRX operation with different TDD UL/DL configurations; ASUSTeK, Nokia Siemens Networks, Nokia Corporation; Disc;
R2-116132 Cell specific TDD configuration Inter-band Carrier Aggregation; Samsung; Disc;
R2-116024 TDD Inter-band Carrier Aggregation; CATT; Disc;
All 3 Tdocs not treated.

PHR
R2-116105 Pcmax Inclusion for Inter-band PHR; InterDigital Communications; Disc;
R2-116107 Triggers and Timers for Inter-band and RRH PHR; InterDigital Communications; Disc;
Both Tdocs not treated

Other
R2-116302 An issue of power calculation; Samsung; Disc;
R2-116304 Draft LS on Tx architecture; Samsung; Disc;
R2-116269 Considerations on CA Signaling Improvement; Intel Corporation; Disc;
R2-116313 Handling SCellDeactivationTimer during RACH on SCell; HTC; Disc;
All 4 Tdocs not treated.

Late or Withdrawn
R2-116144 Measurements for multi-band Carrier aggregation; Motorola Mobility; Disc;
withdrawn

Continuation until next meeting

- ✉ **One week email discussion [76#07] to capture the agreements on CA from this meeting in the running stage-2 CR (Nokia). Endorsed version can be provided in R2-116503.**

7.2 WI: Enhancements for diverse data applications (RP-111372)

(LTE_eDDA-Core, leading WG: RAN2, REL-11, started: March 11, target: Sep.12, WID: RP-111372)
TR 36.822 captures agreements made so far. Version 0.1.0 capturing agreements of RAN2-75bis in R2-115598.
Any problems observed for "background" or "IM" traffic?

Traffic Traces and Models
New traces:
Include the new trace statistics?

IPR2025-00720, OnePlus Ex. 1004
Page 131 of 700

R2-115855 Trace statistics for instant message traffic; CMCC; Disc;
- CATT agrees to include the results in the TR.
- CATT thinks that results from different operating system and applications should be averaged.
- Intel wonders whether the trace shows TCP ACKs. CMCC clarifies that they are not included. Therefore, when performing simulations based on this model, TCP ACKs should probably be added.
- Huawei thinks that so far we tried to distinguish active and inactive (background) users. Would that be possible to do here? CMCC thinks it is not possible from this trace but probably not necessary either since it reflects realistic mix of the two groups.
- RIM wonders whether the graph would go on top of the background or interactive graphs? We could either just add another separate graph or ask CMCC to separate the CDF.
- CMCC clarifies that they captured only the packets related to QQ based on port numbers.

=> Can capture the CDFs of packet inter-arrival and packet size of IM traffic (mobile QQ application) in the TR36.822. Can be checked whether it fits into the collection of CDFs for interactive applications. Otherwise, can consider adding a separate graph.

R2-116171 Trace data analysis for eDDA; Renesas Mobile Europe Ltd.; Disc;
- Renesas clarifies that the trace is taken from a HSPA UE on the UE side on IP level.
- RIM asks Renesas to forward the Matlab files.
- Samsung wonders whether it would not be better to look at the same mix of applications when trying to understand the behaviour of different operating systems.

=> Can include the traces in the TR.

General Discussion:
- LG wonders whether companies have any view on how much traffic is generally in UL vs. DL. RIM clarifies that this information can be derived from the annex in the TR.

=> We conclude that the CDFs we have captured seems sufficient and don't see a big need to add further CDFs.

Other input:

R2-116268 Background traffic from Android OS; NTT DOCOMO, INC.; Disc;
- Broadcom wonders how many such UEs DOCOMO observes in their network generating only such rare packets. DOCOMO thinks that this behaviour is quite common and almost all UEs generate such a pattern.
- RIM indicates that this behaviour is a bit different from the traces captured so far. Samsung thinks the behaviour is similar to the Facebook application results they presented last meeting. Samsung thinks the results should be captured.
- DoCoMo would prefer to include the results separately from the captured CDFs for background traffic.
- Intel sees no need for separating it since it fits well into the background class CDFs captured so far. So, it can be captured as another trace in the "Background" section.
- Samsung agrees that the "Background" class is already a very wide range and this one would complete the set.

=> Can be captured in the collection of "Background" CDFs.

R2-116129 Further analysis for traffic classification; Samsung; Disc;
- RIM clarifies that this information is already available in the TR. Samsung clarifies that we should just adopt this terminology, i.e., talk about packets per second rather than about bytes per second.

=> Noted

R2-115726 Considerations on the traffic trace input for eDDA simulation; China Unicom; Disc;
Proposal 1:
- Samsung thinks that for background and interactive type applications it does not matter much in which system they are recorded.

=> Noted

R2-115735 Analysis on IM traces; China Unicom; Disc;

=> Noted

General Discussion

IPR2025-00720, OnePlus Ex. 1004

- Vodafone thinks it is important to look at combination of background traffic generated by different applications and not so much into a combinations of interactive and background traffic.

Traffic Analysis

R2-116127 Analysis of cause of frequent keep-alive messages; Samsung; Disc;
- Samsung explains that keep-alive messages are generated by the UE to keep the NAT/Firewall open.
- Huawei wonders why there were so rare packets in the DOCOMO CDFs? Was there no NAT? Samsung thinks that those application might not want to keep the connection alive. Keep-Alive is only needed if the UE expects data from a server in the Internet.
- NSN wonders whether the observations have an impact to our work. Samsung's intention was to raise awareness of what the source of the keep-alive messages is.
- Samsung thinks we should not rely on these enhancements listed in this paper but continue our work.
- Samsung wonders whether it should be captured in the TR. NSN appreciates the information but wonders if we have to include it if it does not directly impact our work.

=> Noted

Evaluation methodology

R2-115948 Problems related to DDA; Nokia Siemens Networks, Nokia Corporation; Disc;
- Huawei wonders about the QoS requirements. NSN thinks that the eNB could take the QCI of the currently configured RABs into account when configuring DRX. Huawei thinks that there might be multiple applications mapped to the default bearer and for those we don't know the different QoS requirements. NSN thinks one should look e.g. at the QCI and not further into the application within one bearer.

Proposal 1 "RAN2 eDDA WI can initially focus on the radio interface while evaluating the signalling load"
- DOCOMO thinks that CN signalling load is important.
- Intel wonders what signalling load should now be taken into account. NSN clarifies that they counted the RRC load not e.g. MAC.
- Huawei wonders why the other overhead (MAC…) is not taken into account. NSN agrees that it can be included.
- QC would it find it straight forward to count the signalling towards the CN.
- NSN reminds that there are also TAU and other messages.
- Ericsson thinks that NAS signalling for RRC Connection Setup is already included in the RRC signalling.
- Vdf thinks that CN signalling should certainly be in the scope of our evaluation. DT thinks that CN load is important to consider. DoCoMo agrees but thinks we could for now only count IDLE/Connected transitions and handovers. NSN just thinks that we don't know the cost of such messages. NSN wonders whether we should not also count the number of RRC messages transferred per handover.
- Nokia clarifies that most RRC signalling observed with our traffic modelling is due to handover and connection handling.

=> Noted

R2-116266 Additional evaluation metrics for eDDA; NTT DOCOMO, INC.; Disc;
- RIM thinks the proposed change should be adopted.

=> Impact of simultaneous RRC connections for a cell/eNB should be addressed in the eDDA WI

=> Agree to include the text proposal in the TR

RRC Connection Handling and DRX

What to conclude from the following evaluations?

Connected mode DRX is essential for efficient battery usage?

For low and medium UE velocity, RRC Connection release times of some tens of 10s are considered useful in terms of signalling load and battery consumption? For higher UE velocity and infrequent data transmission the NW should release the RRC connection earlier? This is a trade-off that can be taken by the network?

Benefit of UE indicating interest to release the RRC Connection unclear?

R2-116036 Signaling and mobility related connection calculation for background traffic; Qualcomm Incorporated; Disc;

IPR2025-00720, OnePlus Ex. 1004

- Huawei asks what the unit is for the table. QC clarifies that it is number of events per UE and hour.
- RIM thinks that the cost of RRC Connection establishment and handover might be different and therefore they should be captured separately.
- Huawei thinks that for a proper evaluation we would need to count radio resource consumption in detail (RBs used, L1 control channel, …). Huawei thinks this would give an idea of whether the overall resource consumption is acceptable.

Proposal 1: Document four schemes for handling inactive periods during background traffic (a) Full Connected-DRX, (b) Network based dormancy timer, (c) UE initated dormancy (Note that UE init dormancy is not supported by LTE), (d) Mobility based network initiated dormancy.

- QC thinks that a) is sort of a baseline and should therefore be used. d) should be considered as what a good network can do. Therefore, it can be considered a reference case, too.

=> Evaluations should consider the 4 strategies: (a) Full Connected-DRX, (b) Network based dormancy timer, (c) UE initated dormancy (Note that UE init dormancy is not supported by LTE), (d) Mobility based network initiated dormancy

R2-115931 Power consumption and signalling load for background traffic; Nokia Corporation, Nokia Siemens Networks; Disc;
- CATT does not consider 30 km/h is “high speed”. Nokia agrees that with higher speed one would have more handovers for the longer release timers.
- DT wonders about figure 2: How does it compare to IDLE mode DRX with the same numbers. Nokia has assumed 1.28 s DRX in IDLE.
- Ericsson wonders how the IDLE mode power consumption was modelled. Nokia clarifies that in IDLE mode measurements are taking into account.
- RIM wonders whether the power consumption caused by IDLE to Active transitions is taken into account. Nokia confirms that the transmission of the related messages was taken into account.
- Ericsson wonders how many users were simulated. Nokia clarifies that there were 50 users per cell.
- Nokia thinks it can be concluded that connected mode DRX is very important. But beyond that it might be too early to draw conclusions.

R2-115794 Simulation results for background and IM; CATT; Disc;
R2-116279 Signalling Overhead For Background Traffic; Intel Corporation; Disc;
R2-116167 Signalling overhead of diverse data applications; Huawei, HiSilicon; Disc;
R2-116168 DRX efficiency for diverse data applications; Huawei, HiSilicon; Disc;
R2-115930 Text Proposal for TR 36.822: RRC Connection Frequency Analysis; Research In Motion UK Limited; TP; 36.822;
R2-115929 Text Proposal for TR 36.822: RRC Connection Setup Analysis; Research In Motion UK Limited; TP; 36.822;
All 6 Tdocs not treated

- Huawei thinks we should align the resource consumption metrics (which layer). Nokia thinks that full alignment is not needed.

✉ **Will have an email discussion [76#37] until next meeting to try to agree on which evaluations on RRC Signalling and DRX to include in the TR. (RIM)**

L1 control channels

R2-115838 Update for PUCCH Evaluation; Huawei, HiSilicon; Disc;
- RIM thinks it is a good text proposal. RIM would suggest to associate the traffic types with Trace IDs. Huawei will add those.
- Nokia wonders how important the usage rate of the PUCCH resources really is? Chairman indicates that a low usage ratio is not necessarily bad but that a high ratio could cause interference problems.

=> Can add a sentence that the impact of the D-SR periodicity on the user experience should be taken into account.

=> Will include the TP in the TR

IPR2025-00720, OnePlus Ex. 1004

R2-116280 PUCCH Utilization for Background Traffic; Intel Corporation; Disc;
not treated

R2-116335 PUCCH Improvement; Fujitsu; Disc;
- Nokia wonders whether this is not a stage-3 detail. Fujitsu agrees that it might be too early to agree this now.
- Samsung wonders whether the proposal would really be useful. If there are 2 UEs with a period of 2 the resource is already filled. Therefore, Samsung does not see any gain with this proposal. And 5 matches well with 10, 20, …

=> Noted

R2-115727 Preliminary PDCCH evaluation; China Unicom; Disc;
=> revised in R2-116343

R2-116343 Preliminary PDCCH evaluation; China Unicom; Disc;
- Samsung indicates that we agreed to focus on background and interactive.

=> Noted
=> Can evaluate further whether the PDCCH capacity is a problem for the prioritized traffic models

Other

R2-116060 Flow of IM traffic; LG Electronics Inc.; Disc;
- Ericsson wonders what TAT was assumed. LG assumed that there will be several seconds between the data transfers and that UL sync will not be maintained. Ericsson thinks that the obvious improvement is to allocate SR resources. LG assumed that for the short data transfers no resources are allocated.
- Huawei supports to consider these aspects but wonder why we should only consider the MAC signalling and not also RRC, RLC… LG agrees but have so far only analyzed MAC. NSN agrees that we should not limit ourselves to MAC. LG just mentioned one possible area to work on and thinks this is where we have some problems in the specification.
- RIM wonders what "Fast dedicate resource management" is. LG explains that RRC is too heavy to allocate D-SR for short lived flows. Simpler means could be more efficient. RIM wonders whether that also applies for CQI. LG has only considered SR so far.

=> Noted

R2-115985 Multi-subframe scheduling for eDDA; New Postcom; Disc;
- NSN sees a few drawbacks. E.g. it does not help for retransmissions. How would Link Adaptation work? There was something similar in GERAN and it was removed since considered useless. NPC agrees on the concern link adaptation. But NPC thinks that the complexity is not big and therefore it should be considered.
- NSN assumes that the intention is to reduce PDCCH overhead but for background traffic that might not be the bottleneck. NPC confirms that the intention is to reduce PDCCH overhead. Huawei has done some analysis on the overhead caused by the RRC signalling for background traffic.
- Samsung thinks we should look at the requirement level. If the eNB knows that there is a lot of data it can transmit it at once. Why would it spread it over multiple subframe over a longer time. NPC agrees that the UE could bundle the data but there could be cases where this is not possible. Huawei thinks that for UL scheduling it could be useful.

=> Noted

R2-116196 Reducing power consumption during UL scheduling; Ericsson, ST-Ericsson; Disc;
not treated

Late or withdrawn

R2-116185 Background traffic in LTE; Ericsson, ST-Ericsson; Disc;
withdrawn

Continuation until next meeting

✉ **Email discussion [76#08] until Thursday after meeting to update the TR with the agreements from this meeting (RIM). Update can be provided in R2-116504 TR36.822 v0.1.1**

IPR2025-00720, OnePlus Ex. 1004

7.3 WI: Service continuity improvements for MBMS for LTE (RP-111374)

(MBMS_LTE_SC-Core, leading WG: RAN2, REL-11, started: June 10, target: March 12, WID: RP-111374)
Note that the WI does not cover provisioning of location information.
Agreement status is reflected in running stage-2 CR: R2-115596 (after RAN2-75bis)

7.3.1 General

E.g. Running Stage-2 CR
R2-115696 36.300 CR introducing Service continuity improvements for MBMS for LTE (status after RAN2 #75bis); Huawei; CR; 36.300; B; output of email discussion [75b#02]; "running CR", will be decided at RAN2 #76 whether to provide CR to RAN #54;
R2-116259 Stage 2 agreements on service continuity and location information for MBMS for LTE; Huawei; CR; 36.300; (0410); B;

7.3.2 Assistance Information

Rely on application layer (ESG) or provide additional information from RAN?

Can SIB provide additional assistance information?
- *Service Areas the cell belongs to?*
- *MBSFN area?*
- *MBMS frequency*

Additional information about own cell, neighbour cells or both?

Stop searching when a service is suspended?
When to check again? Periodically? Triggered by notification mechanism?

1 *Timing Information: "SA4 believes that this covers the issue to announcing the timing of single or multiple user services, but would like to ask RAN2 if they agree"*
- QC thinks that this is also RAN2 understanding.

=> Indicate that we agree.

2 *SA4 identified a linkage between geographic location and frequency. Some companies believe that this linkage should be part of the sent information. Does RAN2 agree?*
- QC thinks that this is the case
- ALU thinks we already indicated that both information (frequency and location) is needed. ALU wonders why the send us the question again.
- ALU wonders what SA4 means with the linking. Orange thinks that we (RAN2) should decide what location information we would like to provide and then ask SA4 to include it.
- Orange thinks that it is a RAN2 issue.
- ALU indicates that it is required to provide location information in case a service is provided on multiple frequencies in different areas. Samsung thinks that it will also be needed with one frequency to allow the UE not to search in areas where the service is not provided.
- ZTE wonders why we need the frequency and not just the service area. Ericsson indicates that we already agreed on including the frequency.
- Huawei thinks that the SAI already identifies the location.
- *Need to discuss further:* Will indicate that there is some linkage between frequency and location information. We expect an association between an area and a set of one or more frequencies and we expect that this association needs to be communicated to the UE.

3 *Is there any understanding of the size and resolution of the geographic areas under discussion?*
- LG thinks that Service Area could be a suitable area. NSN thinks that it is up to deployment. We could indicate that there will be a need to indicate multiple location/area entries per service.

4 *Regarding the semi-static nature of the frequency and geographic information, can RAN2 advise on the frequency of change possible? Also, how urgent is it to update the UE?*

IPR2025-00720, OnePlus Ex. 1004

- NSN thinks that the assumption is that it is not dynamic and not urgent. Otherwise, we should have gone for a pure RAN solution. Huawei agrees that it will not change often but that it is important that a change is provided timely, i.e., to provide correct information. LG agrees with NSN. QC agrees that it is semi-static. QC agrees with Huawei that in case of a change it is important that UEs get it before the session starts. Orange thinks that the BMSC pushes the information to the UE and is therefore in control. Huawei thinks that the BMSC does not necessarily push it. UEs might be responsible for fetching it.

=> Draft LS on MBMS assistance information to SA4 can be provided in R2-116505 (QC)

R2-116114 How does the UE determine whether to prioritise a frequency in order to receive an MBMS service?; Huawei, HiSilicon; Disc;

- NSN wonders about the purpose of proposal 2. That seems to be nice to have but not really needed. Proposal 2 would require that UEs get the opportunity to read SIB from neighbour. NSN considers Proposal 3 more important. NSN thinks Proposal 2 and Proposal 3 are mutually exclusive.
- NSN clarifies that for connected mode we need information about neighbours.
- ALU thinks that the UE might be in the MBMS Service Area but not in the MBSFN area where the service is provided. Huawei wonders why that would be the case? Maybe if it is decided not provide the service due to unavailability of information. Orange agrees with ALU that the two are not necessarily the same but proper configuration could ensure this. LG thinks that the 1:1 mapping is possible and in such cases broadcasting the SAI would be helpful. However, LG would consider it better to broadcast the MBSFN area ID. We agreed that frequency information can be broadcast by ESG. So, why do we not directly provide the MBSFN area ID. QC thinks that the MBSFN area will be smaller than the Service Area. QC thinks there could be a limitation of MBSFN ids.
- Ericsson thinks that we might not need to add any additional information. Ericsson mentions that we could e.g. provide cell IDs. Huawei thinks that the UE would then have to read cell IDs of neighbouring cells. Ericsson agrees.
- Samsung wonders what we actually want to achieve? Save battery by not requiring an IDLE UE to read MCCH?
- QC thinks that Proposal 2 allows battery saving in IDLE mode (no need to read MCCH). Proposal 3 avoids having to read neighbour cell information.
- Chairman wonders whether we go for…

a) Frequency only: 1 company
b) Frequency + MBMS SAI: 15 companies
c) Frequency + MBSFN area ID
d) other???

- LG thinks that we need something beyond frequency
- Samsung wonders about the size of the MBMS SAI. Orange thinks this is up to the deployment. Samsung wonders about the length of the SAI field. QC thinks it is 256.

=> Can discuss further offline and come back after coffee break (Huawei)
- After offline discussion Huawei indicates that there is not yet an agreement however some common understanding. SAIs would allow both IDLE and CONNECTED UEs to find the MBMS service. Alternatively, a bit in SIB5 could indicate that there MBMS in a neighbour frequency. This might reduce power consumption in IDLE mode but not help the connected UE. It was suggested to define the area by Tracking Area but this might make it difficult to align tracking areas, location areas…. c) could be excluded.
- NSN thinks that all problems could be addressed by broadcasting in each cell the SAIs for the own cell and for all neighbours. This helps IDLE and CONNECTED UEs. It solves deployment scenarios with more than one frequency per service. Orange thinks this solution would be helpful.
- LG shares this view but still thinks that service area could be defined by MBSFN area instead. Ericsson wonders whether the MBSFN area is not created on the fly and not known in advance. QC thinks that also the MBSFN area is semi-statically defined. QC supports this proposal from NSN but understands that SAI would be simpler. LG thinks that if the service area is larger than the MBSFN area the UE would waste battery power. NSN thinks that can be left to the network. It could match exactly or not. We don't need to discuss it here. Orange would also prefer the SAI.

IPR2025-00720, OnePlus Ex. 1004

- Samsung wonders whether the understanding is that the service area is the area where the service is provided by MBSFN? Stage-2 shows that a service area can consist of multiple MBSFN areas. But not all MBSFN areas might be activated at the same time. Orange thinks that M2 needs to be activated in order to belong to the SAI.
- Verizon would prefer more time to full understand the problem and to discuss the service area.
- NSN indicates that using only the frequency means that if there is more than one frequency indicated the UE does not on which frequency the service is mapped in the area where it currently is. So, it would have to search, both in IDLE and CONNECTED mode. Samsung wonders whether a CONNECTED UE would indicate interest based on assistance information (Application level) or MCCH? NSN assumes it would be based on assistance information. LG thinks the UE will need information from the RAN.
- LG thinks that we should progress stage-2 and agree on b)
- ALU is unsure about the actual gain of any solution beyond a). ALU also thinks that even solution b) or c) would only work for semi-static services. QC thinks that semi-static is sufficient.
- Intel thinks that a solution covering all scenarios should be agreed now.
- Samsung assumes that we do not agree the RAN SIB now but could agree on what application layer indicates. Samsung wonders if we go this way and provide it in all cells for all cells, why do we need the frequency in application layer. Orange agrees with Samsung. NSN agrees. LG thinks that the frequency could still be helpful in cases where the RAN does not provide SAI (E.g. if a service is provided everywhere on a single frequency). Verizon agrees that the frequency information is still helpful. Intel agrees that having the frequency would cover some corner cases.
- Ericsson thinks that a bit in SIB5 would solve the IDLE mode problem. Ericsson wonders what problem we are trying to solve for connected mode? Huawei thinks with two frequencies where at the current location the service is provided on another frequency. Then, the UE could not search for it. Ericsson thinks that if MBMS is not on the current frequency it must be on the other (that is indicated in application layer). Huawei thinks with 3 frequencies the UE would now know on which of the two potential MBMS frequencies the service is provided.
- QC thinks we should have some location information on application level and the SAI seems to be a good choice. Huawei agrees with QC. We should remember that we need SA4 to do their work. They have a meeting before our next meeting and should be able to work on something.
- Chairman wonder whether we should decide what to provide on application level before having decided where to use it in the RAN. Huawei thinks it is only a question of where in the RAN and not “if”.
- ALU thinks that most scenarios can be solved with only the frequency. Then, we should analyze which additional cases and the gain. Then we should discuss what we want to cover and which information is useful for those purposes.

Agreements
1 The application layer provides information about the carrier frequencies on which an MBMS services is being provided as well as the service area IDs (SAIs).
2 It is FFS how the SAIs will be provided and used in the RAN.

R2-116289 MBMS Assistance Information; LG Electronics Inc.; Disc;
R2-116301 Providing neighboring MBSFN information on MCCH; ITRI; Disc;
Both Tdocs not treated

Late or withdrawn
R2-115748 UEs in RRC Connected and MBMS Service Continuity; Nokia Siemens Networks, Nokia Corporation; Disc;
withdrawn

7.3.3 Congestion and Admission Control

Including output of [75b#36] - LTE: Admission and Congestion control for MBMS service continuity [ALU] (Network controlled prioritization of MBSM carrier in IDLE mode cell selection? Where to camp when cell on MBMS carrier is congested? Need for additional unicast/MBMS indication from the UE?)

IPR2025-00720, OnePlus Ex. 1004

R2-116212 Report of the email discussion on [75b#36]-LTE: Admission and Congestion control for MBMS service continuity; Alcatel-Lucent (Rapporteur); Report; result of email discussion [75b#36]; result of email discussion [75b#36]

Signalling or Signalling-less solution
a) Signalling less solution (ie, network policy based solution)
b) Signalling based solution
Which message is used for signalling? e.g. MBMS interest indication
When a priority between MBMS and unicast is signalled to the network?
a) Network controlled signalling
b) UE initiated signalling (anytime whenever a priority changes or only when the frequency is congested)

- Huawei thinks that Proposal 1 contradicts a previous agreement. ALU thinks that we agreed that the user can decide. And ALU thinks that even without an indicator the user can decide by e.g. disabling applications. NSN shares Huawei's view. Orange thinks that we reached the previous agreement before discussing the congestion problem. So, maybe we should discuss it again.
- Samsung thinks that we introduced the possibility to indicate multiple MBMS frequencies. That should also help to avoid congestion. Ericsson thinks that this does not help if an MBMS frequency is only provided on one frequency. Ericsson agrees with NSN and Huawei that having a bit is the current status.
- ZTE thinks the user would not want to actively select between unicast and MBMS.
- QC would like to understand better the proposal without signalling? ALU clarifies that based on the MBMSInterestIndication the network will try to allow the UE to receive MBMS. QC wonders whether the UE would have to release applications to ensure that it stays on the MBMS frequency.
- QC wonders when we have an indication, and the UE indicates that it prefers MBMS, would the network then even put the UE on a congested frequencies.

a) Need for explicit indication whether the UE prefers unicast over MBMS: 15 companies
b) No need for explicit indication: 7 companies

- Samsung wonders whether it is agreed to have one bit. ALU clarifies that there was no conclusion in the email discussion. NEC thinks that some unicast services might be more important for the UE than others. Therefore, there would need to be multiple indicators. Samsung thinks in a worst case this could become a matrix between priorities of unicast and multicast services.
- Kyrocera wonders whether we can exclude voice services. Orange thinks that the network could decide that based on QCI1. Samsung wonders whether this implies that the priority bit does not always apply. Orange thinks a the network could override. Samsung thinks we have one bit with a clear meaning. LG wonders whether the indication covers both GBR and non-GBR bearers. ALU thinks it would apply to any unicast bearers. LG thinks that non-GBR bearers might have always higher priority. ALU clarifies that the application layer does not know whether it uses a GBR or non-GBR bearer. CMCC thinks that the network should be able to override. Samsung thinks that if we have a bit it must have a clear meaning. That means it must apply to all unicast services.

Agreements
1 The UE may indicate with a single bit its willingness to prioritise MBMS over unicast in the MBMSInterestIndication message. This priority indication applies to all unicast bearers.
2 The user/UE willingness to prioritise MBMS over unicast should be informed to the network regardless of whether the concerning frequency is congested or not at the time of signalling.

Prevention of RRC idle UEs establishing a connection on congested MBMS frequency
a) Allowing/Disallowing idle UEs to prioritize MBMS frequencies via system information
b) Existing mechanisms such as ACB and reselection priorities are sufficient
c) Signalling of congestion indicator and congestion end indicator via system information or dedicated signalling
d) Signalling of a wait time via RRC connection release message

IPR2025-00720, OnePlus Ex. 1004

R2-115728 Cell Reselection rules for Ues active in MBMS; Nokia Corporation, Nokia Siemens Networks; Disc;
Proposal 1:
- ZTE wonders whether this is for the IDLE mode. Nokia confirms it is for IDLE mode. ZTE thinks that a UE might prioritize MBMS and not start a unicast session. Samsung wonders whether we would forbid the UE to receive MBMS or just to camp in the cell. Chairman thinks that there is no need to forbid receiving MBMS but rather an interest from the network to avoid RRC Connection Establishment and maybe TAU.
- ALU thinks that for connected mode we added functionality to allow a UE to stay in a congested cell. So, why do we not want to allow this for IDLE.
- Samsung thinks there are two solutions:
  a) Do as suggested as done here but allow the UE to receive MBMS
  b) Allow the UE to camp on the congested cell but avoid connection establishment.

- Nokia agrees that a) would still allow the UE to camp on the cell.
- QC wonders whether we loose service continuity if we forbid the UE to camp on the MBMS frequency.
- LG thinks that we have also no control for CSG. Nokia thinks that for CSGs the number of UEs accessing it is very low. Therefore, there is no such problem. Therefore, there is no reselection priority. For MBMS there may be many UEs and therefore control is needed.
- Samsung assumes that we need just one mechanism and it could be like a) or more like b).

R2-116061 UE behaviour in RRC Idle; LG Electronics Inc.; Disc;
R2-116263 Load control for idle mode UEs; Huawei, HiSilicon; Disc;
R2-115775 Avoidance of MBMS frequency congestion; ZTE Corporation, Potevio; Disc;
R2-116025 Prevention of UE's Connection Establishment on Congested MBMS Freq; CATT; Disc;
R2-116096 Mechanism for MBMS interest indication; MediaTek; Disc; [Moved here from 7.3.4]
R2-116194 MBMS autonomous frequency prioritization in idle mode; Ericsson, ST-Ericsson; Disc;
R2-116213 Prevention of UE establishing a connection in a congested MBMS carrier; Alcatel-Lucent; Disc;
R2-116277 Congestion Control and Priority Handling for MBMS Services; Intel Corporation; Disc;
All 8 Tdocs not treated

Other

R2-116062 Discussion on Priority information; LG Electronics Inc.; Disc;
R2-115983 Enhancing MBMS Service Continuity; Research In Motion UK Limited; Disc;
Both Tdocs not treated

Late or withdrawn

R2-116336 Congestion and admission control for idle and connected UEs; Huawei, HiSilicon; Disc;
withdrawn

7.3.4 Other

E.g. conditions for sending the MBMSInterestIndication (what? when?)? MBMS capabilities? Handling of CSGs?

UE capability

Interpretation of the supportedBandCombination IE

R2-116187 MBMS UE capability extensions; Ericsson, ST-Ericsson; Disc;
R2-115729 UE capability and MBMS; Nokia Corporation, Nokia Siemens Networks; Disc;
R2-115795 MBMS UE capability; CATT; Disc;
R2-116095 UE requirement for Rel-11 MBMS; MediaTek; Disc;
All 4 Tdocs not treated

Further details on interest indication

When to send it? When to repeat? Content of indication? …

R2-115796 MBMS service continuity in RRC-Connected mode; CATT; Disc;
R2-116106 Open issues for MBMSInterestIndication; Huawei, HiSilicon; Disc;
R2-116292 Further discussion on MBMS interest indication; LG Electronics Inc.; Disc;
R2-116190 MBMSInterestIndication for connected UEs; Ericsson, ST-Ericsson; Disc;
[Moved here from 7.3.2]
R2-116252 Limitation of MBMS interest transmission; ASUSTeK; Disc;

IPR2025-00720, OnePlus Ex. 1004

R2-116214 Requirement on MBMSInterestIndication message transmission instance; Alcatel-Lucent; Disc; [Moved here from 7.3.1]
All 6 Tdocs not treated

Cell Selection and Re-Selection
R2-116071 Camping for CA UE; LG Electronics Inc.; Disc;
R2-116177 MBMS enhancements for REL-11, Idle; Samsung; Disc;
R2-116215 Remaining issues on idle mode frequency prioritisation for cell reselection; Alcatel-Lucent; Disc; [Moved here from 7.3.1]
R2-116253 MBMS service continuity for connection re-establishment; ASUSTeK; Disc;
R2-116278 Clarifications on Use of MBMSInterestIndication; Intel Corporation; Disc;
All 5 Tdocs not treated

CSG
Priority between MBMS and CSG for idle mode? a) UE implementation or b) MBMS has a higher priority than CSG? Priority between MBMS and CSG for connected mode? a) inform eNB about MBMS interest together with proximity indication? b) not provide proximity indication when prioritizing MBMS?

R2-116026 MBMS Continuity and the Relationship with CSG; CATT; Disc;
R2-116295 Mobility between MBMS and CSG; LG Electronics Inc.; Disc;
R2-115952 MBMS service continuity for inbound mobility to CSG cells; Kyocera; Disc;
R2-115951 Selection/Reselection between MBMS capable cells and CSG cells; Kyocera; Disc;
R2-116043 MBMS service continuity with CSG; Pantech; Disc;
All 5 Tdocs not treated

Late or withdrawn
R2-116183 MBMS enhancements for REL-11, Idle; Samsung; Disc;
withdrawn

Continuation until next meeting

- ✉ **Email discussion [76#09] until Thursday after meeting to update running 36.300 CR with agreements from this meeting (Huawei). Update can be provided R2-116508. Will not be submitted to plenary**
- ✉ **Email discussion [76#38] until next meeting to discuss how to use the SAI (what to include in SIB and for which purpose…) (Huawei)**
- ✉ **Email discussion [76#39] until next meeting to discuss congestion handling (focus on the two approaches outlined in this meeting) (Nokia)**

7.4 WI: Network-Based positioning Support for LTE (RP-101446)

(LCS_LTE-NBPS-Core, leading WG: RAN2, REL-11, started: March 09, target: March 12, WID: RP-101446)

Need for explicit indication that SRS is being aborted or updated?

Stage-2 CRs
36.300
R2-116050 Draft CR for 36.300 NBPS Support in LTE; TruePosition; CR; 36.300; (0409); B;

- Ericsson thinks the first sentence might be sufficient. Maybe we do not need to indicate what is “typical”. Ericsson wonders what it means that the LMU is considered a “separate” node. TP was brought up in the last meeting by another company. TP wonders if the CR would be acceptable if the middle part “The LMUs are typically co-located or integrated with the eNB. In the case of a co-located (or standalone) LMU, the LMU is considered a separate E-UTRAN node. ” would be removed. Ericsson confirms. Ericsson suggests replacing “connect” to “communicating”.
- NSN understands that the CR is the outcome of the agreement to have a short reference. But NSN considers this CR not needed since also other mechanisms such as “OTDOA” are not specified in 36.300. ALU thinks this was agreed to include it was because the LMU is a new EUTRAN node and 36.300 describes the EUTRAN architecture. NSN thinks we should then introduce it as a node and not as the feature of UTDOA. That would be OK for

IPR2025-00720, OnePlus Ex. 1004

ALU. We can work offline on where to place it. Ericsson suggests to add a sentence in clause 4.
- Intention is to technically endorse the CR (like the 36.305 CR) but not to provide it to RAN for approval (will be provided once stage-2 is complete)

=> Should work offline to find the right place for introducing the LMU.
=> Can provide an updated CR in R2-116514. Only to be technically endorsed therefore no CR number. (TP)

R2-116514 Draft CR for 36.300 NBPS Support in LTE; TruePosition; CR; 36.300; -; B;
=> Should correct “clauses affected” on cover page
- Ericsson thinks that the CR is referencing another CR which is not yet available

=> This CR should mention the 36.305 CR in the cover page (other specs affected)
=> Consequences is not approved should be changed to “LMU description missing from stage-2”
=> Change reference from [43] to [xx]
=> With this change the CR is technically endorsed in R2-116556 (will not be sent to plenary)

36.305

R2-116051 Support for NBPS in LTE; TruePosition; Disc;
=> Noted

R2-116366 On alignment between the RAN1 and RAN2 work on NBPS, Ericsson; Disc; [Late]
Comments before presentation:
- TP wonders if we should consider this paper given it was 8 days after submission deadline.
- Ericsson thinks that R2-116051 makes statements about other companies including Ericsson that are not accurate and therefore it was appropriate to prepare this contribution in response.

Comments after presentation:
- ALU would also like to comment that they are not too happy with the late submission. It is clarified that it was submitted on the email reflector.

Discussion
- TP confirms that no other cases have been tested. TP thinks that it is of course possible for other companies to bring results proving that other bandwidths would be possible. Ericsson thinks that requirements are specified after specifying the feature and not taken from the feasibility study. RAN4 should specify necessary requirements. Ericsson thinks that RAN1 and RAN4 seem to indicate that measurement requirements are in the responsibility of RAN4. TP thinks that the RAN1 simulations were not a simple feasibility study. TP thinks that all decisions about the WI were based on the simulations performed in RAN1. Ericsson thinks that there are differences between FCC requirements but rather L1 measurement requirements. TP thinks that the decision to move forward with this WI was based on the RAN1 simulations.
- TP would like to highlight that Andrew Corp. sent an email to various companies and chairmen where they indicate their support and that they also support the TP view that “wideband SRS” is a requirement and should be captured in the CR.
- TP has objections to moving forward with the v7 as suggested by Ericsson.
- Ericsson wonders why we have to limit it to “wideband” and consider that as a minimum requirement.
- ALU thinks that the WID does not seem to limit the WI to FCC requirements. So, why should we limit the feature to FCC requirements. TP agrees that this feature can be used also in other markets with other requirements but all work so far has been based on those RAN1 assumptions.
- ALU thinks that as long as we provide the signalling allowing also for wideband SRS we do fulfil the requirements. But with the word “Wideband” we would in fact limit the feature to this. Ericsson agrees with ALU that it is essential that SRS is used but how it is configured is a deployment issue. Stage-2 should capture what is essential for the feature to work. TP thinks “wideband” is essential.
- Ericsson thinks that since the discussion does not seem to move forward, we should maybe just wait for the LS replies from RAN1 and RAN4. But Ericsson would of course still be happy to go with the CR without the “wideband”.

IPR2025-00720, OnePlus Ex. 1004

- NSN suggests to remove the "wideband" from the text but add a note (FFS) that documents that wideband SRS should be used and that it is up to RAN4 to specify this further.
- Samsung assumes that TP is very interested to use wideband SRS. If stage-2 and stage-3 allows that, why would they want to limit the feature to only wideband. TP would like to capture a requirement. Samsung understands that it is anyway up to the RAN to configure and SRS and that might anyway require discussions with the RAN vendor. TP thinks that for most features we specify requirements before it hits the markets. And TP thinks it is important to specify requirements early to give guidance as early as possible. TP understands that other companies want to start with the whole range and later narrow down. But TP understands that RAN1 has already narrowed it down to wideband.
- Ericsson wonders what kind of problems TP would envision in the field. TP thinks there would be more discussions on what a network should be able to support.
- Ericsson wonders whether TP would object to the v7. TP thinks that two companies (TP and Andrew) would object to that CR. Ericsson thinks that supporting one CR is not the same as objecting to another version. TP thinks that both TP and Andrew would object to v7.

=> It is not possible to agree on a CR version.
=> Will wait for the LSs from RAN1 and RAN4. That might give further clarity on which group should define requirements

- Ericsson suggests to come back to this on Friday if we receive LSs. NSN wonders if we have not already received an LS indicating that RAN4 is responsible. Ericsson clarifies that the LS has not been received but assumes that this would be the outcome. TP thinks that no matter whether we receive such LS from RAN1 or RAN4 would make TP change their position.

R2-116049 Draft CR for 36.305 NBPS Support in LTE; TruePosition, Andrew Corporation; CR; 36.305; (0031); B;
=> Not agreed

Additional Functionality

R2-115797 Supporting Procedure for Uplink Positioning; Andrew Corp.; Disc;
R2-116052 SRS Abort/Reset support for NBPS in LTE; TruePosition; TP; 36.305;

- ALU wonders why there are two procedures between ESMLC and LMU and just one between eNB and ESMLC. TP is not sure.
- Ericsson wonders if this is one way of optimizing LMU resource optimization. Furthermore hand there is an eNB management impact. So, is that not more a RAN3 issue? TP thinks it is resource optimization vs. ensuring location performance. Ericsson thinks this means it is delay vs. management issue and could still be considered RAN3 issue.
- ALU thinks since this is part of procedure and belongs into stage-2 we could also discuss it in RAN2. But either way is fine for ALU. NSN agrees with ALU. TP thinks if we agree this here it would be seen by RAN3 anyway. Ericsson was in particular concerned since it is a management issue and related to LPPa which would fall more into RAN3 area. It was also agreed to work more on this in RAN3 but reduce efforts in RAN2.
- TP would also like to remind that such procedures were already supported in GERAN. Ericsson thinks since we have a different architecture we cannot necessarily copy all functionality and assumptions.

=> Can discuss the need for such kind of functionality further. Noted for now

7.5 WI: Further Enhanced Non CA-based ICIC for LTE (RP-111369)

(eICIC_enh_LTE-Core, leading WG: RAN1, REL-11, started: March 11, target: June 12, WID: RP-111369)

Note decision from RAN-53: "Second priority topics will be kept on hold for 6 months in all WGs." This means that RAN2 should not work on issues other than inter-frequency support until RAN-55. Note also that it was decided at RAN2-75bis, not to work on inter-frequency measurement subframe restrictions unless RAN4 indicates that it is required to solve RSRQ accuracy problems. => We might not treat any documents on feICIC at RAN2-76.

Wait for RAN1 to first identify scenarios? (see WID)

IPR2025-00720, OnePlus Ex. 1004

R2-116216 Connected mode paging enhancement; Alcatel-Lucent; Disc;

Carrier Aggregation is second priority.
R2-115765 SCell Measurement Restriction; ZTE Corporation; Disc;

7.6 WI: Signalling and procedure for interference avoidance for in-device coexistence (RP-111355)

(SPIA_IDC_LTE-Core, leading WG: RAN2, REL-11, started: Sep.11, target: June 12, WID: RP-111355)
Output of corresponding SI RP-100671 is available in TR 36.816.
Agreement status is reflected in running stage-2 CR: R2-115623 (after RAN2-75bis)

7.6.1 FDM/DRX Solution

7.6.1.1 General

Commonalities of FDM and DRX solution? Re-use RRM measurement reporting procedures? Add something similar to proximity indication? Or a completely new mechanism?

Running stage-2 CR
R2-115697 36.300 CR introducing Signalling and procedure for interference avoidance for in-device coexistence (status after RAN2 #75bis); CMCC; CR; 36.300; B; output of email discussion [75b#03]; "running CR", CR will not be provided to RAN #54, so no CR number will be allocated for RAN2 #76;

Triggering and measurements
Which information can the UE use to determine IDC interference?
May an indication be sent for potential interference?
For measurements, which subframes to measure? All? Only with IDC interference? Only without IDC interference?

R2-115749 Triggers for IDC; Nokia Siemens Networks, Nokia Corporation; Disc;
- LG wonders whether there is any point to distinguish ongoing from potential interference. NSN wonders whether the UE would report potential interference as ongoing interference. NSN thinks the UE would not report interference if there is actually no interference. This is the same for all types of reports. Huawei agrees that we can trust the UE.
- MTK thinks it may be difficult to predict how the UE will be implemented
- NSN does not want to rule out potential interference. The intention was to avoid specifying triggers beyond the 4 described in the TR.
- Ericsson wonders whether the level of interference that triggers the indication would be specified. NSN thinks that it should be up to the UE. QC agrees with the proposal to leave it to the UE which interference triggers the indication. Intel supports this view. Ericsson agrees that the UE knows the levels best. But leaving the trigger threshold unspecified might result in decreased network performance. Motorola agrees. The network needs to know how much interference the UE experiences. Samsung agrees with NSN and others. MTK agrees with Ericsson and Motorola.
- Motorola understands the intention is not to leave it up the UE implementation but that the NW has some knowledge of the level IDC interference.

R2-115846 Further considerations on IDC indication; Huawei, HiSilicon; Disc;
- Huawei thinks it is up to the NW whether it wants to react in response to an indication. MTK wonders how the NW can determine whether the UE has a real problem or not. Huawei thinks that the UE would punish itself by indicating interference that is not severe. Motorola thinks that a UE could go the easy way and send an indication and leave it for the NW to solve even if the problem is small. Chairman wonders what happens if the UE does not trigger an indication even though the network would consider the interference as severe? Pantech agrees with Motorola. In some cases the NW might need information even though the UE might not consider it important.

R2-116142 Triggering of In-device Coexistence Indication and Mobility; Motorola Mobility; Disc;
- NSN thinks this is quite is similar to NSN's view. The eNB should be able to distinguish severe from not severe interference. NSN thinks that only the interference level at which the indication may be sent, should be left to UE implementation.

IPR2025-00720, OnePlus Ex. 1004

- Samsung wonders why the discussion is limited to Band 40 (LTE victim). NSN thinks that is the one where we have to do something. Samsung thinks we also have to do something for Band 40. Motorola thinks in Band 7 there is no problem for LTE.
- QC thinks that LTE measurements are not sufficient since they don't reflect problems caused to ISM. Motorola wonders how long the UE needs to send the indication. What happens to the measurement report and what would the eNB would do with those.
- Regarding proposal 1 Panasonic wonders whether "affected by ISM interference" would refer to high or any interference.
- Motorola thinks the UE would make measurements at the appropriate time. Samsung thinks that there would only be a few µs for the WLAN and LTE part to determine when to measure. Motorola wonders what the UE implementation approach would be. Samsung thinks this should be completely up to UE implementation. Motorola disagrees on this.
- Samsung wonders whether our IDC should not address band 7 issues. Motorola agrees that an overall solution must address all but the Band 40 case should be based on measurements. Samsung thinks if we specify only one trigger, there is no protection against misuse. This problem exists when ISM is the victim.
- LG thinks that since it might be difficult to perform measurements it would be better to perform a test case. Intel thinks test cases might be difficult to define. MTK thinks a test case could be very simple.
- Ericsson thinks that RAN2 might not be the right group to discuss trigger- and measurement thresholds. Huawei thinks that RAN2 is the right group to decide this. QC thinks it will be difficult to come up with metrics for specifying trigger threshold. Samsung shares the understanding.
- Samsung thinks that "internal assessment" could be that the UE knows how much TX power at a certain ISM frequency causes how much interference to a certain LTE frequency. And this would not change over time but determined by UE design. MTK thinks there would still need to be a test case. Samsung thinks that RAN4 has provided input to our TR in which such tables are already provided. MTK wonders which ISM transmit power level the UE would assume for the internal assessment. QC thinks that phone vendors should not be required to show internal UE behaviour.
- Samsung thinks that in the TR we captured that the UE can assess which LTE frequencies are how bad.

=> After offline Motorola reports that there is no real agreement.
=> No agreement to send an LS
=> Companies seem to have common understanding that the UE can determine whether there is a problem either with measurements or by internal assessment.

a) The level of interference upon which the UE may send an IDC indication is up to UE implementation?
b) The level of interference upon which the UE may send an IDC indication is configured by the network?

✉ **Email discussion [76#40] until next meeting on IDC triggers (MediaTek).**
How can the UE evaluate the IDC interference level from and to ISM? (measurement and/or internal assessment?)
When does the UE trigger an IDC indication? (Does the network need to know/control the threshold? Or can the network trust the assessment of the UE?).
Should the UE indicate the level (share of affected subframes and/or interference level) of interference problem or just that there is a problem?
Should attempt to align terminology (usable/unusable frequency,…).

R2-116091 Proposed LS to RAN4 for Trigger Indication; MediaTek, Motorola, ZTE, Pantech, New Postcom; Disc;
R2-115750 Measurements for IDC; Nokia Siemens Networks, Nokia Corporation; Disc;
R2-116175 Measurement schemes and report triggers for IDC; Renesas Mobile Europe Ltd.; Disc;
R2-116274 Overall procedure and trigger indication for in-device coexistence; Intel Corporation; Disc;
R2-116320 New measurement for detecting IDC interference; LG Electronics Inc.; Disc;
R2-116048 Ping-pong HO issue in IDC; Pantech; Disc; [Moved here from 7.6.1.2]
All 6 Tdocs not treated

Signalling Procedure

IPR2025-00720, OnePlus Ex. 1004

Proximity indication-like message or re-using existing measurement configuration or capability

R2-115839 On the procedure of interference avoidance for IDC; CMCC; Disc;
- noted

R2-116186 Signalling and procedures for In-device coexistence; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
Proposal 1:
- NSN wonders if there is a risk that we select an inter-frequency target which suffers from IDC problems.

=> noted

R2-116047 IDC trigger procedure; Pantech; Disc;
R2-115767 Discussion on General signalling and procedure for IDC; ZTE Corporation; Disc;
R2-115972 Clarification and Identification for IDC interference avoidance; Research In Motion UK Limited; Disc;
R2-115975 Reception of IDC indication response; Research In Motion UK Limited; Disc;
R2-116145 Signaling procedures for IDC avoidance; Ericsson, ST-Ericsson; Disc;
R2-116265 The details of trigger for the IDC Problems; New Postcom; Disc;
All 6 Tdocs not treated

Assistance information

Include TDM and FDM related information?
Detailed content? (interfered frequency, unusable frequency, TDM usage scenario, ...)

R2-115847 Assistance information handling concerning the FDM and TDM; Huawei, HiSilicon; Disc;
R2-115878 Details on IDC indication; Nokia Corporation; Disc;
R2-116130 Unified signalling approach for in-device co-existence; Samsung; Disc;
R2-116092 Unusable Frequency; MediaTek; Disc; [Moved here from 7.6.1.2]
All 4 Tdocs not treated

7.6.1.2 FDM

FDM specific aspects of a solution

No contributions.

7.6.1.3 DRX

DRX specific aspects of a solution

Applicability

R2-115934 DRX based short-term gap pattern search between LTE and BT; Qualcomm Incorporated; Disc;
- CMCC agrees with QC that there should be the suggested signalling.
- ZTE prefers using the bitmap pattern and not just the offset. ZTE thinks that the eNB has to rely on certain information from the UE. And ZTE thinks it does not need to be a gap pattern but could also be a HARQ bitmap pattern.
- Ericsson agrees with the analysis that the offset indication improves the throughput but wonders whether the same improvement could not also achieved with BT master mode. QC thinks that both master and slave should be supported. Ericsson thinks that the TR just lists examples of gap patterns and does not yet indicated that both modes needs to be supported equally well.
- QC clarifies that they see a need for a few additional DRX parameters (configured by the eNB) and additional indications from the UE (offset and others)
- Huawei thinks that we should first decide whether the performance achievable with existing DRX is not already sufficient.
- Intel wonders whether the signalled offset based gap patterns could also be used to signal patterns that cannot be supported by DRX.
- Ericsson understands that the question is how much detail the UE is supposed to provide to the network.
- QC would be fine to have DRX based patterns as long as there are also offset based patterns.

IPR2025-00720, OnePlus Ex. 1004

- Huawei thinks that we should stick to the WI scope. We should not try to optimize performance further.

=> In order to support BT Slave mode with DRX and to optimize performance, an offset based gap patterns must be supported.

R2-116275 Limitations of DRX solution for LTE+BT voice usage scenario; Intel Corporation; Disc;

- Huawei thinks that for the moment we should focus on what information is needed for the DRX mechanism and not try to introduce another mechanism.
- NSN thinks "DRX" should mean "Rel-10 DRX". NSN is worried that we would change DRX just for the purpose of IDC. Ericsson thinks that nothing needs to be changed in the DRX mechanism but only a few configuration parameters are needed.
- NSN wonders if things like SRS and CQI have been taken into account. NSN thinks that we have already measurement gaps, so maybe we could re-use it for a reservation based scheme. Ericsson thinks that they discussed CSI/SRS.

R2-116328 DRX solution for IDC interference avoidance; Ericsson, ST-Ericsson, Huawei; Disc;

- NSN thinks there is nothing on CQI measurements. How would one restrict when the measurements are performed. Ericsson assumes that the measurements are taken shortly before the measurement reporting.

Discussion:

- NSN thinks that a DRX based solution would be difficult to implement. Nokia thinks that also from the UE side a gap pattern would be easier to implement. Huawei thinks that also for the gap pattern we would have to investigate how to perform measurements. NSN would assume that we would just duplicate the Rel-8 solution.
- Ericsson thinks that HARQ gap patterns are different from gap patterns as defined for Rel-8.
- Huawei wonders how a gap pattern would work with inter-frequency measurement.
- NSN clarifies that they refer to a gap pattern of configurable length and not about a bitmap solution. Huawei wonders whether it would work for BT voice.
- NSN would be OK to stick to the DRX solution if we agree to not change the DRX procedure.
- NSN would expect that the DRX solution is from a UE perspective less predictable than a pre-configured gap pattern.

- Samsung thinks that it is important to make the DRX patterns predictable. This can mostly be achieved by configuration but might require some additional changes to SR and RA. Ericsson thinks that predictability can be achieved by means of proper configuration. IDT thinks that the DRX would need to ensure certain IDLE times. The current DRX does not ensure this.
- NSN thinks that DRX as defined in Rel-10 does not guarantee periods of inactivity. NSN thinks that a fixed pattern of activity and inactivity periods sounds much more like a gap pattern (similar to measurement gaps as defined for Rel-8). NSN thinks that the gap mechanism should work also for other gap lengths and other periodicities.
- CMCC thinks that DRX is sufficient and we should make a decision not to work on gap pattern or HARQ patterns. Huawei agrees and thinks we concluded already earlier that DRX would be sufficient for all scenarios.
- Samsung thinks that DRX can be used to solve the issue. Samsung thinks the eNB has to ensure that there are unscheduled period. To do so, the UE would request a pattern from the eNB. Then the eNB ensures that this patterns is achieved using the DRX.
- ZTE thinks that DRX can work but it might needs improvements.
- NSN thinks that DRX is there anyway and of course it can be used. NSN would not want to modify the DRX procedure.

=> We will focus on specifying UL assistant information that would be needed not matter which TDM solution we choose.

=> Since DRX is available anyway, it can be considered as the baseline.

=> DRX should be used in a predictable way, i.e., the eNB should ensure a predictable pattern of unscheduled periods by means of DRX

=> It can be discussed whether additional parameter values should be support in the DRX mechanism. Other changes to the DRX procedure should be avoided if possible.

IPR2025-00720, OnePlus Ex. 1004

Enhancements to DRX mechanism

R2-115751 TDM Solutions for IDC; Nokia Siemens Networks, Nokia Corporation; Disc;
R2-115768 Discussion on the DRX based solution for IDC; ZTE Corporation; Disc;
R2-115936 Protection of essential LTE DL signaling with short-term TDM between LTE and BT; Qualcomm Incorporated; Disc;
R2-116131 Some aspects of DRX solution for in-device co-existence; Samsung; Disc;
R2-116323 DRX procedure for avoiding IDC interference; LG Electronics Inc.; Disc;
R2-116305 DRX based solution for LTE+WiFi offload (power saving mode); Fujitsu; Disc;
R2-115976 Discussion on DRX resource management; Research In Motion UK Limited; Disc;
All 7 Tdocs not treated

7.6.2 Autonomous denial

Need for a solution to handle rare periodic/non-periodic events? If so what is the impact on LTE performance? How to limit/control the impact?

Applicability

R2-115933 On the applicability of autonomous denials and DRX for BT connection-setup scenarios; Qualcomm Incorporated, Broadcom Corporation, MediaTek Inc.; Disc;
- NSN tend to agree that it will be difficult to avoid the autonomous denial. But the UE should indicate the usage of autonomous denial to the eNB so that it can take it into account. Such an indication would not need to be acknowledged.

R2-116330 Handling of BT and WiFi control signaling in an IDC interference scenario; Ericsson, ST-Ericsson; Disc;
- QC thinks that even if latest features are in place, a device may still start as slave. Ericsson would like base further work on the assumption that latest BT features are being used and that UE vendors attempt to relay on BT master mode.
- QC thinks that the DRX solution would not be sufficient in some cases and then autonomous denial should be allowed to be used.

Agreements
1 Autonomous denial can be considered as solution for rare cases if other solutions cannot be used
2 Additional restriction and methods to reduce the impact of the network will be discussed.
3 We will also discuss further the definition of “rare”.

Enhancements

R2-115939 Signaling for Autonomous Denial of ISM and LTE Transmissions; Sharp; Disc;
- MTK thinks that the proposal is agreeable. MTK would like to point out that denial might not be necessary for WiFi beacon handling.
- LG agrees with the proposal but wonders based on what information the network determines whether it should enable it.
- NSN thinks that autonomous denial cannot be avoided and even if the eNB indicates that the UE is not allowed to do it the UE would do it anyway. IDT agrees.

=> Noted

R2-116321 Assistant information for autonomous denial; LG Electronics Inc.; Disc;
not treated

R2-116108 Analysis and Discussion on Autonomous Denials; InterDigital Communications, Nokia Seimens Networks and Nokia Corporation; Disc;
- QC wonders how messaging before the denial would be possible. IDT thinks that for WiFi beacon reception the UE would know when it appears. Sharp wonders whether the indications are sent only for deterministic or also for non-deterministic events.
- Ericsson thinks that as long as the UE does not know if it will be scheduled it does not need to send a denial report.
- QC thinks that reporting after denial should work better.

=> Noted

R2-116173 Enhanced solution for beacon handling; Renesas Mobile Europe Ltd.; Disc;
not treated

IPR2025-00720, OnePlus Ex. 1004

7.6.3 Other

IDC Information Forwarding

R2-116319 Necessary procedure for avoiding ping-pong to problematic frequency; LG Electronics Inc.; Disc;
R2-116188 IDC Information forwarding; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
R2-115752 IDC Signalling to Target eNB; Nokia Siemens Networks, Nokia Corporation; Disc;
All 3 Tdocs not treated

Continuation until next meeting

- ✉ **Email discussion [76#10] until Thursday after the meeting for capturing agreements from this meeting in running stage-2 CR? (CMCC). Update can be provided in R2-116510**

7.7 WI: RAN overload control for Machine-Type Communications

(SIMTC-RAN_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, target: March 12, WID: RP-111373)
It is assumed that for RAN2-76 most issues related to this WI will be handled in the corresponding AI of the joint session.

No contributions.

7.8 WI: Other Rel-11 WIs

For WIs for which RAN2 is not prime responsible WG, e.g. …

CoMP

(COMP_LTE_DL-Core, leading WG: RAN1, REL-11, started: Sep.11, target: Sep.12, WID: RP-111365)

R2-116070 CoMP architecture and CoMP RRM measurement; Samsung; Disc;
- Fujitsu wonders whether it is time to start working on a stage-2 description for CoMP. Samsung suggests to wait for further progress in RAN1 and would primarily raise awareness of this ongoing work in RAN1.
- Huawei: Figure 5: Could the CoMP measurement set be across eNBs? Samsung thinks the CoMP measurement sets provide information about sites that have very tight coordination. Huawei thinks that it is not yet time to say that some CoMP schemes should be limited to intra-eNB? Samsung thinks this is a lot up to implementation. In terms of specification we would probably not specify which schemes are possible and which are not. Samsung clarifies that it would anyway be transparent from a UE perspective whether the signals come from different or only one eNB.
- Samsung thinks it is not the intention to remove the conventional RRM measurements on CRS. The new CoMP RRM measurements are not primarily for mobility.
- Samsung explains that the legacy RRM measurements cannot support Scenario 4 where all cells send the same CRS. But the new measurements could also be used for the other Scenarios.
- DOCOMO wonders about the impact on RAN2 due to CSI-RS measurements. Samsung thinks that needs more discussion. They are not proposing anything right now. Fujitsu thinks that how CoMP management impacts the procedures need to be defined and that could be for RAN2 to look at.

=> Samsung as rapporteur of CoMP will ensure that RAN2 is informed timely about decisions in RAN1 that might have an impact on RAN2 work.

R2-116334 Discussion on Some Aspects of Signalling for CoMP Operation; Fujitsu; Disc;
not treated

TEI11

R2-116331 Support for Multiple Serving Cells in LPP; Qualcomm Incorporated; Disc;
not treated

IPR2025-00720, OnePlus Ex. 1004

7.9 SI: Hetnet mobility enhancements (RP-110709)

(FS_HetNet_eMOB_LTE, leading WG: RAN2, REL-11, started: March 11, target: Dec. 11, WID: RP-110709)
TR 36.839 captures agreements made so far. Version 0.3.0 capturing agreements of RAN2-75bis in R2-115651

***Informal adhoc on LTE HetNet simulations** planned on Wednesday afternoon (chaired by Jialin Zou (Alcatel-Lucent)) with the intention to discuss the initial large area calibration results and the way forward on HTN mobility simulation. The outcome of the adhoc will be a document with further agreements.*

R2-116355 Report of ad hoc on LTE HetNet mobility simulations; Alcatel-Lucent; Report;
- ZTE would like to clarify the way forward. Should companies do both calibration results and simulations with enhanced models to find problems. ZTE wonders whether this should be don in parallel. ALU thinks that simulation assumptions for calibrations are already stabilized. But it has been found that there is quite some variance among the calibration results and that should be looked into. However, these final calibration simulations should not delay the actual simulation work.
- ZTE wonders whether companies should use individual parameter configurations (e.g. for DRX, …)? ALU thinks that the understanding was that companies may use their preferred settings. NSN agrees that companies should focus on making the actual simulations rather than optimizing the calibration. NSN thinks that the the actual simulation settings should be up each company and there is no need to agree on 4-7 below. Ericsson agrees with NSN that it is more important to progress than to align models. But it is important that companies describe the models they used. Huawei thinks that there is no need to follow the checklist in R2-116103. Ericsson thinks the list is good but does not want to mandate the list. Renesas agrees that the checklist should be considered an example and intended to help when describing their simulation settings. QC would find it beneficial to discuss assumptions on DRX and eICIC a bit further. QC thinks that it is not necessary to mandate DRX or eICIC but to agree on common set of parameters and assumptions e.g. on how often the UE performs measurements.

Agreements
1 Companies will be given more time to verify their calibration simulation results. Those updated results could still be incorporated into the TR. No conclusions should be drawn from the calibration simulation results. More simulations with different settings and use of available features are required to conclude whether enhancements are required.
2 Companies should have the freedom of using different simulator modelling than used during calibration provided the differences in the modelling and metrics are described.
3 The checklist provided in R2-116103 may be taken into account for further HetNet simulations in this SI.
4 Should think further about suitable models (DRX, eICIC, RLF recovery, traffic patterns). This should be contribution driven and not limiting allowed simulation models.

- DOCOMO thinks that the SI is supposed to close now. ALU explains that ALU will suggest at the RAN plenary meeting an extension of probably 6 months. NSN agrees that a 3 month extension would not be sufficient and would support 6 months. QC supports this.

✉ **Email discussion [76#20] 1 month to discuss and collect final calibration simulation results. Results can be included in TR (ALU).**
=> Can provide an update TR including these results for the next meeting (to be agreed at RAN2-77)

7.9.1 Calibration Simulations

Simulation results for calibration purposes?
Including output of [75b#37] - LTE: HetNet large scale calibration simulations [ALU]

R2-116120 Email discussion: [75b#37] - LTE: HetNet large scale calibration simulations; Alcatel-Lucent (Rapporteur); Report; result of email discussion [75b#37];
R2-116349 Email discussion: [75b#37] - LTE: HetNet large scale calibration simulations; Alcatel-Lucent (Rapporteur); Report; result of email discussion [75b#37];
- see conclusions above.
=> noted

IPR2025-00720, OnePlus Ex. 1004

R2-116103 Way forward with Hetnet simulations; Renesas Mobile Europe Ltd.; Disc;
R2-115741 Results of large area system simulations for HetNet; New Postcom; Disc;
R2-115925 Impact of small cells in mobility performance; Qualcomm Incorporated; Disc; [Moved here from 7.9.2]
R2-116102 Further simulation results for Hetnet mobility; Renesas Mobile Europe Ltd.; Disc;
R2-116121 Open Issues with Large Scale HetNet Mobility Simulations; Alcatel-Lucent; Disc;
All 5 Tdocs not treated

R2-116149 HetNet large area simulation results; Nokia Siemens Networks, Nokia Corporation; Disc; revised in R2-116394
R2-116394 HetNet large area simulation results Nokia Siemens Networks, Nokia Corporation Disc REL-11 FS_HetNet_eMOB_LTE
not treated

R2-116150 Clarifications to HetNet Technical Report; Nokia Siemens Networks, Nokia Corporation; TP; 36.839;
=> Agree to incorporate the changes proposed into the update provided by the rapporteur

R2-115916 Simulation results and observations of large area HetNet mobility; Huawei, HiSilicon; Disc;
not treated

Late or withdrawn
R2-116317 Simulation results of large scale HetNet mobility; MediaTek; Disc;
not treated

7.9.2 Cell detection performance

Simulation-based evaluation of potential cell detection problems (depends on the progress on the calibration effort)?
R2-115917 Cell detection delay in HetNet; Huawei, HiSilicon; Disc;
- QC would agree to set this as a baseline. But if cell identification delay does not have an impact on the HetNet mobility performance there is also not need to send an LS.
- NSN thinks proposal 1 is not in line with the agreements just made that companies are free to choose their models. Huawei thinks that companies are free to bring in other models but it will be difficult to move forward if we don't agree on models. Renesas agrees that it is a feasible model and it would be good to use this model. It should of course be allowed to test other models.
- MTK wonders whether it is for inter- or intra-frequency. Huawei clarifies that it is for intra-frequency.

Agreements
1 The model provided in R2-115917 is considered suitable for modelling non DRX intra-frequency cell identification delay.

=> Based on the results provided in R2-115917 there is currently not need to send an LS to RAN4.

R2-116151 Small cell detection in HetNet environment; Nokia Siemens Networks, Nokia Corporation; Disc;
- ZTE: Table 1: Is the power consumption per UE? NSN confirms. What is the reason for the sudden drop between 63 and 80 cells? NSN explains that the UE searches for small cells only if it is not connected to a small cell. Therefore, with increased density there is less need to scan. ZTE assumes that the UE on the small cell frequency would also need to scan the other frequency to select back. NSN explains that the UE only scans for the macro cells when loosing connectivity to the pico.
- Renesas wonders whether the assumption is that there are 6ms gaps. NSN confirms that they used the existing pattern of 6 subframes per 80 subframes.
- QC wonders about the traffic model. NSN is not sure about the traffic model. QC thinks if it was full buffer, the power consumption would anyway be dominated by other factors than inter-frequency search. So, we should consider another traffic model than full buffer.
- MTK wonders how one would arrive to a suitable traffic model. MTK thinks that this contribution is very nice even without a traffic model.

IPR2025-00720, OnePlus Ex. 1004

- QC wonders whether we have to model the cell identification differently with such long gaps between measurements.
- Huawei asks what the battery consumption for intra-frequency scanning is modelled. NSN explains that they have not modelled that but only captured the energy consumed for inter-frequency measurements. Huawei wonders about the power consumption for inter-frequency scanning on the macro frequency while the UE is on the pico cell.
- Samsung thinks that we should be careful not to draw to early conclusions.
- QC wonders whether we should capture parts of this in the TR. NSN thinks we could study and discuss it a bit further but would of course be happy to capture something in the TR.

=> Power consumption for inter-frequency measurements should be studied further

R2-115731 HetNet mobility and DRX; Nokia Corporation, Nokia Siemens Networks; Disc;

- Samsung wonders whether this would mean to decouple measurements from DRX. But would one then still save power? Nokia agrees that one would not save much power when measuring often but having a long DRX cycle. When the UE can do measurements it does not cost much more to do read PDCCH as well. Nokia would like to point out that using very long DRX settings might cause problems to HetNet mobility performance.
- DOCOMO agrees that it would be good to study mobility performance with DRX being activated. DOCOMO thinks that if there is no data transmission ongoing an RLF might not be too critical. Samsung thinks that during a speech call there could still be a lot of DRX. Nokia points out that they did not simulate any data.
- Huawei wonders what the cause for the RLFs is. Nokia did not separate those reasons.

=> Important topic to study further.

=> Noted

R2-115967 Pico cell discovery in a Heterogeneous Network; Research In Motion UK Limited; Disc;
R2-115769 Discussion on enhancement of small cell discovery; ZTE Corporation; Disc;
R2-115821 Consideration on small cell discovery in HetNet; Potevio; Disc; [Moved here from 7.9.4]
R2-116260 Improvement for small cell discovery and identification; ITRI, Acer; Disc; [Moved here from 7.9.4]
All 4 Tdocs not treated

Late or withdrawn

R2-115926 Further analysis on pico-macro handovers; Qualcomm Incorporated; Disc;
R2-116276 Mobility performance in HetNet deployment; Intel Corporation; Disc;
Both Tdocs are withdrawn.

7.9.3 Mobility state estimation performance

Simulation-based evaluation of potential mobility state estimation problems (depends on the progress on the calibration effort)?

R2-115919 Need of mobility state estimation enhancement in HetNet; Huawei, HiSilicon; Disc;

- Ericsson: Which values was used for TTT? What was the time of stay. Huawei indicates that TTT was used according to the simulation assumptions in the calibration study. Huawei did not capture those but could present them next time.
- ALU wonders how this is related to the deployment of pico cells. Huawei thinks that for the MSE it is important to weigh the different handovers differently. Huawei indicates that the picos were places according to the agreed simulation assumptions.
- NSN evaluated increasing number of small cells in their paper and also concludes that the MSE needs to be improved.
- Samsung wonders whether we improve MSE or rather find solutions to select different parameters for macro-pico, pico-macro, macro-macro… Nokia agrees that it is important to look at the full set of solutions and not just at MSE.
- QC thinks that even if we have different parameters (e.g. TTT) for different cells, we could still have additional scaling with MSE.
- NSN observed that for high speeds the MSE was primarily subject to wrong classification.

=> Should look at MSE also in combination with other enhancements on the table (e.g. dedicated mobility parameters for macro/pico cells…)

=> Noted

R2-116097 Improvements to mobility state estimation; Renesas Mobile Europe Ltd.; Disc;
R2-116152 UE mobility state estimation and HetNet; Nokia Siemens Networks, Nokia Corporation; Disc;

IPR2025-00720, OnePlus Ex. 1004

R2-115770 Discussion on enhancement of mobility state estimation; ZTE Corporation; Disc;
R2-116041 Consideration on counting only macro cells' cell changes; Pantech; Disc;
R2-116042 Selective counting in HetNet MSE; Pantech; Disc;
R2-116273 Issues related to UE mobility state estimation in Hetnet; Samsung; Disc;
R2-116296 Mobility State Estimate Enhancement; LG Electronics Inc.; Disc;
R2-116307 Discussion on the scenario for UE mobility state estimation; Fujitsu; Disc;
All 8 Tdocs not treated

R2-116098 CR for excluding handover from mobility state estimation; Renesas Mobile Europe Ltd.; CR; 36.331; (0830); B;
R2-116099 CR for counting handovers in other RATs for mobility state estimation; Renesas Mobile Europe Ltd.; CR; 36.304; (0168); C;
R2-116100 CR for reporting UE mobility state to the network; Renesas Mobile Europe Ltd.; CR; 36.331; (0831); B;
All 3 CRs not treated

7.9.4 Other

R2-116122 Update: Email discussion: [75#36] – LTE: HetNet: Calibration results of hotspot case; Alcatel-Lucent; Report; resubmitted in order to reference it in TR 36.839, some corrections were needed compared to R2-115648;
- Only small correction.
=> Should reference from the TR to this updated document.
=> Noted

R2-115745 Inter-frequency Pico cell measurements for Hetnet deployments; NTT DOCOMO, INC.; Disc; [Moved here from 7.9.2]
- Renesas wonders whether DOCOMO has measurements with or without gaps in mind. And with triggers or periodic?
- QC indicates that it is already possible in Rel-10 to indicate the gap requirements for each band combination. Mandating something would be difficult and probably not necessary. Nokia can agree that it would be desirable from an operator point of view to be able to measure on other bands with gaps. But it would not be desirable from UE perspective. And whether is it possible is already indicated to the NW.
- Nokia wonders also why this would be limited to pico cells.
- Renesas wonders whether we want to introduce new measurement procedures.
- Renesas wonders whether we really want to involve RAN4 now. Nokia agrees that it would be too early to involve RAN4. For now we could discuss the need and where we see some needs for improvements, we could still involve RAN4.
=> Noted. Should be discussed further

R2-115881 SCell configuration for HeNB with carrier aggregation; Panasonic, NTT DOCOMO, INC.; Disc;
R2-115732 Re-establishment issues in HetNet scenarios; Nokia Corporation, Nokia Siemens Networks; Disc;
R2-115819 Enhancement for high speed UEs in HetNet; Potevio; Disc;
R2-116123 Discussion on Context Fetch for RRC Connection Re-establishment in LTE HetNets; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
R2-116128 Discussion on Synchronization Related Aspects in LTE HetNets; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc;
R2-116101 Enhancement of proximity indication in heterogeneous networks; Renesas Mobile Europe Ltd.; Disc;
R2-115730 Discussion on HetNet mobility; Nokia Corporation, Nokia Siemens Networks; Disc;
R2-115822 Consideration on connection re-establishment in HetNet; Potevio; Disc;
All 8 Tdocs not treated

Late or withdrawn
R2-116146 Minimizing unnecessary handovers in HetNet deployments; Motorola Mobility; Disc;
R2-116147 Minimizing unnecessary handovers in HetNet deployments; Motorola Mobility; Disc;
Both are withdrawn

Continuation until next meeting

IPR2025-00720, OnePlus Ex. 1004

✉ **Email discussion [76#11] until Thursday after the meeting for capturing agreements from this meeting and the updates proposed in R2-116150 in the TR? An update can be provided in R2-116517 v0.3.1. Will not be provided to plenary for information**

7.10 SI: Other Rel-11 SIs

For SIs for which RAN2 is not prime responsible WG

IDC
(FS_SPIA_IDC, leading WG: RAN2, REL-11, started: June 10, completed: Sep.11, WID: RP-111366)

R2-115713 CR to 36.816 on DRX based TDM solution; CMCC, CATT; CR; 36.816; 0009; F;
=> CR is agreed

8 UTRA Release 9 and earlier releases

NOTE: In AI 8 - AI 11 the references to "Chair" refer to Simone Provvedi (RAN2 vice-chairman) who chaired the UMTS session.

8.1 In principle agreed CRs

REL-4 TEI4:

REL-5 HSDPA-L23 (RAN2):

REL-5 TEI5:

REL-6 EDCH-L23 (RAN2):
R2-115694 Delete E-HICH, E-RGCH, E-AGCH information when E_DCH is stopped Ericsson, ST-Ericsson, Broadcom Corporation, Research In Motion UK Ltd, Alcatel-Lucent, Renesas Mobile Europe Ltd, Nokia Siemens Networks CR 25.331 4813 - F REL-10 TEI10, EDCH-L23 R2-115518
=> The CR is agreed

REL-6 RANimp-RABSE (RAN2):

REL-6 TEI6:

REL-7 RANimp-CPC (RAN1):

REL-7 RANimp-EnhState (RAN2):

REL-7 MIMO-L23 (RAN2):

REL-7 RANimp-16QamUplink (RAN1):

REL-7 LCRTDD-EDCH-L23 (RAN2):

REL-7 RANimp-L2DataRates (RAN2):

REL-7 RANimp-64QamDownlink (RAN1):

REL-7 TEI7:

REL-8 RANimp-UplinkL2dataRates (RAN2):
R2-115681 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0091 - F REL-8RANimp-UplinkL2dataRates R2-115501
=> The CR is revised in R2-116345
R2-116345 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0091 1 F REL-8RANimp-UplinkL2dataRates

IPR2025-00720, OnePlus Ex. 1004

Ericsson: we discussed the changed at the figures at the last meeting. We decided that it was not needed.
Intel: I miss that, but as rapporteur I prefer that we correct them.
Ericsson: ok.
=> The CR is agreed

R2-115682 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0092 - A implicitly in principle agreed with REL-8 cat.F CR in R2-115501 REL-9 RANimp-UplinkL2dataRates R2-115501
=> The CR is revised in R2-116346
R2-116346 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0092 1 A REL-9RANimp-UplinkL2dataRates
=> The CR is agreed

R2-115683 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0093 - A implicitly in principle agreed with REL-8 cat.F CR in R2-115501 REL-10 RANimp-UplinkL2dataRates R2-115501
=> The CR is revised in R2-116347
R2-116347 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0093 1 A REL-10 RANimp-UplinkL2dataRates
=> The CR is agreed

R2-115684 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0094 - A implicitly in principle agreed with REL-8 cat.F CR in R2-115501 REL-11 RANimp-UplinkL2dataRates R2-115501
=> The CR is revised in R2-116348
R2-116348 Cleanup corrections for enhanced uplink operation with MAC-i ZTE Corporation CR 25.319 0094 1 A REL-11 RANimp-UplinkL2dataRates
=> The CR is agreed

REL-8 RInImp8-CsHspa (RAN2):

REL-8 RANimp-UplinkEnhState (RAN2):

REL-8 RANimp-EnhState1.28TDD (RAN2):

REL-8 HNB-supp (RAN2):

REL-8 RANimp-DCHSDPA (RAN1):

REL-8 RANimp-LCRCPC (RAN1):

REL-8 RANimp-DRX (RAN2):

REL-8 RANimp-HSPAVoIP (RAN2):

REL-8 RANimp-ANSS (RAN2):

REL-8 RANimp-HSDSCH (RAN2):

REL-8 MBSFN-DOB (RAN1):

REL-8 RANimp-MIMOLCR (RAN1):

REL-8 ETWS (SA1):

REL-8 PPACR (SA1):

REL-8 TEI8:
R2-115687 Correction on the measurement configuration validation for SFN reading Huawei, HiSilicon CR 25.331 4806 - F REL-8TEI8 R2-114888
=> The CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-115688 Correction on the measurement configuration validation for SFN reading Huawei, HiSilicon
CR 25.331 4807 - A implicitly in principle agreed with REL-8 cat.F CR in R2-114888 REL-9TEI8 R2-114888
=> The CR is agreed

R2-115689 Correction on the measurement configuration validation for SFN reading Huawei, HiSilicon
CR 25.331 4808 - A implicitly in principle agreed with REL-8 cat.F CR in R2-114888 REL-10 TEI8 R2-114888
=> The CR is agreed

REL-9 RANimp-DC_MIMO (RAN1):

REL-9 RANimp-DC_HSUPA (RAN1):

REL-9 EHNB-RAN2 (RAN2):

REL-9 RANimp-TxAA_nonMIMO (RAN1):

REL-9 RANimp-MultiBand_DC_HSDPA (RAN4):

REL-9 TEI9:

8.2 Others

REL-4 TEI4:

R2-115759 Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7
Anritsu, CATT CR 25.331 (4816) - F REL-4TEI4
=> The CR is agreed in R2-116415 CR4816

R2-115760 Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7
Anritsu, CATT CR 25.331 (4817) - A REL-5TEI4
=> CR is agreed in R2-116416 CR4817

R2-115761 Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22
Anritsu, CATT CR 25.331 (4818) - A REL-6TEI4
=> CR is agreed in R2-116417 CR4818

R2-115762 Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22
Anritsu, CATT CR 25.331 (4819) - A REL-7TEI4
=> CR is agreed in R2-116418 CR4819

R2-115763 Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22
Anritsu, CATT CR 25.331 (4820) - A REL-8TEI4
=> CR is agreed in R2-116419 CR4820

R2-115764 Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22
Anritsu, CATT CR 25.331 (4821) - A REL-9TEI4
=> CR is agreed in R2-116420 CR4821

R2-115766 Correction to Default Radio Configurations for TDD: number of TFCI coding bits Anritsu, CATT CR 25.331 (4822) - F REL-10 TEI10
Note: REL-10 CR R2-115510 was in principle agreed at RAN2 #75bis. Since corresponding REL-4 to REL-9 CRs are needed and they are not simple mirror CRs, no Tdoc and CR number were allocated for this CR for RAN2 #76 in advance.
=> CR is agreed in R2-116421 CR4822

R2-116332 Draft LS on Default Radio Configurations for TDD Anritsu LSout REL-4TEI4
=> The LS is agreed in R2-116422

R2-116422 LS on Default Radio Configurations for TDD REL-4TEI4

IPR2025-00720, OnePlus Ex. 1004

From RAN2 to : RAN 5, GERAN 3 LSout (Contact: Anritsu)
=> The LS is agreed

REL-5 HSDPA-L23 (RAN2):

REL-5 TEI5:

REL-6 EDCH-L23 (RAN2):

REL-6 RANimp-RABSE (RAN2):

REL-6 TEI6:

REL-7 RANimp-CPC (RAN1):

REL-7 RANimp-EnhState (RAN2):

R2-116136 Cell update Confirm using dedicated or common H-RNTI Alcatel-Lucent Disc REL-7 RANimp-Enhstate
Huawei: we also have a paper
QC: we have a CR. We
Broadcom: can you clarify this: “The periodical cell update timer, T305, is set in minutes with a default value of 30 minutes”? We think T305 should only be reset for signalling, not for data.
ALU: the UE will have signalling due to the data traffic we think.
Interdigital: we can also re-start T305 if we have common E-DCH resources allocated, so not only for signalling.
ALU: periodical cell update is unlikely to happen if data application is on (e.g. mail)
Huawei: do you see any other cases that can cause problems?
ALU: we focused on this one.
=> Noted

R2-115849 Discussion on H-RNTI handling in Cell Update procedure Huawei, HiSilicon Disc REL-8 TEI8
Broadcom: Periodic Cell Update should always use Dedicated H-RNTI, not Common
Ericsson: on observation 5 we have a small disagreement. We have a cell selection, but then in some cases the UE can re-enter the service area.
On Broadcom comment: if you don’t have dedicated H-RNTI assigned, the UE uses the Common.
Broadcom: in that case you cannot do periodical cell update.
Ericsson: ok, we need to check
QC: question: on the conclusions: is the conclusion that except for those 2 cases we can have either? What is your suggestion on those 2 cases.
Conclusions and analysis do not match.
QC: today there are different implementations in some NW and some UEs.
Huawei: in principle our proposal is that when the UE caould monitor both depending on the caes, we would like to keep the dedicated H-RNTI monitoring. We could discuss the two cases here. If they are not clear, we are open to clarifications. On observation 5 comment from Ericsson, I see your point. It is a case not clear in the current specs. It is not written that the UE delete the dedicated H-RNTI. So we assumed that the UE doesn’t delete that.
Ericsson: if cell reselection fails, we think that the UE lose the dedicated H-RNTI.
QC: we agree with Ericsson.
After offline:
We will focus on two cases RLC unrecoverable error and re-entering service. But we are not ready to agree on anything this meeting.
We could have email discussion until the next meeting?
QC: could be a good idea.
=> Noted
=> Email discussion n. 2) [76#30] until next meeting. Rapporteur: QC. Purpose progress on this issue and possibly on CRs.

IPR2025-00720, OnePlus Ex. 1004

R2-116223 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.331 (4866) - F REL-7RANimp-EnhState
Renesas: in the proposal the UE clears HARQ info. Why? What is the UE supposed to use?
QC: we copied from other similar places.
NSN: why do we clear C-RNTI? This is not even mentioned in the cover sheet.
Interdigital: we are not sure any of this changes are needed. It has been clear from Rel-7.
The only ambiguous case that we find is the case that Ericsson analysed in their paper last time and that was mentioned before. These are a lot of changes for Rel-7.
ZTE: we are cautions about Rel-7 changes here. We need more time to check. Why the UE needs to delete the old H-RNTI before getting a new one?
QC: On IDT question: 8.3.1.2 dedicated H-RNTI is cleared.
ST-E: we are supportive of the intention, but a question. The change is not intended to change the legacy Rel-7 UE, but it should change Rel-8 UE behaviour supporting the FACH enhancement in UL and DL. Should we put that in the if statement at the beginning.
Chair: would that be a Rel-8 CR?
QC: yes, we agree with Ericsson. We could review the CR.
Ericsson: we support the CR.
NSN: we support the intention to clarify the UE behaviour but we are concerned with some of the changes.
Broadcom: we are concerned about changing the UE behaviour.
Panasonic: we should start with the study of the cases and justification for changes.
RIM, Broadcom: we support the intention but not the implementation of the CR.
=> The CR is postponed

R2-116226 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.331 (4867) - F REL-8RANimp-EnhState, RANimp-UplinkEnhState
RANimp-EnhState was a REL-7 WI, RANimp-UplinkEnhState was a REL-8 WI, why no REL-7 CR?

R2-116229 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.331 (4868) - A REL-9RANimp-EnhState, RANimp-UplinkEnhState

R2-116231 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.331 (4869) - A REL-10 RANimp-EnhState, RANimp-UplinkEnhState
=> Above 3 Tdocs not treated

R2-116140 SRB1 Mapping Info in CELL_FACH state Alcatel-Lucent Disc REL-7RANimp-Enhstate
NSN: we think it is a real issue that we saw in a lab. We should discuss it.
Broadcom: I am a bit confused. The question is the meaning of “applicable”.
Chair: “applicable”, not “available”. So?
Huawei: is the use case from a Cell supporting Enhanced Cell FACH to a cell where it is not supported?
ALU: Yes. We need to investigate this.
Renesas: we could have two UE implementations. One UE could store 2 configurations. Another UE could override the stored configuration with the configuration received by the SIB with Enhanced cell FACH configuration. So if this UE moves to a legacy network, it doesn’t have the right configuration.
Renesas: we could remove those two lines that ALU indicated.
ZTE: we share the concern from Huawei.
ALU: we think there is some investigation to do here. It’s not too clear.
ALU: OK to come back at the next meeting.
=> Noted

R2-116233 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 (4870) - F REL-7RANimp-EnhState
Intel: we agree with the intention but we could remove the whole section. The new sentence will not fit in there.
QC: Ok either way
Broadcom: we support.
Broadcom: in FACH is possible to have this.

IPR2025-00720, OnePlus Ex. 1004

NSN: "HS-DSCH is designed for the reception of ***SYSTEM INFORMATION CHANGE INDICATION*** message, not for the reception of SIBs" where is this specified?
QC: This is clearly stated in subclause 8.1.1.7.1 and 8.1.1.7.3.
=> revised in R2-116400

R2-116400 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4870 - F REL-7RANimp-EnhState
Ericsson: changes on changes
=> The CR is revised in: R2-116437.

R2-116437 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4870 r1 F REL-7RANimp-EnhState
=> The CR is agreed.

R2-116235 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 (4871) - A REL-8RANimp-EnhState
=> Revised in R2-116401

R2-116401 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4871 - A REL-8RANimp-EnhState
Ericsson: some of the changes in Rel-7 CR have not been done in this one.
=> The CR is revised in: R2-116438

R2-116438 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4871 r1 A REL-8RANimp-EnhState
=> The CR is agreed.

R2-116236 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 (4872) - A REL-9RANimp-EnhState
=> Revised in R2-116402

R2-116402 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4872 - A REL-9RANimp-EnhState
=> Revised in: R2-116439

R2-116439 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4872 1 A REL-9RANimp-EnhState
Ericsson; why only?
QC: copied from above. It's the same thing.
=> The CR is agreed.

R2-116237 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 (4873) - A REL-10 RANimp-EnhState
=> Revised in R2-116403

R2-116403 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4873 - A REL-10 RANimp-EnhState
=> Revised in R2-116440:

R2-116440 Correction of BCCH mapping on HS-DSCH Qualcomm Incorporated CR 25.331 4873 1 A REL-10 RANimp-EnhState
=> The CR is agreed

R2-116240 Clarification of F-DPCH transmission with STTD Qualcomm Incorporated CR 25.331 (4875) - F REL-8RANimp-EnhState
why no REL-7 CR?
Renesas: the current spec already clarifies this.
Chair: so no network will do this.
Broadcom: we agree with Renesas.
QC: but this for Enhanced CELL FACH
Intel: this cannot happen.
Ericsson: you can receive this in dedicated signalling.
Broadcom: even if you receive it is not applicable.
QC: Ericsson is correct.
Broadcom: we don't see the problem.
Renesas: 8.6.6.3a this is already clarified.
Chair: the UE shouldn't apply this in CELL FACH state even if it received it. So the CR is not needed.

IPR2025-00720, OnePlus Ex. 1004

Ericsson: we are not sure that this is the common understanding. There are ambiguities in the specification that we need to clarify. We are not in favour of this CR but there are cases to clarify.
QC: ok not to have a CR, RAN2 agrees that the Chair comment above is correct.
NSN: what about stage 2?
QC: not needed. Maybe in RAN1, we don't know yet.
Panasonic: we might bring something for stage 2 next time.
=> The CR is not agreed.

R2-116242 Clarification of F-DPCH transmission with STTD (4876) - A REL-9RANimp-EnhState Qualcomm Incorporated CR 25.331
R2-116243 Clarification of F-DPCH transmission with STTD (4877) - A REL-10 RANimp-EnhState Qualcomm Incorporated CR 25.331
=> Both the 2 above not treated.

REL-7 RANimp-16QamUplink (RAN1):

REL-7 LCRTDD-EDCH-L23 (RAN2):

REL-7 RANimp-L2DataRates (RAN2):
R2-116234 Clarification on HS-DSCH TB size table for non-64QAM Panasonic, Nokia Siemens Networks Disc REL-7RANimp-L2DataRates
Intel: we think we only need to discuss about case 6. We prefer that the pre-rel message doesn't affect the table.
Why the source RAN would not be able to take care of this.
Panasonic: are you talking about this IE only.
Intel: yes. SRNS the source RNC should take care of preparing the right message for the UE.
Renesas: we think we should configure the bit aligned table. So we share Panasonic opinion.
We have problems with case 1 interpretation from Panasonic table.

Case 6:
NSN not too strong preference, Slight preference for falling back to bit aligned.
ALU: we are in the Intel camp.
Broadcom, ST-E, QC: we think we should fallback to bit aligned.
QC: UE that uses 64QAM cannot fall back to bit aligned.
Chair: confused network behaviour.
Renesas: for ALU: what is the use case? Why not using Rel-7 message?
Intel: what happen to the 64 QAM configuration is a REl-6 message is received?
QC: if the UE understands that 64 is still configured, the UE doesn't fallback.
Chair: this is fine.
QC: we also are not Ok with case 1.
Intel : we could agree on fallback to bit-aligned table if that's the majority.
Renesas: we need a CR anyway.
=> There is agreement on this case (see Renesas CR in R2-116202)

Case1:

#	Release verion of the message	v780 non-critical extension	IE "Downlink HS-PDSCH information"	UE action w.r.t. HS-DSCH TB size table
1	Rel-7	Included	Not included	No change

Renesas: we think the specification is not clear. We expect the fallback to bit-aligned also in this case.
QC: what if the table octed aligned is configured. There are subcases in case 1.
NSN: there are several IEs to consider.
QC: the subcase that we have in mind is IE "Downlink HS-PDSCH information" not inlcuded but octed aligned table configured. So is this a valid network configuration?
NSN: the network should not use this.
Renesas: we have the same understanding than QC.
QC: there are other subcases in case1.

IPR2025-00720, OnePlus Ex. 1004

NCE is included, inside the TB size is not. And the IE IE “Downlink HS-PDSCH information is not included.
Renesas: we agree with the interpretation in propososal 1 but some legacy UE could not comply to that.
Panasonic: we could have a network workaround.
Renesas: The network could include the same configuration if NCE is present. We proposed this last time.
But one network vendor was not happy with that.
QC: we can try to have a CR for case 1.
Panasonic: In case NCE is included but nothing is there? Do we need to clarify this case as well? To forbid it?
=> Noted

R2-115989 Clarification to the handling of HS-DSCH TB size table (4840) - F REL-7RANimp-L2dataRates Intel Corporation CR 25.331
R2-115990 Clarification to the handling of HS-DSCH TB size table (4841) - A REL-8RANimp-L2dataRates Intel Corporation CR 25.331
R2-115991 Clarification to the handling of HS-DSCH TB size table (4842) - A REL-9RANimp-L2dataRates Intel Corporation CR 25.331
R2-115992 Clarification to the handling of HS-DSCH TB size table (4843) - A REL-10 RANimp-L2dataRates Intel Corporation CR 25.331
=> All the 4 CRs above not treated.

R2-116202 Clarification to the handling of HS-DSCH TB size table 25.331 (4861) - F REL-7RANimp-L2DataRates Renesas Mobile Europe Ltd CR
Note 1 clarifies case 6.
Note 5 in normative text clarifies case 1.
Intel: I am not sure NOTE 5 reflects case 1.
Renesas: we think so.
Panasonic: there is a limitation for the network. If the network wants to included further IE NCE after this, then the drawback is that the network has to include this IE first always.
NSN: this is the concern that we expressed before.
Intel: we agreed the intention but we are not sure NOTE 5 reflects properly case 1.
=> The CR is Revised in R2-116463
R2-116463 Clarification to the handling of HS-DSCH TB size table 25.331 4861 - F REL-7RANimp-L2DataRates Renesas Mobile Europe Ltd CR
Intel: we agree on the intention but we prefer to have the text in NOTE5 inside the NOTE1in the tabular.
Renesas: but you asked me to put it in note 5?
Ericsson: editorial quote
Renesas: we will put it in note 1.
=> The CR is revised in: R2-116471
R2-116471 Clarification to the handling of HS-DSCH TB size table 25.331 4861 1 F REL-7RANimp-L2DataRates Renesas Mobile Europe Ltd CR
=> The CR is agreed

R2-116203 Clarification to the handling of HS-DSCH TB size table 25.331 (4862) - A REL-8RANimp-L2DataRates Renesas Mobile Europe Ltd CR
ST-E: what do we do for this?
Renesas: yes there is legacy.
=> The CR is revised in R2-116462:
R2-116462 Clarification to the handling of HS-DSCH TB size table 25.331 4862 - A REL-8RANimp-L2DataRates Renesas Mobile Europe Ltd CR
Renesas: same problems.
=> The CR is revised in R2-116472
R2-116472 Clarification to the handling of HS-DSCH TB size table 25.331 4862 1 A REL-8RANimp-L2DataRates Renesas Mobile Europe Ltd CR
Renesas: remove “in 8.5.25” from the cover sheet.
=> The CR is revised in R2-116477
R2-116477 Clarification to the handling of HS-DSCH TB size table 25.331 4862 2 A REL-8RANimp-L2DataRates Renesas Mobile Europe Ltd CR
=> The CR is agreed.

IPR2025-00720, OnePlus Ex. 1004

R2-116204 Clarification to the handling of HS-DSCH TB size table Renesas Mobile Europe Ltd CR 25.331 (4863) - F REL-9RANimp-L2DataRates
=> Revised in R2-116461
R2-116461 Clarification to the handling of HS-DSCH TB size table Renesas Mobile Europe Ltd CR 25.331 4863 - F REL-9RANimp-L2DataRates
NSN: drooped?
Ericsson: other spec.
Ericsson: quote mark “
=> The CR is agreed in R2-116469
R2-116469 Clarification to the handling of HS-DSCH TB size table Renesas Mobile Europe Ltd CR 25.331 4863 1 F REL-9RANimp-L2DataRates, TEI9
=> The CR is agreed

R2-116205 Clarification to the handling of HS-DSCH TB size table Renesas Mobile Europe Ltd CR 25.331 (4864) - A REL-10 RANimp-L2DataRates
=> The CR is revised in R2-116464
R2-116464 Clarification to the handling of HS-DSCH TB size table Renesas Mobile Europe Ltd CR 25.331 4864 - A REL-10 RANimp-L2DataRates
R2-116464 was mised by another Tdoc
=> The CR is revised in R2-116466
R2-116466 Clarification to the handling of HS-DSCH TB size table Renesas Mobile Europe Ltd CR 25.331 4864 - A REL-10 RANimp-L2DataRates
Renesas: pure shadow including typos.
=> The CR is revised in R2-116470
R2-116470 Clarification to the handling of HS-DSCH TB size table Renesas Mobile Europe Ltd CR 25.331 4864 1 A REL-10 RANimp-L2DataRates, TEI9
=> The CR is agreed

REL-7 RANimp-64QamDownlink (RAN1), REL-7 MIMO-L23 (RAN2):
R2-116220 Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20 Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.306 (0340) - F REL-7RANimp-64QamDownlink, MIMO-L23
ALU: we are ok with the intention but there is a network impact.
NOTEs are strangely worded.
Chair: interoperability analysis?
Huawei: we think there can be a serious problem if there is mismatch.
ST-E: we are fine with the CR. The issue was for Rel-8 UE. Why are we writing this in Rel-7?
RIM: we support.
=> We are ok with the CR. We will re-word the NOTEs to only mention the soft bits. Add a comment that we don’t need cat A.
=> Revised in R2-116405
R2-116405 Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20 Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.306 0340 - F REL-7 RANimp-64QamDownlink, MIMO-L23
Ericsson: why we did add this line now?
ALU: we think is better.
Broadcom: ME box needs to be checked.
QC: we discussed this before. For the UEs is quite obvious.
Ericsson: we could remove this: “which should be recognized by the UTRAN”
QC: the CRs have been circulated for quite a while.
Ericsson: prefer to remove.
=> Revised in R2-116441
R2-116441 Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20 Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.306 0340 1 F REL-7 RANimp-64QamDownlink, MIMO-L23
=> The CR is agreed.

R2-116221 Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20 Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.331 (4865) - F REL-7RANimp-64QamDownlink, MIMO-L23
=> The CR is revised in R2-116406

IPR2025-00720, OnePlus Ex. 1004

R2-116406 Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20 Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.331 4865 - F REL-7 RANimp-64QamDownlink, MIMO-L23
Ericsson: "which should be recognized by the UTRAN" can be taken out.
Add why we don't have shadows.
=> Revised in R2-116442

R2-116442 Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20 Qualcomm Incorporated, Renesas Mobile Europe Ltd. CR 25.331 4865 1 F REL-7 RANimp-64QamDownlink, MIMO-L23
=> The CR is agreed.

REL-7 TEI7:

R2-115742 Wayfoward for adding up Rel-7 missing optional capabilities ZTE Corporation Disc REL-7 TEI7
ZTE: Rel-10?
ST-E: we support the intention. Preference for Rel-10.
=> We are ok to have a REl-10 CR in the next meeting.
=> Noted

R2-116197 Discussion on the removal of the stored IE HARQ Info Renesas Mobile Europe Ltd Disc REL-7TEI7
=> revised in R2-116352

R2-116352 Discussion on the removal of the stored IE HARQ Info Renesas Mobile Europe Ltd Disc REL-7TEI7
Renesas: we had some offline comments. We could remove this:"when UE does not support HS-DSCH reception in CELL_FACH state"
Broadcom: when this variable can be set to true?
Renesas: Cell DCH as well
ST_E: we introduced this: "8.5.37a" with Enhanced DL in Cell FACH. So we shouldn't read the specs too literally. We need to look at some scenarios before changing anything. The intention of this part was not intended to affect legacy UEs.
Interdigital: we also don't think that the intention was to impact legacy UEs.
Renesas: they have some problem in RAN5.
DT: "when the IE "HS-DSCH common system information"" this part need correction also.
After offline:
Renesas: the in consensus offline to address this issue, but more time is needed to figure out the details, so we need to postpone to the next meeting.
=> Noted

R2-116198 Correction of IE HARQ info handling Renesas Mobile Europe Ltd CR 25.331 (4857) - F REL-7TEI7
R2-116199 Correction of IE HARQ info handling Renesas Mobile Europe Ltd CR 25.331 (4858) - A REL-8TEI7
R2-116200 Correction of IE HARQ info handling Renesas Mobile Europe Ltd CR 25.331 (4859) - A REL-9TEI7
R2-116201 Correction of IE HARQ info handling Renesas Mobile Europe Ltd CR 25.331 (4860) - A REL-10 TEI7
=> All the 4 CRs above not treated.

REL-8 RANimp-UplinkL2dataRates (RAN2):

REL-8 RInImp8-CsHspa (RAN2):

REL-8 RANimp-UplinkEnhState (RAN2):

R2-116137 Release of common E-DCH resources Alcatel-Lucent Disc REL-8RANimp-UplinkEnhState
=> Not treated.

R2-116153 Seamless transition from CELL_FACH state to CELL_DCH state Ericsson, ST-Ericsson Disc REL-8RANimp-UplinkEnhState
Broadcom:what is the intention for CCCH.
Ericsson: we can leave it as it is.

IPR2025-00720, OnePlus Ex. 1004

Renesas: what problem needs to be solved? The UE has to apply the reconfiguration immediately. So the UE is not starting the release of the resources. The current specification already takes care of this.
Ericsson: so the SI is not sent by the UE in that case? Is everybody's opinion?
NSN: can you point out where this is stated?
Renesas: the UE is leaving cell AFCH to go to DCH so it shouldn't act like if it is in cell FACH.
Broadcom: what if the Reconfiguration messages changes cell?
Ericsson: this shouldn't happen.
Broadcom: what is the network expecting while the UE is applying the reconfiguration? Is the UE allowed or expected to keep transmitting using common E-DCH resources?
QC: we think that the UE is allowed to send SI = 0 if in the space of N1 (and N2) has still not applied the new reconfiguration message. So it can happen that the UE releases the resources.
NSN: so we have two different understanding here.
QC: both implementation are allowed according to the specs.
Renesas: yes, it depends on UE implementation.
Ericsson: how can you fulfil the performance requirement if the UE releases the resources.
QC: this requirement applies only if the UE doesn't need to perform sync A again.
Renesas: we don't think that there is a use case that needs to be improved.
The use case is very very rare.
NSN: maybe not.
Ericsson: we think we cannot rule out failures and drop calls, it's not only a performance issue.
NSN: what's the point of having a requirement which is not obeyed?
=> Noted

R2-116154	SI pre-emption upon RRC reconfiguration message (4850)	-	F	Ericsson, ST-Ericsson	CR 25.331 REL-8RANimp-UplinkEnhState
R2-116155	SI pre-emption upon RRC reconfiguration message (4851)	-	A	Ericsson, ST-Ericsson	CR 25.331 REL-9RANimp-UplinkEnhState
R2-116156	SI pre-emption upon RRC reconfiguration message (4852)	-	A	Ericsson, ST-Ericsson	CR 25.331 REL-10 RANimp-UplinkEnhState

=> The above 3 CRs all not treated.

REL-8 RANimp-EnhState1.28TDD (RAN2):

REL-8 HNB-supp (RAN2):

REL-8 RANimp-DCHSDPA (RAN1):

REL-8 RANimp-LCRCPC (RAN1):

REL-8 RANimp-DRX (RAN2):

REL-8 RANimp-HSPAVoIP (RAN2):

REL-8 RANimp-ANSS (RAN2):

REL-8 RANimp-HSDSCH (RAN2):

REL-8 MBSFN-DOB (RAN1):

REL-8 RANimp-MIMOLCR (RAN1):

REL-8 ETWS (SA1):

REL-8 PPACR (SA1):

REL-8 TEI8:

R2-115844	Clarification of RNTIs handling in CELL_PCH (Rel-8) (4825)	-	F	Huawei, HiSilicon	CR 25.331 REL-8TEI8

ST-E: we have the same comments than before.
It's a Rel-8 CR that changes the DL behaviour described in Rel-7.

IPR2025-00720, OnePlus Ex. 1004

Huawei: so in Rel-7 the UE keeps the RNTIs?
ST-E: yes
Renesas: this CR just clarifies the network requirement.
The network always need to provide new H-RNTI. If all the network do that, than we don't need the CR.
NSN: nothing is broken.
Huawei: it's more a clarification.
Renesas: network vendors should take care of this.
=> The CR is not agreed.
After offline discussion the companies think that we have a point so we could clarify this.
ST-E: the intended behaviour that Huawei is trying to clarify is not only affecting Rel-8 but also Rel-7. So this was not specified like that, so if there are different UE implementation in the field that can cause trouble.
ST-E: if any clarification is needed this would only apply to clearing the H-RNTI and not to all the variables that Huawei wanted to.
=> Postponed to the next meeting

R2-115845 Clarification of RNTIs handling in CELL_PCH (Rel-9) Huawei, HiSilicon CR 25.331 (4826) - A REL-9TEI8
R2-115848 Clarification of RNTIs handling in CELL_PCH (Rel-10) Huawei, HiSilicon CR 25.331 (4827) - A REL-10 TEI8
=> The 2 CRs above not treated.

R2-116256 Disabling of default radio configurations in CELL_FACH in Rel-8 Nokia Siemens Networks, Nokia Corporation CR 25.331 - - F REL-8TEI8
=> withdrawn, see R2-116258 instead

R2-116257 Disabling of default radio configurations in CELL_FACH in Rel-8 Nokia Siemens Networks, Nokia Corporation CR 25.331 (4879) - F REL-8TEI8
=> withdrawn, see R2-116258 instead

R2-116258 Disabling of default radio configurations in CELL_FACH in Rel-8 Nokia Siemens Networks, Nokia Corporation CR 25.331 (4880) - F REL-8TEI8
ALU: it changes some IE to dummy. But in the later releases CR we leave them. This is strange.
Renesas: it should be dummy in the Rel-8 branch forever, but not in the Rel-9 branches.
We need to remove completely the lines in tabular of the corresponding to the dummies.
Renesas: we should say that is unspecified in Rel-8 instead of ignored.
RIM: tabular corrections are not consistent.
Panasonic: comment for Rel-8: also Readio Beaer Release message is mentioned in cover sheet but we don't see the ASN.1
=> Revised in R2-116407

R2-116407 Disabling of default radio configurations in CELL_FACH in Rel-8 Nokia Siemens Networks, Nokia Corporation CR 25.331 4880 - F REL-8TEI8
NSN: one company asked for a discussion paper but we would appreaciate a more collaborative spirit.
NSN: Can we have email agreement?
Panasonis: agree on this or disable the feature?
NSN: we would like to agree on the whole package. We have been discussed this for a long time now.
Renesas: what exactly is the problem if we agree on this?
NSN: ASN.1 dummy has been changed accordingly to the comments.
Panasonic: we can agree on the Rel-8 but we still have concerns in the following releases. There are flows.
Panasonic: we don't this it will be possible to be agreed on email agreement.
NSN: we discussed the way forward before. We removed the blocking points.
=> Email discussion n.1) [76#00] up to Thursday midnight to check that the CRs correctly implement the way forward agreed in RAN2 previously. Purpose: agreed on the CRs Rel-8-9-10.

R2-116261 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks, Nokia Corporation CR 25.331 (4881) - F REL-9TEI9

IPR2025-00720, OnePlus Ex. 1004

Renesas: what about the RLC configuration?
NSN: we need to check this.
RIM: can you clarify the difference from Rel-8 about HO to UTRAN message?
NSN: we agreed to correct the feature in Rel-9 for the first configuration,
Renesas: some places in ASN.1 are missing changes. Radio Bearer Setup. This applies also for Rel-8 CR.
=> Revised in R2-116408

R2-116408 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks, Nokia Corporation CR 25.331 4881 - F REL-9TEI9
=> On Email discussion n.1) [76#00]

R2-116264 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks, Nokia Corporation CR 25.331 (4882) - A REL-10 TEI9
NSN: the ASN.1 is different in parts, but functionally is a pure shadow.
=> Revised in R2-116409

R2-116409 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks, Nokia Corporation CR 25.331 4882 - A REL-10 TEI9
=> On Email discussion n.1) [76#00]

REL-9 RANimp-DC_MIMO (RAN1):

REL-9 RANimp-DC_HSUPA (RAN1):

R2-115993 Clarification to the applicability of CPC configuration in DC-HSUPA Intel Corporation CR 25.331 (4844) - F REL-9RANimp-DC_HSUPA
ALU: “If the UE is implemented according to the CR and the network is not”?
It cannot really happen as the network can only signal one value.
Ericsson: Ok with the CR. “on all activated uplink frequencies” shoud we say “configured”?
NSN: we have preference for a stage 2 clarification.
What about the DLs not associated with ULs (if present?).
Renesas: OK with NSN.
=> The CR in not agreed.
=> Editorial indentation can be captured in rapporteur CR for 25.331.
=> The CR to 25.331 is not agreed
=> We will see a stage 2 CR at the next meeting.

R2-115994 Clarification to the applicability of CPC configuration in DC-HSUPA Intel Corporation CR 25.331 (4845) - A REL-10 RANimp-DC_HSUPA
=> Not treated.

R2-115864 Clarifications on the measurement reprort for DC-HSUPA (Rel-8) Huawei, HiSilicon CR 25.331 - - F REL-9RANimp-DC_HSUPA
cat.A CR?
NSN: so there is no separate IE for the periodical configuration?
Huawei: “for periodical measurement, there is no carrier specific parameter in “Periodical reporting criteria” in Measurement Control for secondary UL carrier”
NSN: so how should we interpret this?
Ericsson: we don’t remember we missed it or we did it on purpose. Can we have independent periodic triggering? With this CR not, but maybe that is fine.
=> The CR is postponed

R2-115865 Clarifications on the UE E-DCH category report Huawei, HiSilicon CR 25.331 (4828) - F REL-10 TEI10, RANimp-DC_HSUPA
why no REL-9 CR?
ALU: it is already there: If the UE supports 16QAM in the uplink, the UE shall signal a value in the "E-DCH physical layer category extension" IE. So this will happen anyway:
If the UE signals an "E-DCH physical layer category extension 2" of 9, it shall signal an "E-DCH physical layer category extension" of 7.
The CR is not needed.
=> The CR is not agreed.

REL-9 EHNB-RAN2 (RAN2):

IPR2025-00720, OnePlus Ex. 1004

REL-9 RANimp-TxAA_nonMIMO (RAN1):

REL-9 RANimp-MultiBand_DC_HSDPA (RAN4):

REL-9 TEI9:

R2-115935 Clarification to absolute priority based criteria (0300) - F REL-9TEI9 Research In Motion UK Limited CR 25.304
withdrawn

R2-115937 Clarification to absolute priority based criteria (0301) - F REL-9TEI9 Research In Motion UK Limited CR 25.304
Chair: impact analysis is needed.
DoCoMo: I need to understand more about Change 1: reason for change?
We are not sure this is a clarification or a change in UE behaviour.
NSN: red text. Change 1?
RIM: we would like to clarify that the UE should do the same as it is done for criteria 2 and 3.
ST-E: we would be fine with this as for us it is a clarification.
NSN: what is the consequence if not approved?
Renesas: change 1 is correct.
NSN: we still like to see some better wording in consequences if not approved.
=> Revised in R2-116410:

R2-116410 Clarification to absolute priority based criteria 0301 - F REL-9TEI9 Research In Motion UK Limited CR 25.304
=> The CR is agreed.

R2-115938 Clarification to absolute priority based criteria (0302) - A REL-10 TEI9 Research In Motion UK Limited CR 25.304
=> Revised in R2-116411

R2-116411 Clarification to absolute priority based criteria 0302 - A REL-10 TEI9 Research In Motion UK Limited CR 25.304
=> The CR is agreed.

9 UTRA Release 10

9.1 WI: LCR TDD MC-HSUPA (RP-090990)

(TDD_MC_HSUPA; leading WG: RAN1, REL-10, started: Sep. 09, closed: Dec. 10, WID: RP-090990)

9.1.1 In principle agreed CRs

R2-115686 MC-HSUPA related HARQ operation in UE for LCR TDD F REL-10 TDD_MC_HSUPA R2-115511 TD Tech CR 25.321 0744 -
=> The CR is agreed.

9.1.2 Others

R2-115831 E-AGCH ECSN for Multi-carrier HSUPA for LCR TDD F REL-10 TDD_MC_HSUPA TD Tech CR 25.321 (0745) -
Ericsson: Consequences if not approved needs improvement.
"If not approved, how to set the ECSN for the multi-carrier case is not correct for LCR TDD in TS 25.321"
ME box in the cover sheet can be un-ticked.
Chair: with the two changes above the CR is agreed in R2-116423
=> revised in R2-116423

R2-116423 E-AGCH ECSN for Multi-carrier HSUPA for LCR TDD REL-10 TDD_MC_HSUPA TD Tech CR 25.321 0745 - F
=> The CR is agreed.

IPR2025-00720, OnePlus Ex. 1004

9.2 WI: 4C-HSDPA (RP-100991)

(4C_HSDPA-Core; leading WG: RAN1, REL-10, started: Dec. 09, closed: March 11, WID: RP-100991)

R2-116238 Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs
Qualcomm Incorporated Disc REL-10 4C_HSDPA
ST-E: one or two meetings ago QC had a similar discussion on Dual Cell and MIMO. This looks like an extension of the clarification that we did before.
We made these clarifications in the HARQ info section.
Renesas: what if the network configures MIMO only on one carrier?
NSN:I had initially the same concern as ST-E and Renesas and I think the issue before was different from this one.
QC: the CR that we had before was MIMO configured on a subset of carriers, but at least one carrier. Here we solve the case all or nothing.
NSN: what is the problem? The UE has that memory.
QC: yes, but that's not the point.
ST-E: we should talk about HARQ memory partition and not soft buffer per UE.
QC: we are open.
QC: can we agree on the principle?
NSN: what about 8C?
Interdigital: we agree with the intention.
=> OK. We will try to capture this in the HARQ memory part
=> Noted

R2-116239 Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs
Qualcomm Incorporated CR 25.331 (4874) - F REL-10 4C_HSDPA
=> The CR is revised in R2-116412

R2-116412 Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs
Qualcomm Incorporated CR 25.331 4874 - F REL-10 4C_HSDPA
One company needs to check.
=> The intention of the CR is agreed and the CR is on email approval to check.
This is ok for the UE categories for 3C and 4C.
=> Email approval n. 6) [76#04] Rapporteur: QC Deadline Thursday midnight pacific time. Purpose agreement of the CR in R2-116412.

9.3 WI: RF pattern matching in UMTS (RP-091427)

(LCS_UMTS_RFPMT-Core; leading WG: RAN2, REL-10, started: Dec. 09, closed: March 11, WID: RP-091427)

No contributions

9.4 WI: Minimisation of Drive Test (RP-100360)

(MDT_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: RP-100360)

No contributions

9.5 WI: ANR for UTRA (RP-100688)

(ANR_UTRAN-Core, leading WG: RAN3, REL-10, started: June 10, closed: June 11, WID: RP-100688)

No contributions

9.6 WI: Interfrequency detected set measurements (RP-101015)

(Interf_dset_meas_UMTS, leading WG: RAN2, REL-10, started: Sep. 10, closed: Dec. 10, WID: RP-101015)

No contributions

IPR2025-00720, OnePlus Ex. 1004

9.7 WI: TEI10

9.7.1 In principle agreed CRs

R2-115685 Correction on Multi-frequency HS-DSCH Transport Block Sizes for 1.28 Mcps TDD TD Tech CR 25.321 0743 - F REL-10 TEI10 R2-115513
=> The CR is agreed

9.7.2 Others

R2-115720 Network caused incorrect measurement report let call drop fix Acer Disc REL-10 TEI10
Chair: no track changes in discussion document please.
QC: now we understand better the problem.
We think event 3b case is not so clear.
Renesas: is it not bad network configuration? We think that there is no problem in the specification.
=> Noted

R2-115721 Network caused incorrect measurement report let call drop fix 25.331 Rel-10 CR Acer CR 25.331 (4814) - F REL-10 TEI10
=> Not treated.

R2-115722 Event 1c Race Condition Avoidance 25.331 Rel-10 CR Acer CR 25.331 (4815) - F REL-10 TEI10
QC: similar as before, we think it is a network implementation and configuration issue, not a specification issue.
Renesas: we agree with QC.
=> The CR is not agreed

R2-115781 Addition of the missing value ranges for 1.28Mbps TDD capabilities CATT CR 25.306 (0333) - F REL-10 TEI10
Ericsson: “Support of HS-PDSCH in CELL_FACH”.
Is this a capability or do you have it in RRC Connection Request?
CATT: is in the request.
Chair: only in the Request or the UE reports is also in the next UL message?
CATT: also in the next message.
Chair: Times New Roman is used. But it needs to be Arial.
Chair: “HSPA plus feature” doesn’t exist.
Chair: interoperability and consequences if not approved have to be softened. We can say that this is to align 25.306 with 25.331 and there are no interoperability issues.
=> Revised in R2-116436.

R2-116436 Addition of the missing value ranges for 1.28Mbps TDD capabilities CATT CR 25.306 0333 - F REL-10 TEI10
Ericsson: font size.
=> The CR is revised in R2-116445.

R2-116445 Addition of the missing value ranges for 1.28Mbps TDD capabilities CATT CR 25.306 0333 1 F REL-10 TEI10
=> The CR is agreed
After RAN2 #76 it was detected that R2-116445 had wrong Tdoc number and wrong rev - on the CR cover. Therefore R2-116445 was revised in R2-116482 CR0333 rev 2 which is the agreed CR.

R2-115836 DPA related corrections in TS 25.308 for LCR TDD TD Tech CR 25.308 (0118) - F REL-10 TEI10
=> Revised in R2-116414

R2-116414 DPA related corrections in TS 25.308 for LCR TDD TD Tech CR 25.308 0118 - F REL-10 TEI10
TD Tech: the first change was removed
Intel: these corrections are related to different features that belongs to different releases? For example the last change. Which release?
We could make it clear in the cover sheet.

IPR2025-00720, OnePlus Ex. 1004

TD Tech: First correction is for Release 9.
TD Tech: last one is Release 7. MC HSDPA.
TD Tech: Second correction is older feature (HSDPA). Release 5.
Ericsson: the new picture needs to be added with track changes on. Now is not.
On the HARQs: this is affecting FDD, So in front of the last change we need to specify "For 1.28 Mcps TDD". And leave the FDD HARQ numbers as before.
=> Revised in R2-116434 CR0118 Rev1

R2-116434 Downlink related corrections in TS 25.308 for LCR TDD TD Tech CR 25.308 0118 rev1 - F REL-10 TEI10
=> The CR is agreed

R2-115837 UPA related corrections in TS 25.319 for LCR TDD TD Tech CR 25.319 (0095) - F REL-10 TEI10
Cover sheet: Chair: UPA? Maybe we can say Uplink related?
CATT: we need a shadow for Rel-11.
Cover sheet Intel: these corrections are related to different features that belong to different releases?
Some concern also on correcting these figures.
Usually we don't do it very often, so maybe it is not necessary.
Ericsson: same comments. Quite a lot of changes also apply to FDD and for FDD there might be not correct. So perhaps we prefer not to see the changes or changes more clear.
7.2.1 The change here only applies to TDD, so we need to make this clear: "or MAC-is/MAC-I".
Chair: so we change the text and keep the old figures.
7.2.2. and 7.3.2
The change doesn't apply to FDD, so we will have either two figures or no update or a clearer figure?
Chair: can we add TDD specific text here and do not touch the picture?
TD Tech: ok
7.2.4 and 7.3.4 applies to FDD also. Do we discuss in FDD session? Or leave it out?
Need to check with FDD companies.
=> Revised in R2-116433:

R2-116433 UPA related corrections in TS 25.319 for LCR TDD TD Tech CR 25.319 0095 - F REL-10 TEI10
CATT: so only one change left?
Ericsson: impact analysis should not be in stage 2.
=> The CR is revised in R2-116446:

R2-116446 Uplink related corrections in TS 25.319 for LCR TDD TD Tech CR 25.319 0095 1 F REL-10 TEI10
=> The CR is agreed.

R2-116435 Uplink related corrections in TS 25.319 for LCR TDD TD Tech CR 25.319 0100 - A REL-11 TEI10
=> The CR is revised in R2-116447

R2-116447 UPA related corrections in TS 25.319 for LCR TDD TD Tech CR 25.319 0100 1 A REL-11 TEI10
=> The CR is agreed.

R2-115900 Total RLC AM buffer size Ericsson, ST-Ericsson Disc REL-10 TEI10
QC: can you explain a bit more Proposal 2?
Ericsson: this is for Rel-11
Huawei: why do you want to increase the value in Proposal 1? Any problem in the field?
Ericsson: no. But the model used for the buffer calculation so far is not so accurate
NSN: So do we have a general problem?
Ericsson: we just say that it is not precise.
NSN: so we have the same problem for all the other categories.
Ericsson: we think that somehow cat 32 is penalized by not having a higher value.
QC: why the probability increases if we have multiple RLC entities?
Ericsson: in case of not even distribution of the memory among RLC entities.
QC: any more precise idea on P2?
Ericsson: we were more interested in the principle.
Renesas: we have the same concern as QC. We have a formula now. So?
Chair: add something on top of the formula?

IPR2025-00720, OnePlus Ex. 1004

Ericsson: we could keep it as it is and add some values on top, so we don't touch the minimum requirement.
Chair: we can come back on the Rel-11 and see if we can agree on the Rel-10?
QC: why that particular value in Rel-10?
Ericsson: we don't think that this puts a requirement on the UE vendors. We agree that this vaklue is arbitrary.
QC: we need to think more.
After offline:
Ericsson: I have sent a proposed formula on the reflector but one company needs more time to check. A few companies like it.
=> Noted

R2-115901 Additional value for Total RLC AM Buffer Size Ericsson, ST-Ericsson CR 25.331 (4832) - C REL-10 TEI10
R2-115902 Additional value for Total RLC AM Buffer Size value range Ericsson, ST-Ericsson CR 25.306 (0335) - C REL-10 TEI10
The 2 CRs above were not treated.

R2-115906 Corrections to UE test loop mode 4 Ericsson, ST-Ericsson, Telecom Italia, Orange, Deutsche Telekom CR 34.109 (0050) - F REL-10 TEI10
Ericsson: This CR is for Rel-10, but due to the nature of UE test loop mode 4 and its intended use* then the clarifications in this CR reflects the UE behaviour expected from earlier release UEs as well.
Renesas: we are more or less ok. SM procedures? What about network initiated SM procedures? UE initiated needs to be disabled.
So all in all maybe the NOTE needs to be more specific.
Ericsson: we can check on the SM procedures.
No problems on the intention. We need to come back after checking.
=> The CR is revised in R2-116432.
R2-116432 Corrections to UE test loop mode 4 Ericsson, ST-Ericsson, Telecom Italia, Orange, Deutsche Telekom CR 34.109 0050 - F REL-10 TEI10
=> The CR is agreed

R2-115910 Improved Deferred Measurement Control Reading Ericsson, ST-Ericsson, Nvidia CR 25.331 (4833) - C REL-10 TEI10
ALU: we agree with the intention but we think the CR is not complete.
What about the IE in the Complete messages?
Ericsson: we excluded this consciously. They are for DCH state.
QC: we agree with Ericsson. We don't need to report SIB 18 and 19 to the network.
Broadcom: we could mention in the cover sheet.
Ericsson: ok.
Chair: no network impact?
Ericsson: ok we can remove it.
Huawei: minor comment on the last change.
Telecom: we will have two population of UEs behaving differently, will that be a problem for the network? Does the network need to distinguish between them?
Ericsson: we need to think
NSN: I guess for the network is fine.
=> Revised in R2-116413
R2-116413 Improved Deferred Measurement Control Reading Ericsson, ST-Ericsson, Nvidia CR 25.331 4833 - C REL-10 TEI10
ALU: this is not too clear: " UE may not skip reading"
=> Email approval n. 7) [76#05] to get the note right . Rapporteur: Ericsson, deadline: Thursday midnight pacific time. Purpose: to approve the CR in R2-116413.

R2-115915 25.331 trivial corrections Ericsson CR 25.331 (4836) - F REL-10 TEI10
=> Revised in R2-116428:
R2-116428 25.331 trivial corrections Ericsson CR 25.331 4836 - F REL-10 TEI10
=> The CR is agreed.

R2-115996 Introduction of the frequency specific compressed mode Nokia Siemens Networks CR 25.306 (0336) - F REL-10 TEI10

IPR2025-00720, OnePlus Ex. 1004
Page 171 of 700

Renesas: we might have RAN4 impact. Is there any RAN4 discussion on this?
NSN: we are not aware of papers in RAN4 about this.
Renesas: RAN4 hasn't yet discussed or RAN4 decided that there is no impact?
NSN: R4-115701, R4-115748 are about this topic, but they are not related to what we are doing here.
NSN: we don't think that are new requirements.
NSN: there is a CB on this.
Renesas: what about RAN3?
NSN: they discussed the signalling this week.
NSN: after offline we think we can agree this.
NSN: dual-band should be dual band.
Renesas: RAN4 discussed these papers and confirmed that there is no RAN4 impact releated to this feature. Correct?
NSN: correct.
=> The CR is revised in R2-116443

R2-116443 Introduction of the frequency specific compressed mode Nokia Siemens Networks CR 25.306 0336 - F REL-10 TEI10
=> The CR is agreed.

R2-115997 Introduction of the frequency specific compressed mode Nokia Siemens Networks CR 25.331 (4846) - F REL-10 TEI10
Renesas: why we don't have a WI on this?
NSN: this is an old discussion. But Renesas was in the room when the introduction of this bit was agreed.
NSN: so what do you propose?
Renesas: RAN plenary needs to decided on this.
NSN: same spelling mistake.
=> The CR is revised in R2-116444

R2-116444 Introduction of the frequency specific compressed mode Nokia Siemens Networks CR 25.331 4846 - F REL-10 TEI10
=> The CR is agreed.

R2-116157 Re-direction to E-UTRA issues Ericsson, ST-Ericsson, AT&T, NTT Docomo, TeliaSonera Disc REL-10 TEI10
Ericsson: RAN4 is discussing this now and is writing an LS saying that RAN4 is fine with 1 sec.
ALU: Proposal 1 might be reasonable today but maybe not for the future if the LTE coverage is larger. Maybe the UE should search in all the RATs or we could have a network indication.
Ericsson: that is an approach that would require signalling. We are trying to make it simple and early and early implementable
NSN: we need to discuss this in joint session.
We have some concern of UE behaviour with early implementability.
DT: it's an idle mode procedure, so we don't push the UE performance here.
We don't think we should change idel mode procedure to be able to keep the connection, This is not the target of the procedure.
Maybe we need to define something else.
Orange: we are not negative on reducing the 10 seconds, but we are concerned about the UE coming back.
Chair: there are a number of proposals, is it all one big package?
Ericsson: we think proposal 1 is important, and the reduction of the time of search is not enough.
DT: we thinking we shouldn't have proposal 1. We don't want to have two populations of UEs doing two different things. The network doesn't need to indicate all the frequencies that the UE should look at.
=> Noted

R2-116158 Reduction of time in Idle mode after Release with re-direct to E-UTRA Ericsson, ST-Ericsson CR 25.331 (4853) - C REL-9TEI9
R2-116159 Reduction of time in Idle mode after Release with re-direct to E-UTRA Ericsson, ST-Ericsson CR 25.331 (4854) - A REL-10 TEI9
The above two CRs were not treated.

IPR2025-00720, OnePlus Ex. 1004

R2-115995 PS RAB unrecoverable error in the multi-RAB configuration Nokia Siemens Networks, Broadcom Corporation, Panasonic Disc REL-10 TEI10
DT: any standardisation impact for the network based solution mentioned?
NSN: no.
Renesas: is this dynamic or static? “HARQ failure indication” My feeling is that the proposed solution doesn’t solve the problem because RNC cannot guess exactly when UE detectes the RLC unrecoverable error. In some case the UE cannot transmit in UL at all. So no status PDUs. So RNC doesn’t know.
NSN: technically I would agree. But it looks like we have more problem in the DL than in the UL, because of the soft combining.
Renesas: yes, but not in all cases.
NSN: Ok, but in part is up to the network.
NSN: we think the network has a few tools that can use.
=> Noted.

R2-116072 Call Drop Analysis for RLC Unrecoverable Error Research In Motion UK Limited, Renesas Mobile Europe Ltd Disc REL-10 TEI10
=> Revised in R2-116404

R2-116404 Call Drop Analysis for RLC Unrecoverable Error Research In Motion UK Limited, Renesas Mobile Europe Ltd Disc REL-10 TEI10
NSN: thank you for the numbers.
DT: why the coverage difference between CS and PS is not mentioned here?
Renesas: HSPA coverage and DCH coverage are different.
RIM: the main purpose was to prove that the problem occurs in real network.
Huawei: it looks like in your paper you mention network problems. What about other causes like radio conditions?
Ericsson: did you observe this also when we have call re-establishment when CELL UPDATE/CELL UPDATE CONFIRMED are enabled?
RIM: we don’t have details on that.
NSN: how many of these call drops where actually due to the network fault and how many due to radio causes?
RIM: we don’t have the detailed information. The numbers include both.
=> Noted

R2-116189 Cell update-less RLC/PDCP unrecoverable error reporting and recovery Renesas Mobile Europe Ltd, Research In Motion UK Limited Disc REL-10 TEI10
NSN: 2.2. Even if you have the recovery procedure for the network, maybe we end up in the same situation a few seconds(?) afterwards. So?
Renesas: valid comment. We have the same problem with CELL UPDATE case. We trust the network to reconfigure to a better configuration. But we can avoid cell update procedure.
NSN: for example what can be changed? Not many.
Renesas: this is up to network vendor. A few choices are possible. Maybe reconfigure to DCH, a lot of choices, after maybe investigation in the field on the route causes.
Broadcom: the change looks simple but the CRs are big. Do we need so many changes?
Renesas: the CR looks big. I proposed to update all the reconfiguration messages to give the network the freedom. RIM proposed to give update via SIBs, but there is less flexibility for the network. We are open to this option depending on the opinions.
DT: SCRI? Any legacy problem?
Renesas: UE indicates this only if there is network support for the feature, so it works.
NSN: I confirm it works.
Discussion:
1) Do we introduce the solution in R2-116191 (only 2.1)?
   Broadcom: why not a simplified version of this? We have many messages touched.
   Renesas: CS call in not interrupted is we introduce this because we save the Cell Update procedure.
   Broadcom: is the recovering procedure enabled in Cell Update in the networks?
   Ericsson: is the same question that I asked before. For the network is better to have the choice.
   Renesas: for PS only case we have indication from a number of network vendors that is useful.
   QC: we don’t see the need for this.

IPR2025-00720, OnePlus Ex. 1004

QC, Panasonic: we prefer nothing
Broadcom, Intel: maybe something but not so complex
Add the improvement as proposed in R2-116191: 8 companies
2) From which release?
3) Do we introduce something more for further releases? E.g. R2-116193?
After offline:
Renesas: it looks like there is only one company that doesn't want to have a simplified version of this feature. Can we agree on having this feature?
QC: we don't want to object or block but we are not sure on the benefit.
Also we think we are not the only company that would object on having a solution.
We are not sure this solution can fix the problem reported.
We ask for more time.
Renesas: Simplified solution: Radio Bearer Setup and Radio Bearer Reconfiguration only.NSN: this doesn't look as a simplified solution to us.
Also we were not too convinced but the faults due to erroneous network behaviour in the paper from RIM with the analysis.
Renesas: strange discussion.
Chair: we don't have time to discuss this now again. We need to postpone to the next meeting.
=> Noted

R2-116191 Introduction of cell update-less RLC/PDCP unrecoverable error reporting Renesas Mobile Europe Ltd, Alcatel-Lucent, Huawei, HiSilicon, Research In Motion UK Limited CR 25.331 (4855) - C REL-9TEI9
R2-116192 Introduction of cell update-less RLC/PDCP unrecoverable error recoveryRenesas Mobile Europe Ltd, Alcatel-Lucent, Huawei, HiSilicon, Research In Motion UK Limited CR 25.306 (0339) - C REL-10 TEI10
R2-116193 Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery Renesas Mobile Europe Ltd, Alcatel-Lucent, Huawei, HiSilicon, Research In Motion UK Limited CR 25.331 (4856) - C REL-10 TEI10
The above 3 CRs were not treated.

R2-115862 UM RLC Ciphering Error Detection for VOIP Huawei, HiSilicon Disc REL-10 TEI10
Renesas: NOTE 1: what is "self-recovery mechanism"?
Huawei: UE implementation
Renesas: Samsung proposed to apply that for CS over HSPA but we believe it doesn't work, so we can remove it. RAN2 did not agree in introducing that.
Huawei: OK.
QC: can we have more details?
Renesas: Samsung proposal was based on AMR codec.
DT: in general we welcome solutions in RLC layers but we don't want to fix the numbers in NOTE 1. Maybe we should be able to configure these numbers per RB.
Huawei: we are fine to have more flexibility.
Nvidia: even in CS there can be ciphering mismatch. CFN is used.
Renesas: because we use CFN we don't have this problem.
Nvidia: what about LTE?
Renesas: it should be different
NSN: what happen after we add this indication to upper layers?
Renesas: then the UE initiate Cell Update with the indication to the network of RLC unrecoverable error (possible now).
NSN: what else?
Renesas: in 25.331 needs to be configurable. So we need a 25.331 CR.
Renesas: PDCP entity or RLC entity?
Broadcom, Renesas, ALU: we prefer PDCP,
DT: we discussed this before. We prefer RLC.
Renesas: yes but we didn't make any agreement.
DT: we don't have to configure PDCP layer. So we prefer RLC.
ALU: we should decide.
DT: there is no point for us if this is not in RLC layer.
Renesas: we have overhead for both cases, so not much difference
Huawei: we don't see an efficiency problem with overhead.
Broadcom: there is only one byte difference.
DT: I could agree on this RLC proposal.

IPR2025-00720, OnePlus Ex. 1004

Renesas: technical concern with RLC solution. PDCP solution works better for detecting the problem.
Huawei: misdetection problem can happen in both cases.
Renesas: the detection is delayed more if RLC selection is chosen.
There is some interest in having a solution, but we need to see the full solution (all the CRs and more flexibility on the parameters).
=> Noted

R2-116245 Extend the carrier capability for two-carrier HSDPA for 1.28Mcps TDD Qualcomm Incorporated CR 25.331 (4878) - F REL-10 TEI10
=> Not treated.

R2-116342 Extend the carrier capability for two-carrier HSDPA for 1.28Mcps TDD Qualcomm Incorporated, TD Tech, ZTE, CATT CR 25.306 (0341) - F REL-10 TEI10
Ericsson: we should have a principle 3 discussion. This is a new feature. Maybe we need a new WI? We need some offline among the TDD companies. There is some background in CCSA. We need to check also RAN 3 and RAN4.
QC: the discussion in RAN3 is about multiband. Here we are not discussing multiband.
Chair: what's RAN4 situation. Are there already requirements for this?
QC: even without the CR the UE is supposed to support the adjacent operation. If there are RAN4 requirements, those do not change with the CR. This CR has no impact on RAN4.
RAN3 has nothing on this. We are not talking about dual band operation here. This CR is only for the same band.
Chair: what's the value of this proposal if the UE has two separate RF?
QC: maybe somebody want to implement with one RF.
Chair: so after the CR do you think one UE can use only one RF?
So if there is only one RF do we need new RAN4 requirements?
QC: no.
QC: we can agree on the CR and send a nice LS to ARn4 to ask to consider this.
Chair: can we agree on the CR?
Ericsson: if there is an impact in ARN4 is a new feature and we need a new WI.
Ericsson: we prefer to have the time to check RAN3 and RAN4 as well.
QC: no impact in RAN3.
After offline:
QC: we need to come back at the next meeting because people need more time to check, because TDD Multicarrier needs to be coordinated in CCSA.
=> The CR is postponed

R2-116338 Correction about the presence of Security Revert Status Indicator in CELL UPDATE Message Nokia Siemens Networks CR 25.331 (4884) - F REL-10 TEI10
ZTE: can you clarify?
ST-E: editorial.
Huawei: nw impact?
Renesas: we could improve the cover sheet.
=> Revised in R2-116425

R2-116425 Correction about the presence of Security Revert Status Indicator in CELL UPDATE Message Nokia Siemens Networks CR 25.331 4884 - F REL-10 TEI10
Ericsson: cover page needs update. Some of the boxed need revision. Naming convention in the file.
=> The CR is revised in R2-116468 Rev1

R2-116468 Correction about the presence of Security Revert Status Indicator in CELL UPDATE Message Nokia Siemens Networks CR 25.331 4884 1 F REL-10 TEI10
=> The CR is agreed.

R2-115877 Alignment of the text description for SIB 18 for UEs in idle mode and connected mode Broadcom Corporation CR 25.331 (4830) - F REL-10 TEI10
=> The CR is agreed in R2-116426 CR 4830.

R2-116426 Alignment of the text description for SIB 18 for UEs in idle mode and connected mode Broadcom Corporation CR 25.331 4830 - F REL-10 TEI10
=> The CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-115734 Correction of capability table ZTE Corporation CR 25.306 (0332) - F REL-10 TEI10
correcting aspect that was introduced in REL-8
Chair: only TEI10
ST-E: why we moved the absolute priority capability? No strong opinion.
Chair: remove “Note:” from cover sheet.
With these changes the CR is agreed in R2-116427.
=> revised in R2-116427
R2-116427 Correction of capability table ZTE Corporation, Panasonic CR 25.306 0332 - F REL-10 TEI10
=> The CR is agreed.

9.8 Other UTRA Rel-10 WIs/SIs

(MUMIMO_LCR_TDD-Core, leading WG: RAN1, started: March 10, closed: Dec. 10, WID: RP-100347)
(E1900-Core, leading WG: RAN4, REL-10, started: June 10, closed: June 11, WID: RP-100676)

No contributions

10 UTRA Release 11

10.1 WI: Further enhancements to CELL_FACH (RP-111321)

(Cell_FACH_enh-Core, leading WG: RAN2, REL-11, started: March 11, target: June 12, WID: RP-111321)

10.1.1 Stand-alone HS-DPCCH

Companies to focus on RAN2 aspects.

R2-115851 Analysis on the TTI indication for the stand-alone HS-DPCCH transmission Huawei, HiSilicon Disc
withdrawn

10.1.2 DC-HSDPA Operation in CELL_FACH

Companies to focus on merit provided by this feature.

R2-115858 On the benefits of DC-HSDPA operation in CELL_FACH state Huawei, HiSilicon Disc
R2-115957 On the merits of DC-HSDPA in CELL_FACH Qualcomm Incorporated Disc
The above 2 documents not treated.

10.1.3 2/10 ms TTI concurrent deployment

The merit was agreed. Companies to focus on progressing on the open issues.

R2-115956 On concurrent deployment of 2ms and 10ms TTI in a cell in CELL_FACH Qualcomm Incorporated Disc
Proposal 1a: If the Headroom based on (3) falls below a threshold broadcasted in the system information, implying that the UE has limited headroom, then the UE requests a 10ms TTI common E-DCH resource. Otherwise, the UE requests a 2ms TTI common E-DCH resource.
Proposal 1b: The UE performs common E-DCH TTI selection prior to every E-DCH enhanced random access procedure
Proposal 1c: If the UE exceeded a maximum number of preamble ramping cycles M_{max}, i.e. upon failure of E-DCH enhanced random access procedure, the UE may request common E-DCH resource with 10ms TTI length
Proposal 2: Allow to broadcast two new sets of PRACH preamble control parameters – one corresponding to 2ms TTI and the other corresponding to 10ms TTI common E-DCH resources. Based on its initial TTI selection, the UE would request for an E-DCH resource with that TTI value by (randomly) choosing the access preamble parameters from the corresponding set.

IPR2025-00720, OnePlus Ex. 1004

Proposal 3: CCCH transmission shall re-use the common E-DCH TTI selection and allocation mechanism introduced for DCCH/DTCH.
Proposal 4: Send an LS to RAN1 to investigate if it is feasible to allow flexible partitioning of common E-DCH resources by signaling the TTI value to use in addition to the common E-DCH resource index via the AI/E-AI on AICH.
Proposal 5: Send an LS to RAN1 to investigate which of the parameters (under RAN1 expertise) broadcasted in Rel-8 common E-DCH system info list can be re-used for the concurrent deployment of 2ms and 10ms TTI common E-DCH resources within a cell.

Renesas: Proposal 1b. Is it based on what? This is more RAN1." ΔPp-m is the power offset between the power of the last transmitted preamble and the control part of the random-access message". Is it calculated at the start of every transmission and retransmission or not?
QC: it's a fixed value broadcast in SIBs for us. The calculation in between pre-ambles will give the same results if the measurements are the same.
Huawei: in P2. Do you include the resources?
QC: no, only the parameters.
Huawei: P4:so your preference is shared resources?
QC: yes
Huawei: P1c.
QC: after the backoff we would like the UE to be free. (The UE may)
ALU: P1c. why the UE come backs with 10ms?
QC: it's a good guess that the UE is coverage limited, so the UE should be free to choose 10ms.
Ericsson: could be, but combined with other P1…perhaps the UE could evaluate every time what to use. We will not need P1c.
QC: P1a doesn't say that each time we decide. We decide the first time and we try every time with that one, until the maximum number of try.
Ericsson: the UE accuracy will be limited.
ZTE: on P4. One concern on flexible partition. How can the network figure it out? How can the partition from the network affect the UE behaviour.
Renesas: about sending an LS to RAN1.
=> Noted

R2-115850 Some considerations on the concurrent deployment of 2ms and 10ms TTI in a cellHuawei, HiSilicon Disc

Proposal 1: The joint common E-DCH resource is preferred.
Proposal 2a: 2ms TTI and 10ms TTI joint common E-DCH resource parameters should be broadcasted in the system information.
Proposal 2b: Node B could change the TTI value by using the reserved bits in AICH.
Proposal 3: The rule of TTI value selection should consider UE power margin, which is calculated according to formula 2.
Proposal 4: CCCH transmission can be handled in the same way as the DTCH/DCCH transmission

Renesas: P4. What are the reasons for P4?
Huawei: it looks simple. There is only one rule for the UE.
=> Noted

R2-115866 Node B TTI indication for 2/10 ms TTI concurrent operations in CELL_FACH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc

Proposal 1: The management of TTI for each E-DCH (e.g. whether fixed partitioned or joint common E-DCH resource) is up to network implementation
Proposal 2: Extend the AICH/EAI rule without changing the format, to allow the NB to indicate the TTI and E-DCH resource index that a UE should use for 2/10 ms TTI concurrent operation in a cell
Proposal 3: The UE maintains the TTI until the E-DCH resource is released
Proposal 4: Further extend the AICH/EAI rule to indicate PRACH fallback (e.g. when EAI=+1 and s'=0)
Proposal 5: Send a LS to RAN1 to discuss on the AICH/EAI rules for 2/10 ms TTI and PRACH fallback indication.

Huawei: is it for one UE?
ALU: yes
Renesas: figure 2. Are we extending the resources from 32 to 64? Why change of TTI?
ALU: it doesn't double the resources. There are 64 things we can say to the UE. But the resources are still 32.
Ericsson: what if you have 2 or 3 UEs in the same TTI? What happens in that case? This is additional complexity in the network. It's ok when you have 1 UE but very complex when you have more than one UE.

IPR2025-00720, OnePlus Ex. 1004

ALU: even today is the same.
Ericsson: we think there is additional complexity in the NodeB. The network needs to be smart and fast for the offsets. For legacy is easy for the NodeB.
Ericsson: in legacy we have longer transmission than R99. So it is quite likely that the resource is occupied. With your proposal will be drastic increase in the use of EAI.
Renesas: P3. "For scenario where a need to change TTI is required the UE can release this resource and try to obtain another resource with a different TTI ". Do you imply a new implicit release?
ALU: yes.
=> Noted

R2-116076 Initial TTI selection for 2ms/10ms concurrent deployment in CELL_FACH Renesas Mobile Europe Ltd Disc

Proposal 1: The UE TTI selection is based on actual preamble transmission/retransmission power. If a transmission or retransmission is above the threshold then the UE selects 10ms TTI, otherwise the UE selects 2ms TTI.
Proposal 1a: Also consider whether the UE should attempt a 10ms TTI selection if the 2ms TTI is not allocated due to reaching the maximum number of preamble retransmissions (even when threshold is not exceeded)
Proposal 1b: Also consider whether the UE is allowed to request a 10ms TTI even if the threshold is not exceeded (for example the UE may request 10ms TTI resource if the UE has only a small amount of data to send). This could be left to UE implementation.
Proposal 2: The UE TTI selection is identified by the network based on the PRACH signature used by the UE. The use of additional scrambling codes can be used to virtually increase the signature space (see[5]).
Proposal 3: It's not necessary to override a 10ms resource request with a 2ms resource allocation. This should be treated with a lower priority in the design (however if the design provides this option for free then we should consider whether to disallow it)
Proposal 4: A UE selecting 10ms TTI could use the Rel-8 signatures, and resources. It needs to be discussed whether additional 10ms resources are needed to be provided in Rel-11.
Proposal 5: It should be possible to override 2ms TTI selection by sending NACK or reserved E-AI value to the UE. The UE will then attempt to select a 10ms TTI using the available signatures, codes, etc.
Proposal 6: It should be considered whether R99 fallback can be by achieved sending NACK or reserved E-AI value to the UE.
Proposal 7: Send LS to RAN1 to confirm what we agree is correct and feasible
Proposal 8: We should synchronise the discussions in RAN1 on standalone HS-DPCCH with the 2ms/10ms TTI selection feature discussions in RAN2, the LS should attempt to take care of this.

ZTE: P3. Why not necessary to override 10 ms with 2ms?
Renesas: the UE should like the 2ms more, so if it chooses a 10 ms there must be a coverage problem for example
ZTE: but there are cases where this can be debatable.
Renesas: we think is mainly a coverage problem case.
ALU: figure 1?
Renesas:UE could completely stop and restart from zero or keep going from that using a separate signature.
=> Noted

R2-116077 Signalling for 2ms/10ms concurrent deployment in CELL_FACH Renesas Mobile Europe Ltd Disc

Proposal 1: No need to perform TTI selection for CCCH.
- If the NW does not configure CCCH messages to be sent on PRACH (FFS) then UE shall select 10ms TTI using the legacy RACH procedure and resources.
Proposal 2: The UE indicates support for 2ms common E-DCH in RRC Connection Request, Cell Update and URA Update.
Proposal 3: Additional common E-DCH resource(s) and PRACH configurations for 2ms TTI operation and 2ms/10ms selection procedure are signalled by DL DCCH/CCCH RRC messages.

=> Noted

R2-116078 TTI change during common E-DCH resource allocation Renesas Mobile Europe Ltd Disc

Proposal: Discuss whether TTI Change should be performed in a controlled manner, or if it's acceptable to handle this as an error case.

=> Noted

R2-116195 Enh CELL_FACH - Support concurrent deployment of 2ms and 10ms TTI in a cell Ericsson, ST-Ericsson Disc

IPR2025-00720, OnePlus Ex. 1004

Proposal 1 The network may configure a threshold for UE initial TTI selelction. The theshold is broadcasted in System Information
Proposal 2 The threshold is based on the power margin taking into account the initial preamble power and the maximum UE transmission power
Proposal 3 The UE selects the initial E-DCH TTI based in the power margin and comparing it with the threshold.
Proposal 4 The NW can always change the TTI (resource) using the AICH.
Proposal 5 The NW may fix the TTI that may be selected for the access (e.g. not broadcasting the threshold mentioned above or configure a infinit value).
Proposal 6 Allow the network to configure additional PRACH scrambling code as well as a split of the available signatures.
Proposal 7 Introduce a bitmap signaling to identify the TTI for each of the 32 common E-DCH resources. This should be given per defined PRACH.
=> Noted

Discussion on the papers in AI 10.1.3:
Network can configure something (e.g. a threshold?) to enable the UE to perform an initial TTI selection.
The network may configure a threshold for UE initial TTI selection.
The threshold is based on:
Preamble power.
Initial power only or (initial power + actual power)?
I.e. does the UE decide once for all and then ramp of (QC, Interdigital) or the UE needs to decide every time (Ericsson, Renesas)?
NSN, Huawei, ALU: RAN1 should decide
QC: we think the threshold takes care of the power ramping to some extent.
Ericsson: we don't see the complexity
Absolute threshold or relative?
The VERY VERY initial one is based on Initial power
=> We will indicate these options to RAN1.

Can the network fix the TTI that may be selected for the access?
Ericsson: Fixed? (Ericsson P5) It depends if it is in the SIB or not.
Renesas: can it be based on something else (signatures?) so we could achieve the same results by configuration.

Any exceptions (e.g. small data)? i.e. Renesas P1b: Also consider whether the UE is allowed to request a 10ms TTI even if the threshold is not exceeded (for example the UE may request 10ms TTI resource if the UE has only a small amount of data to send). This could be left to UE implementation.
Ericsson: not agreeable now.

Overriding:
What with what? FFS
How?
The NW can always change the TTI (resource) using the AICH.?
QC: We need RAN1 on this.
Renesas: yes.
Ericsson: if we use it and not need to change we don't need RAN1.
Renesas: some of the proposals change AICH, some not.
ALU: it depends on the partition choice. Fixed we could use the AICH as it is, flexible partition we need to modify it.
Renesas: not entirely true.

Do we keep the TTI chosen until when? From ALU: Proposal 3: The UE maintains the TTI until the E-DCH resource is released ?
Renesas: there will be cases where this is not optimal. And do you want to introduce an implicit release?

CCCH?
IDT: this is linked to the signalling. The benefit of the saving on the SIBs is if we decide to go for the dedicated signalling.
ALU: concern on system performance if every UE is using 10 ms for CCCH.
Renesas: then what about R99 fallback?
ALU: if RACH is also congested.
Ericsson: we prefer the same behaviour.

IPR2025-00720, OnePlus Ex. 1004

Partition? Fixed or flexible?
Joint common E-DCH resource?
QC: the point is whether the network needs to be able to signal the TTI dynamically?

Chair: can we agree on this: "The network does not signal the TTI for all the resources in the SIBs. This should allow flexible or fixed pool of resources"?
Ericsson: no, because we think that also with our proposal the mechanism is flexible enough.

Agreements: -The network can fix the TTI that may be selected for the access (i.e. in practice disabling the UE selection without the need for e.g. NACKs. FFS how). -The UE makes the decision on which TTI to select based on either the initial preamble power only or also on retransmission. FFS how. - The network can figure out the UE selection. Signature will be used. If configured, it could be preamble scrambling code + signature. FFS if in addition we have something else. - The network can indicate (override or not) the TTI and/or the resource using the AICH. Whether we need to modify it or not is FFS. - The UE maintains the TTI until the E-DCH resource is released. - CCCH case will be the same as for DCCH and DTCH.

- The network needs to be able to signal the TTI case by case? I.e. the joint pool of resources should be an allowed network implementation and the signalling that we design needs to support this.

We will send an LS to RAN1?
Ericsson: why?
QC: as a rapporteur I think we need to move on and we should send an LS to progress on some issues that are under RAN1 expertise.
Ericsson: what do we ask? We need to narrow down the scope.
Renesas: we support sending an LS. We need to ask if there is any technical issue on what we have in mind in RAN2.
- to investigate which of the parameters (under RAN1 expertise) broadcasted in Rel-8 common E-DCH system info list can be re-used for the concurrent deployment of 2ms and 10ms TTI common E-DCH resources within a cell.

Ericsson: maybe we don't need anything new, so what's the point of asking RAN1 on new parameters?
QC: there will be some parameters for sure, e.g. the initial serving grant. Some of these will be RAN1 parameters.
Ericsson: we would like to see more discussion at the next meeting. We need to have an idea in RAN2 before sending an LS on this part to RAN1.
QC: we can ask on the feasibility of this, i.e, check that it is feasible:
- The network can indicate (override or not) the TTI and/or the resource using the AICH. Whether we need to modify it or not is FFS.

Ericsson: difficult to ask. Maybe this can be decided all in RAN1?
ALU: the part of RAN1 is:" Whether we need to modify it or not is FFS."
Interdigital: maybe we need to be very detailed on what to ask. E.g. can we use this, or can we extend this?
Ericsson: I was hoping we could converge here in RAN2 first.
Renesas: some of the proposals require some RAN1 expertise to know if there are feasible or not.
QC: we prefer to move it to RAN1.
Ericsson: usually we don't ask for feasibility to other groups.
We haven't decided the level of flexibility that we want to have. That affects the rest.
Huawei: fine to send an LS, but we could focus more on the agreements. On other things we are still discussing so we don't know what to ask.
Renesas: we asked other groups for feasibility several times.
QC: LS would be useful.
Ericsson: does it help?
QC: whatever.
Chair: so which one of these 4 options does the group prefer?
1) Ask if some are feasible?
2) Ask nothing and do it in RAN2?
3) Move the decision in RAN1?
4) Join session

Chair: it seems a joint session with RAN1 will be needed
=> We will have a joint session with RAN1 on this sub-feature at the next meeting.

IPR2025-00720, OnePlus Ex. 1004

10.1.4 Fall-back to R99 PRACH

The merit was agreed. Companies to focus on the different schemes and their relative merits.

R2-115853 Discussions on Solution of Fallback to R99 PRACH Huawei, HiSilicon Disc
=> Not treated

R2-115867 Discussion on PRACH fallback for enhanced CELL_FACH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
Proposal 1: UE supporting RACH fallback feature shall not autonomously select RACH
Proposal 2: Do not use UE ID scheme for PRACH fallback feature
Proposal 3: The NB decides on the type of uplink transport channel (RACH or E-DCH) for every UE access in CELL_FACH
Proposal 4: Extend the AICH/EAI rules to indicate PRACH fallback
Proposal 5: Discuss the expected delay required at the UE to flush residual packets encoded for E-DCH transmission when a PRACH fallback occurs
Proposal 6: Discuss the need for UE to indicate its preferred uplink transport channel type
NSN: P1?
ALU: every time the network should decide.
ALU: we think that the SIBs are a bit slow.
NSN: P6?
ALU: UE preference could be useful.
Renesas: P2? We think that the HRNTI comes from Node B.
ALU: RRC signalling is too slow we think.
=> Noted

R2-115913 Fallback to R99 RACH Ericsson, ST-Ericsson Disc
Proposal 1: Network can allow the REL-11 UE to transmit UL CCCH/DCCH messages on PRACH
Proposal 2: RAN2 is kindly requested to discuss the Network controlled fallback issues and agree on basic design principles.
Broadcom: L2 re-configuration. Do you foresee the same L1 configuration?
Interdigital: Tx in UL doesn't affect what you monitor in the DL.
NSN: how the UE comes back to E-DCH after a fallback?
Ericsson: 2.3
=> Noted

R2-115954 On the merits of Fallback to R99 Qualcomm Incorporated Disc
Not treated

R2-115959 On the complexity aspects of Fallback to R99 Qualcomm Incorporated Disc
Not treated

R2-116079 E-DCH or PRACH resource selection and fallback Renesas Mobile Europe Ltd Disc
Proposal 1: CCCH can be configured to be sent on PRACH by default.
Proposal 2: PRACH or E-DCH could be selected by the UE based on H-RNTI if the feature is enabled. Initial UE Identity can be considered for CCCH resource selection also.
Proposal 3: Fallback to R99 PRACH could be commanded by the Node B using E-AI (NACK or reserved E-DCH resource index)
QC: P2 and P3 are contradictory?
Renesas: they are all alternative proposals. We prefer P1 and P2. P3 is a bit more complex but not too bad in the end (i.e. acceptable)
=> Noted

R2-116262 Discussion on R99 RACH fallback mechanisms InterDigital Communications Disc
Observation 1: R99 RACH fallback should ideally be performed only by UEs that have a limited amount of data in their buffer when UL access is initiated
Observation 2: An ideal solution would allow the network to have dynamic control on the selected and used UL transport and physical channel used.
Based on this observations and analysis the following proposals are proposed in order to progress the work:
Proposal 1: Agree that RAN2 should focus on a solution that increases transmission and system efficiency (i.e. by possibly restricting R99 RACH fallback according to UE buffer content) and attempts to properly and dynamically controls the usage of R99 RACH and common E-DCH.

IPR2025-00720, OnePlus Ex. 1004

Proposal 2: Prioritize and consider the use of the following two schemes, UE decision based on buffer content and dynamic network control of resources.
Proposal 3: A scheme that uses both of those solutions should be further considered in order to obtain the two objective discussed above.
Proposal 4: The decision to perform a R99 RACH fallback should be performed either before the initiation of the preamble signature transmission phase or during the preamble transmission phase before an ACK or a resource is allocated to the UE.

QC: what if we have untransmitted RLC PDUs encoded?
IDT: it's another use case. You have something already in the buffer. I don't think we could re-encode in this case. If you have a lot of retransmission in the buffer maybe you are above the threshold or we can say that the UE doesn't do it.
Renesas: why we are talking about buffer?
Ericsson: it's better to check the buffer
QC: but what if the data comes in last minute?
DT: we should keep the network control.
Ericsson: yes.
Huawei: we see some UE worried about complexity.
Is this L2 complexity a real problem?
QC: there is a transport channel reconfiguration, with no re-establishment of RLC, MAC level buffer flushed, etc. Here we don't have this.
Broadcom: we also see some limitations, e.g. retransmission.
QC: our concern is slightly different.
Ericsson: we don't think is a good idea that the UE indicates a preference.
NSN: same
ALU: it might be not so complex for the UE.
Ericsson: can we agree on our P1?
Renesas: what about DTCH?
Ericsson: not proposed.
QC: we don't think there is any value in this P1 and it only brings complexity so we are not happy at all. Any scheme should be dynamic, not static.
NSN: we think we can keep it simple.
ALU: we agree on some QC points.
Huawei: we have some sympathy on QC concerns, we should consider them.
Interdigital: we agree with QC than this mechanism need to be dynamic.
We need to limit the use cases, that will limit the complexity in the UE.
Chair: it looks it is not possible to have any agreement.
=> Noted

R2-116315 Fallback to R99 RACH Nokia Siemens Networks, Nokia Corporation Disc
Not treated

How many alternative schemes to choose from?

1) UE starts using R99 RACH when Common E-DCH access fails.
2) The UE autonomously chooses to fall back to R99 RACH depending on buffer content.
3) The network dynamically controls the resource allocation and signals to the UE to fallback to R99 RACH, possibly depending on congestion/load on E-DCH resources.
4) Network preconfigures (FFS on the SIBs or something else) some selection criteria [more static than 3]]

Questions:

- *Main focus? (congestion, latency or both)*
- *Any restrictions to the occurrence/use cases? E.g. - Fallback after 1st access only or always?*
- *Enabling the feature (network enabler and/or disabler)*
- *Who decides? (NW or UE)*
  - *Network: …?*
  - *UE decides, NW can overwrite (same principle as for the TTI choice)??*
- *Which criteria the UE uses?*
  - *Preamble power?*
  - *More than 1 choice -> RAN1?*
- *How the network can know?*
  - *Need to discuss this together with HS-DPCCH standalone?*
- *Joint pool or not?*

IPR2025-00720, OnePlus Ex. 1004

Separate:
Joint:
- *How the network can overwrite?*
  If join pool: legacy E-AICH?
  Extended 1024chips of AICH?
  AICH/EAI can be used both for joint pool or not?
- *How to reconfigure between common E-DCH and R99 RACH?*
- *How the nw can distinguish the release of the UE (if it needs to)?*
- *UE time delay for this?*
- *How often and how a TTI chosen can be changed*
  Until common E-DCH is released?
- *Combination with other features (e.g. 2ms/10ms)*
- *How the legacy UEs are impacted?*

10.1.5 Per-HARQ process grants

Companies to focus on the merit of the feature with more details on the solutions.

R2-115860 Discussion on per-HARQ-TDM scheduling process grants for CELL_FACH UEs Huawei, HiSilicon Disc
R2-116165 On the support for per-HARQ-process activation in CELL_FACH and TTI alignment between CELL_FACH and CELL_DCH UEs Ericsson, ST-Ericsson, Orange, Softbank Mobile, AT&T Disc
The above 2 documents not treated.

10.1.6 Signalling based Interference control

Companies to focus on RAN2 aspects.

No contributions.

10.1.7 UE battery life improvement and signalling reduction

Companies to focus on further analysis for the merit and details of the different proposed mechanisms.

R2-115998 Further considerations on the 2nd DRX cycle for CELL_FACH Nokia Siemens Networks, Nokia Corporation Disc
Renesas: one of the observations here says that there is little gain in power consumption for second DRX, but CELL_PCH is still more efficient for power saving.
NSN: we took some results from live network, but as shown we don't have many UEs Rel-8, so we took some assumptions in our simulations.
QC: on the Renesas point. We belive that if we introduce the 2nd DRX in Cell FACH we think the measurement requirement will be similar to CELL PCH.
About DRX in CELL FACH (Rel-8) is normal that we don't see those yet, but we need to prepare for the future with a second DRX.
NSN: this feature will come quite late. We need to think also in terms of UE support. URA PCH and Cell PCH are mandatory.
QC: we think the second DRX will improve the situation. Can the UE rely on CELL PCH deployment?
NSN: we don't have these numbers of UEs in the future. There will be much much more legacy UEs using other features/states to save battery.
=> Noted

R2-116080 UE Battery Life Improvements and Signalling Reduction Renesas Mobile Europe Ltd, Nokia Siemens Networks Disc
QC: is the paper the same?
Renesas: the only difference is we clarify a bit observation 1.
QC: on that we already commented on the measurement requirement.
Renesas: why do we need CELL_PCH in CELL_FACH state.
QC: we would like to improve CELL_FACH.

IPR2025-00720, OnePlus Ex. 1004

Renesas: we are copying the functionality. There is no gain in this. We had this discussion in Rel-7 and Rel-8 time frame.
=> Noted

R2-115841 The Solutions of UE Battery Life Improvement and Signaling Reduction Huawei, HiSilicon Disc
NSN: Alt.1 Node B should not send the data to the UE, so no data loss.
Renesas: why the RNC needs to know at all? Data can be in control of the Node B. This looks like network implementation.
Huawei: can you clarify?
=> Noted

R2-116325 Way forward on UE battery life improvement and signalling reduction Ericsson, ST-Ericsson, Alcatel-Lucent, Qualcomm Incorporated Disc
Proposal 1: Introduce 2nd DRX cycle in CELL_FACH
Proposal 2: Discuss whether there is sufficient support to introduce an additional solution for battery saving and signalling reduction (e.g. autonomous transition CELL_PCH)
ST-E: also Interdigital supports
TIM: not all the network support CELL PCH state. We should not use this kind of argument to discuss about features. If a feature is mandatory in the UE and not in the network we should not look at other features without thinking carefully
ST-E: unfortunately this is just a fact and has an impact on UE power consumption.
Renesas: we think we already have in the standards (and in the field) something that works. We don't want to implement the same thing twice.
Nokia: we support what Renesas just said.
=> Noted

R2-116326 Further Enhanced UE DRX Ericsson, ST-Ericsson Disc
R2-115724 Interaction between 2nd DRX for Cell_FACH and other features ZTE Corporation Disc
R2-115955 UE battery life improvements and signaling reduction via a 2nd DRX cycle in CELL_FACH Qualcomm Incorporated Disc
=> The above 3 papers not treated.

Discussion on the papers in AI 10.1.7:
Proposal 1: Introduce 2nd DRX cycle in CELL_FACH
Chair: can we agree on this?
Renesas: we would like to see some conditions. For example we don';t want to see a lot of new performance requirements, so if we have this it should be same as CELL PCH
NSN: in the work item we need to see if the gains justify the complexity. This is not the case for this subfeature.
ST-E: we see gains for the UE.
QC: we showed gains before.
NSN: power consumption gains are small (power consumption and signalling load) and there are drawbacks.
QC: the baseline we took is Rel-8 today, or Rel-10.
QC: features that we propose show some gains on both sides.
NSN: we cannot agree on this.
ST-E: we compare with the current situation that we have today. We see gains.
NSN: UE staying in CELL FACH is a network decision, not a UE decision.
Renesas: as a compromise we could merge option 2) and 3) below, i.e. put what we have today in CELL PCH (exp. Measurements) in CELL FACH we will not object.
ST-E: this is also our understanding on the RAN4 work.
TIM: what about SCRI in CELL_FACH? The question is also about the DRX timers.
ST-E: we addressed this issue in one of our contribution. We think that would be the principle.
QC: we support Renesas way forward.
ZTE: did we try the seamless transition from CELL FACH to CELL PCH before? We are concerned about the complexity with that.
Final decision in plenary?
Chair: no, here.
What about monitoring the PI?
Renesas: we think that should stay in CELL PCH, otherwise it would be really CELL_PCH in CELL_FACH.
ST-E: same opinion as Renesas. Ok with the DRX proposals. Measurement requirements: we support the intention but in the end it is RAN4 work.

IPR2025-00720, OnePlus Ex. 1004

Chair: Tentative Agreements: Introduce 2nd DRX cycle in CELL_FACH, with the re-use of DRX length and the intention to keep the measurement requirement the same as for CELL PCH (up to RAN4).

NSN: I don't think we can agree on this now. We don't have a concrete proposal right now.
VDF: we think we should go for this way forward.
ST-E: all the detailed proposals will be discussed later.
NSN, Nokia: we are not ready to agree on this.
After coffee break:
Chair: can we agree on this Tentative Agreement above?
NSN: we would like to look at this simplified version of 2nd DRX cycle.
NSN: we don't object.
DT: if people think this is useful we don't object. We are interesting in the seamless transition.
NSN: what about autonomous transition?
Can we leave it open as a feasible option?
Chair: RAN2 will keep looking at those alternatives.
More details are needed on the simplified version of: "with the re-use of DRX length and the intention to keep the measurement requirement the same as for CELL PCH (up to RAN4)"

Agreements: Introduce 2nd DRX cycle in CELL_FACH. The solution will include at least the re-use DRX length values of the CELL PCH state and the intention is to keep the measurement requirement the same as for CELL PCH (up to RAN4). RAN2 will keep working on other options. The two above are not mutually exclusive.

10.1.8 Mobility from CELL_FACH to EUTRA

The merit was agreed. Companies to focus on the different technical solutions.

R2-115857 Discussion on CELL_FACH mobility enhancement to LTE Huawei, HiSilicon Disc
Proposal 1: For both dedicated priority mechanism and redirection mechanism, accurate radio quality info of each possible target frequency is needed.
Proposal 2: It is proposed the E-UTRA measurement results should be included in IE "Measured results on RACH" in CELL UPDATE message.

ALU: are P1 and P2 partially contradicting?
Huawei: if the radio conditions do not vary much.
ZTE: target frequency info by SIBs or dedicated signalling?
Huawei: the UE will have this info in that point in time.
Renesas: What the motivation for redirection here? Is this for service based, coverage based, load based or all?
Huawei: it doesn't matter. This is what I need.
Renesas: it is important to know for which use case we need this.
TIM: all the use cases are valuable. Service based requires some clever mechanism. We propose P1. Only blind redirection is not enough. On P2 we need to investigate more on the reporting solutions.
VDF: in Idle mode we don't need to be accurate, but here in CELL FACH is different. We need to be more accurate. We support P1. There is a need for more accurate redirection.
Orange: we support P1.
Renesas: service or load seems more important than coverage for what I heard.
So then what aspect we need to consider now? How to obtain the measurements?
We have absolute priority for those measurement based on services.
But measure every 60 seconds might not be enough here. So?
VDF: anything that can help is welcome.
TIM: we need some analysis on the time.
Do we need tight requirements as for the coverage? Maybe not in this case. 60 secs or tighter we will see.
Ericsson: what is "accurate"? It depends on the network strategy and use. It could be too much. Measurement maybe good but we need to be careful. We sympatise with the proposal but not agree on the statement in P1.
On Cell Update: not sent frequently, so not very useful in the end. Not frequent enough. And we don't want to have THAT message more frequently.
Load on RNC needs to be considered also and UL random accesses.

IPR2025-00720, OnePlus Ex. 1004

QC: we need a compromise. P2 is not suitable.
=> Noted

R2-116058 Absolute Priority Cell reselection in cell_FACH Qualcomm Incorporated Disc
Proposal 1: Modify RAN2 specifications to allow full/complete inter-frequency and Inter-RAT absolute priority based cell reselection in cell_FACH.
Proposal 2: Allow some flexibility for the UE to indicate support of absolute priority cell reselection in cell_FACH (with and/or without DRX), and for the UTRAN to configure (enable/disable) absolute priority cell reselection in cell_FACH (with and/or without DRX).
=> Noted

R2-116066 Enhanced RRC Redirection to E-UTRAN Qualcomm Incorporated Disc
Proposal 1: Define an optional configurable timer for UTRA to E-UTRA redirection (replacing the hardcoded 10 seconds), such that a UE is required to search for suitable cells in the redirected layer(s) till it finds one or the configured timer expires.
Proposal 2: Define a UE capability bit used by the UE to indicate to the NW that it supports the configurable timer for UTRA to E-UTRA redirection.
=> Noted

R2-116081 Reselection Enhancements in CELL_FACH Renesas Mobile Europe Ltd Disc
Proposal 1: In CELL_FACH, the UE shall measure all frequency layers and RATs with a priority higher than the serving frequency when the serving cell is above Sprioritysearch. It shall be possible for the NW to enable/disable LTE.
Proposal 2: Reselection in CELL_FACH state to high priority LTE layers in Rel-11, using priority based measurement rules, should be implementable early in order to address the problems demonstrated from Rel-8.
Proposal 3: In CELL_FACH, when there are 3 RATs in total indicated as neighbours the UE shall measure UTRAN inter-frequency and EUTRAN when the serving cell is below Sprioritysearch, eliminating GERAN.
Proposal 3a: There is no need to prioritise when there are only 2 RATs indicated (either in neighbour list, or after applying dedicated priorities) and the UE shall measure the 2 RATs (including GERAN if indicated).
Proposal 3b: In case there is operator interest in being able to configure which 2 RATs shall be prioritised, rather than simply dropping GERAN, then other options to could be considered [13].
Proposal 4: RAN2 to determine whether reselection in CELL_FACH state to low priority LTE layers in Rel-11, using these rules, should be implementable early.
Further we also propose to consider whether some further enhancements for reselection can be done:
Proposal 5: UE should be allowed to read intra-frequency neighbour cell system information before a cell reselection and be prepared to start using common E-DCH and HS-DSCH immediately when cell reselection is triggered.
Proposal 6: Consider whether the rule that UE shall not reselect during the time a common E-DCH resource is allocated is still appropriate and whether the UE should be able to do reselection automatically of if some level of NW control should be maintained.
=> Noted

R2-116162 Fast Redirect to LTE Ericsson, ST-Ericsson Disc
Proposal 1 *The UE shall only search in the frequencies provided in the IE "E-UTRA Target Info" in the RRC Connection Release message, and return to UTRA if no suitable E-UTRA cell is found. Upon returning to UTRA, the UE shall enter CELL_FACH state and access the network via a Cell Update message reusing the existing RL failure mechanisms introduced already in rel-99.*
Proposal 2 *A capability bit should be introduced to indicate to the network the capability to return to UTRA after a failed re-direction by sending a cell update. In this way the network will be prepared to handle UEs coming back to the old configuration.*
Proposal 3 *A RSRP/RSRQ quality threshold is included in the redirection order. If this threshold is present the UE shall not try to camp on the E-UTRA cell in case the measured RSRP/RSRQ is below the value signalled by UTRAN.*
Proposal 4: *RAN2 to discuss to extend the proposals 1 to 3 for earlier releases.*
Broadcom: P1. Returning to UTRA looks like Cell Change Order. Why don't we use that?
Renesas: I agree with Broadcom.
ST-E: CCO we point out the specific cell. This is slightly different.
=> Noted

R2-116272 Network Controlled CELL_FACH mobility Nokia Siemens Networks, Nokia Corporation Disc
Proposal 1: UE sends to the network the information about a candidate LTE cell in a UL message.
Proposal 2: MEASUREMENT CONTROL/REPORT are used for measurement configuration / report
=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-115723 Requirements for mobility procedure from UMTS to LTE in Cell_FACH ZTE Corporation
Disc
=> Not treated.

Discussion on the papers in in 10.1.8:
TIM: useful to collect concerns on the methods to provide measurements to the network.
ALU: What is 3) Enhance network controlled methods: redirection means?
Are we talking about enhancing existing behaviours or something more?
Ericsson: we have the same question.
TIM: we decided that HO in not priority.
Means that we use redirection for mobility, so we need to list the features/possible improvements in 3)
DT: we think re-direction is an idle mode procedure. So connection release with re-direction will affect idle.
We would like to see some details before moving on on this.
NSN: 2) and 3) are based on measurements from the UE to the network. So maybe we can agree that there will be some.
Chair: is 3) mature and detailed enough that we can agree on it?
TIM, VDF: we have quite a lot of support for 3), i.e. network controlled methods.
DT: we share the same concern as VDF.
We still have concerns on solution 1), i.e. the introduction of absolute priority.
QC: cell reselection is already defined for other states.
We don't see any problem. We are trying to fill a hole in the specs.
RIM: we agree with QC.
NSN: what about 3)?
Renesas: it seems that nobody is objecting working on 3).
Orange: yes, we would like to work on 3).
Chair: there is evident support on working on 3).
TIM: the focus on 3) should not be on the need (we think is needed) but on the study of the complexity.
Chair: how interesting is to introduce Absolute priority I-RAT Cell Reselection to GSM for operators?
3) Enhance network controlled methods: redirection. Can include measurements in CELL FACH, reporting of these measurements and redirection enhancements
VDF: if the UE has some data to send the operator might want to send this UE to LTE.
We have not much interest for GSM.

Proposal 2: Reselection in CELL_FACH state to high priority LTE layers in Rel-11, using priority based measurement rules, should be implementable earlier than Rel-11 in order to address the problems demonstrated from Rel-8.

TIM: we need more time on this.We need to see stage 3 and then we can decide. We are not aginst.
NSN: some issues on P2. We will have two populations of UE without the network knowing it.
DT: same concern.

Proposal 3: In CELL_FACH, when there are 3 RATs in total indicated as neighbours the UE shall measure UTRAN inter-frequency and EUTRAN when the serving cell is below Sprioritysearch, eliminating GERAN. This should be configurable.

Not ready to agree on this yet:

- In CELL_FACH, the UE shall measure all frequency layers in LTE and interfrequency with a priority higher than the serving frequency when the serving cell is above Sprioritysearch. GSM is FFS. It shall be possible for the NW to enable/disable this mechanism.

Proposal: In CELL_FACH, when there are 3 RATs in total indicated as neighbours the UE shall measure two of the three RATs when the serving cell is below Sprioritysearch, eliminating the third RAT.
QC: what about if an operator wants all 3?
DT: why intra-UTRA?

Agreements:
- RAN2 will introduce Absolute priority I-RAT Cell Reselection in CELL_FACH (to LTE for sure, to GSM FFS).
- RAN2 will introduce Absolute priority intra-UTRA Cell Reselection in CELL_FACH.
- RAN2 will work also on mechanism contained in 3). This will include reporting of measurements from the UE.

IPR2025-00720, OnePlus Ex. 1004
Page 187 of 700

10.1.9 Others

R2-115961 Introduction of Further Enhancements to CELL_FACH in 25.308 Qualcomm Incorporated
CR 25.308 (0120) - B REL-11 Cell_FACH_enh-Core
NSN: standalone HS-DPCCH needs to be worded differently. How about removing "standalone"?
QC: this was copy paste from the Work item Description
Renesas: similar comment to NSN.
Should this go in 25.319?
Renesas: ok to leave it in 25.308.
=> Postponed

R2-115962 IIntroduction of Further Enhancements to CELL_FACH in 25.319 Qualcomm Incorporated
CR 25.319 (0097) - B REL-11 Cell_FACH_enh-Core
Ericsson: we would prefer more wording and not a list of bullets
A few lines about what it the sub-feature and the list of the properties.
=> Postponed

R2-115868 Layer 1 indication of UE capability and preference for Enhanced CELL_FACH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
R2-115859 Signature partition and sub-feature dependency in FE-FACH Huawei, HiSilicon Disc
R2-115958 E-DCH resource analysis Qualcomm Incorporated Disc
R2-115856 Blocking and Collision Probability Analysis for Common E-DCH Random Access Huawei, HiSilicon Disc
The above 4 documents not treated.

10.2 WI: 8C-HSDPA (RP-101419)

(8C_HSDPA-Core, leading WG: RAN1, REL-11, started: Dec.10, target: June 12, WID: RP-101419)

Ericsson: in 24.008 it is supported up to 256 Mb/sec in the coding.
It will be impossible to achieve 336 if it is not updated.
Do we need to send an LS to CT1 and maybe CT4?
NSN: in similar cases we haven't send LSs to other groups.
QC: it was done before?
We will check offline and see if we need to send an LS
After offline: let's see a Draft LS.

R2-116460 Draft LS on peak rate limitations in CT1 specifications for 8C HSDPA Ericsson To: CT1 CC: CT4, RAN3 REL-11 8C_HSDPA-Core
Renesas: why we need to send the LS
Ericsson: we checked with the secretary.
NSN: why don't we remove the second paraghaps in the overall description?
Renesas: we think the max throughput is 336 but if 4x4 MIMO will be introduced this will double.
Ericsson: this is in the future. We could send another LS later.
Renesas: no big problem.
Huawei: at physical level is 345.6 Mbps. Why don't we indicate that number?
Ericsson: we can add this.
DT: we need a second paragraph.
Huawei: do we need to wait for an LS to CT1? It doesn't look urgent.
=> The Draft LS is revised in R2-116467
R2-116467 Draft LS on peak rate limitations in CT1 specifications for 8C HSDPA Ericsson To: CT1 CC: CT4, RAN3 REL-11 8C_HSDPA-Core
=> The LS is revised in R2-116476
R2-116476 LS on peak rate limitations in CT1 specifications for 8C HSDPA R2 To: CT1 CC: CT4, RAN3 REL-11 8C_HSDPA-Core
=> The LS is agreed

IPR2025-00720, OnePlus Ex. 1004

10.2.1 CRs

R2-115889 Introduction of 8C-HSDPA in 25.302 Ericsson, ST-Ericsson CR 25.302 (0206) - B REL-11 8C_HSDPA-Core
ALU: changes on changes. Example in the table.
ALU: if we will have CLTD CR and this one, we can have an email discussion.
Huawei: do we need the definition from 4th to 7th? Because they are never referenced.
Ericsson: we had the comment before that we need to include them.
Huawei: "Secondary downlink frequency" has not been updated (also for Rel-10) but these are actually used. Can we update them?
ALU: is there an ambiguity if we don't do it?
Huawei: it is better to define it.
Ericsson: not needed.
=> The CR is revised in R2-116473

R2-116473 Introduction of 8C-HSDPA in 25.302 Ericsson, ST-Ericsson CR 25.302 0206 - B REL-11 8C_HSDPA-Core
=> The CR is agreed.

R2-115892 Introduction of 8C-HSDPA in 25.306 Ericsson, ST-Ericsson CR 25.306 (0334) - B REL-11 8C_HSDPA-Core
=> The CR is revised in R2-116455 CR 0334:

R2-116455 Introduction of 8C-HSDPA in 25.306 Ericsson, ST-Ericsson CR 25.306 0334 - B REL-11 8C_HSDPA-Core
=> The CR is agreed

R2-115894 Introduction of 8C-HSDPA in 25.308 Ericsson, ST-Ericsson CR 25.308 (0119) - B REL-11 8C_HSDPA-Core
=> The CR is revised in R2-116456 CR 0119

R2-116456 Introduction of 8C-HSDPA in 25.308 Ericsson, ST-Ericsson CR 25.308 0119 - B REL-11 8C_HSDPA-Core
=> The CR is agreed

R2-115896 Introduction of 8C-HSDPA in 25.319 Ericsson, ST-Ericsson CR 25.319 (0096) - B REL-11 8C_HSDPA-Core
=> The CR is revised in R2-116457 CR 0096

R2-116457 Introduction of 8C-HSDPA in 25.319 Ericsson, ST-Ericsson CR 25.319 0096 - B REL-11 8C_HSDPA-Core
=> The CR is agreed

R2-115897 Introduction of 8C-HSDPA in 25.321 Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd, InterDigital, Alcatel-Lucent, Qualcomm Incorporated, Nokia Siemens Networks CR 25.321 (0746) - B REL-11 8C_HSDPA-Core
Huawei: other spec affected is missing.
Other comments needs to be amended.
We have a discussion on this one.
Huawei: semi-column here: "SDUs, or,"
=> Revised in R2-116458

R2-116458 Introduction of 8C-HSDPA in 25.321 Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd, InterDigital, Alcatel-Lucent, Qualcomm Incorporated, Nokia Siemens Networks CR 25.321 0746 - B REL-11 8C_HSDPA-Core
Huawei: can we come back later.
Huawei: minor comment.
=> Revised in R2-116475

R2-116475 Introduction of 8C-HSDPA in 25.321 Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd, InterDigital, Alcatel-Lucent, Qualcomm Incorporated, Nokia Siemens Networks CR 25.321 0746 1 B REL-11 8C_HSDPA-Core
=> The CR is agreed

R2-115898 Introduction of 8C-HSDPA in 25.331 Ericsson, ST-Ericsson CR 25.331 (4831) - B REL-11 8C_HSDPA-Core
Huawei: other spec affected is missing.

IPR2025-00720, OnePlus Ex. 1004

Other comments needs to be amended.
Chair: font problem in different places.
Huawei: on 8.1.3.3? What is higher rate and lower rate now? What is the threshold?
Ericsson: the threshold that we considered is 126 in this case.
Huawei: where is the threshold coming from? Why not a different threshold?
I don't understand.
In addition there is also a back-ward compatibility issue. It depends on which network the UE goes to.
Ericsson: it is like that, there will be different reporting in Rel-10 and Rel-11. This is the only way that we can avoid to ask for additional bits on the RRC Connection Request.
Huawei: maybe we can use some other method without a new bit?
Ericsson: like what?
Huawei: no idea now.
Huawei: inside this: "UE-RadioAccessCapability-vbxyext" there are some missing capabilities.

```
UE-RadioAccessCapability-vbxyext ::= SEQUENCE {
    ue-RadioAccessCapabBandFDDList4         UE-RadioAccessCapabBandFDDList4-vbxyext
}
```

Maybe it is a general Rel-10 problem?
Ericsson: we will correct it in a revision.
Huawei: also this IE UE-RadioAccessCapability-vbxyext ::= SEQUENCE should be OPTIONAL.
Renesas: high rate/lower rate question.
It doesn't have any backward compatibility issue.
Huawei: UE cat 33 (6 carrier w/o MIMO) also supports 4C + MIMO. In Rel-10 is lower rate but in Rel-11 network is higher rate?
Renesas: we think this is a good compromise
Huawei: the problem is in the network side, not the UE side.
NSN: no strong preference, but looks strange.
Huawei: we also saw some benefit in the past, but now this will bring trouble to the network if the mechanism is not accurate.
Renesas: answer to Huawei example above. The UE will report higher rate. Rel-11 CR doesn't change Rel-10 rule.
Huawei: we have a different understanding. The UE doesn't have any idea of the Release of the network. Why cat the UE needs to use?
Renesas: it doesn't matter.
Huawei: we are still not happy about this.
Ericsson: if Huawei can come up with the case that can cause trouble to the network we can check it, but we don't see any problem here.
Chair editorial: 30 or 32 or 34 or 35 or 36?
Huawei: 13.4.3f. Is this done in a backward compatible way?
We have similar cases later.
Ericsson: for section 13 is fine, for 10 is different.
=> The CR is revised in R2-116459:

R2-116459 Introduction of 8C-HSDPA in 25.331 Ericsson, ST-Ericsson CR 25.331 4831 - B REL-11 8C_HSDPA-Core

Huawei: we have the same issue for the UE capability report. So we should postpone this to email discussion?
Renesas: is this capability per band?
Huawei: the 8C capability is per band, so we have the same problem that ALU pointed out.
Renesas: this is release 11 and it is not frozen, so we don't see this critical.
Huawei: we don't think this is fair to us.
ALU: Email approval on this one will be better
=> Email approval n. 5) [76#03] on this one R2-116459. Rapporteur Ericsson. Deadline Thursday midnight pacific time.

10.2.2 Others

R2-116011 Discussion on the increased number of reordering SDUs per TTI Huawei, HiSilicon Disc

Ericsson: we think this is unnecessarily complicated. We don't see the benefit.
Huawei: we see the benefit. The network can use smaller PDU size. Some network vendor can see great benefit. There is no impact on UE and no arm to any network.

IPR2025-00720, OnePlus Ex. 1004

QC: we support Ericsson view. Or is not true that there is no impact on the UE. We don't like to allow that the network plays with the PDU sizes. We hope to see better network implementation.
Huawei: what is the impact to the UE?
QC: processing power. We prefer to have the proper PDU size. The number should be per configuration, not per category.
In the past we have done this per configuration, not per category.
Huawei: I don't know why.
Huawei: it might cost more power consumption if we don't do this.
NSN: no strong opinion. We are fine with what we have today.
Chair: any support?
No other support.
=> Noted

R2-116209 U-plane optimisation for 8C-HSDPA Renesas Mobile Europe Ltd Disc
Renesas: any company interested?
Broadcom: I am not sure what you are proposing.
What about MAX-DAT to 1?
Renesas: it doesn't work.
Bradcom: is this a new mode?
Renesas: quite new
DT: 1) the target is to save memory? But the memory should be there.
2) Is this similar to UM mode? We decide them according to service requirement, not radio condition, So how often do you envisage the switching?
Renesas: 1) we propose smaller RLC PDU size, smaller window size, smaller memory
2) In good radio condition is unlikely that AM is request to re-transmit.
DT: what is here good radio condition?
Renesas: UE switch back to normal operation if the UE detects data corruption for example.
How often? It depends on radio conditions.
Renesas: network will configure this.
DT: interesting idea but more analysis is needed.
NSN: MIMO + 64QAM you need to have good radio. If you account for fast fading, you could have HARQ error rate.
Renesas: we hope MAC compensate, or some higher later if not.
NSN: how much memery do we save?
Renesas: according to 25.306. Maybe 3MB? Maybe more?
Ericsson: the used memory or the physical memory?
Renesas: used memory. Physical memory also.
25.306 needs to be update if this is agreed.
=> Noted

10.3 WI: RAN overload control for Machine-Type Communications (RP-111373)

(SIMTC-RAN_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, target: March 12, WID: RP-111373)

It is assumed that for RAN2-76 most issues related to this WI will be handled in the corresponding AI of the joint session.

No contributions.

10.4 WI: HSDPA Multiflow Data Transmission (RP-111375)

(HSDPA_MFTX-Core, leading WG: RAN2, REL-11, started: Sep.11, target: Sep.12, WID: RP-111375)
RAN2 is the prime responsible WG

Chair: status from RAN1?
NSN (WI rapporteur): summary of RAN1 R1-114152 (which refers to R1-114151)
Cases 1, 2 ,3 and 4 in R2-114151 will be supported at least for non-MIMO.
Intel: what about the other scenarios? Who will decide?

IPR2025-00720, OnePlus Ex. 1004

NSN: RAN1 will decide on the scenarios. RAN2 will decide on the RAN2 aspects.
Intel: can RAN2 have a veto on some scenarios agreed by RAN1 if RAN2 thinks they are too complex?

10.4.1 General considerations/issues

Including supported RRC states, supported scenarios, terminology/definitions, feature activation /deactivation/ configuration.
Excluding mobility aspects (to be discussed under 10.4.3)

R2-115725 Consideration on L1 order (de)activation between various MPT-HSDPA modesZTE Corporation Disc
Not treated.

R2-115903 General considerations on Multiflow HSDPA operations Ericsson, ST-Ericsson Disc
Proposal 1: a serving multiflow radio link is a "Serving HS-DSCH radio link" participating in multiflow operations.
Proposal 2: the primary downlink frequency is the frequency having the same UARFCN as the uplink frequency, if the UE is configured with single uplink frequency. If the UE is configured with two uplink frequencies, the primary downlink frequency is the frequency having the same UARFCN as the primary uplink frequency.
Proposal 3: the secondary downlink frequency is the frequency having the same UARFCN as the secondary uplink frequency, if the UE is configured with two uplink frequencies. If the UE is configured with a single uplink frequency, the secondary downlink frequency is a frequency whose index is indicated by higher layers.
Proposal 4: discuss whether it is possible to re-use the existing reporting events or it is needed to introduce new events.
Proposal 5: multiflow operations should be limited to Cell_DCH state.

NSN: P1?
Ericsson: we don't clarify how to call the cells. We need to distinguish the two sectors. We need new terminologies. We think assisting is also serving in your paper.
Huawei: P2 and P3?
Ericsson: is to say that primary and secondary are associated to the frequency, not to the sectors.
Renesas: how many cells we can configure per Mflow operation per frequency?
We might have 2 cells for Mflow operation. Are they both serving?
Ericsson; yes, then we need to add terminology to differentiate them.
Renesas: but we need to differentiate.
Ericsson: yes, but we don't want to change the legacy definition.
Huawei: can we use assisting serving cells?

Proposal 1: a serving multiflow radio link is a "Serving HS-DSCH radio link" participating in multiflow operations.

NSN: P1 needs to be more precise.
Ericsson: Ok. But can we agree on the concept?
Renesas: what about "serving Mflow set cells"? "Serving HS-DSCH active set cell"?
Active set cell should work. It is maintained per frequency.
Renesas: we don't use radio link here.

Proposal 2: the primary downlink frequency is the frequency having the same UARFCN as the uplink frequency, if the UE is configured with single uplink frequency. If the UE is configured with two uplink frequencies, the primary downlink frequency is the frequency having the same UARFCN as the primary uplink frequency.

Proposal 3: the secondary downlink frequency is the frequency having the same UARFCN as the secondary uplink frequency, if the UE is configured with two uplink frequencies. If the UE is configured with a single uplink frequency, the secondary downlink frequency is a frequency whose index is indicated by higher layers.

NSN: P2 and P3 seems obvious.
Ericsson: is to say that primary and secondary are associated to the frequency, not to the sectors.
Interdigital: this is taking into account the DC UL, so we think this is fine.
After lunch:
NSN: On P2 and P3 above. Is there anything new here or not?
Ericsson: we think this was already understood, but never captured. We think this is obvious.
Huawei: do you want to write this somewhere in the specs?
Ericsson: no
ALU: how about frequency instead of UARFCN?

IPR2025-00720, OnePlus Ex. 1004

NSN: proposals and observations are different
Ericsson: we don't plan to add this to stage 2, but to be able to agree on the terminology so we can discuss in RAN2.
ALU: the intention is fine but the wording not clear. UARFCN is a number.
=> Noted

R2-115999 General considerations on the HSDPA Multiflow Nokia Siemens Networks Disc
Table 1 – Proposed terminology to differentiate between different cells in the Multiflow operation.

	Node B	(Assisting) NodeB		
Primary frequency	(Primary) serving cell	(Primary) assisting cell	SF-DC	DF-4C
Secondary frequency	Secondary serving cell	Secondary assisting cell		

Huawei: we support
Ericsson: the assisting cell is a serving, so serving assisting.
So the primary should be called "assisted"?
Renesas: we have same concern as Ericsson. In principle there is no difference between the two. We don't need to have new name.
=> Noted

R2-116012 Some general considerations on multiflow Huawei, HiSilicon Disc
R2-116018 Dynamic control for multiflow transmission Huawei, HiSilicon Disc
The above 2 documents not treated

Agreements:
- Multiflow operations will be limited to Cell_DCH state.
- Reuse the same definition of "Serving HS-DSCH radio link" and "Serving HS-DSCH cell" as in the current stage 2

10.4.2 Interaction and compatibilty with other features

Including other "multi-carrier" features, eSCC, CPC

R2-116001 DTX/DRX operation with HSDPA Multiflow Nokia Siemens Networks Disc
R2-116021 Discussion on multiflow and CPC Huawei, HiSilicon Disc
The above 2 papers not treated

10.4.3 Mobility aspects

R2-115869 Mobility in inter-NB multi-flow transmission Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
Proposal 1: Use legacy methods and event triggers for primary serving cell handover when multi-flow transmission operational at the UE.
Proposal 2: The addition of a secondary serving cell is triggered if the signal strength/quality of a cell in the UE's Active Set comes within a threshold (for a defined period of time) to that of the primary cell.
Proposal 3: The change to the secondary serving cell is triggered if the signal strength/quality of a cell in the UE's Active Set is better than that of the existing secondary serving cell for a predetermined period of time.
Proposal 4: The removal of the secondary serving cell is triggered if the signal strength/quality of the existing secondary serving cell falls below that of the primary serving cell by a threshold for a predetermined period of time.
Proposal 5: Discuss methods to enable ESCC for the secondary serving cell.
NSN: P2 and P4. Is this not up to the network?
ALU: yes, but you need triggers. So we need the UE to report these events.
Ericsson: "Naturally, the secondary serving cell should have the second best radio condition in the Active Set. " this is questionable.
ALU: I agree, it is questionable.
Renesas: on P3. Any reason to limit this?
ALU: we thought that it could be a good candidate.

IPR2025-00720, OnePlus Ex. 1004
Page 193 of 700

Renesas: what's the problem if "monitored set cell" became "Mlow set cells" .
ALU: AS is in between.
Renesas: you always prefer two steps?
Ericsson: the question should be if a serving cell belongs to the active set or not.
The rest is up to the network.
=> Noted

R2-116014 Discussion on mobility issues for multiflow transmission Huawei, HiSilicon Disc
Not treated

R2-116210 Considerations for HSDPA multiflow mobility aspect Renesas Mobile Europe Ltd Disc
Proposal: Apply the modified event 1a, 1b, 1c, 1e, 1f and 1j for HSDPA multiflow mobility on primary carrier
Ericsson: not very clear to me.
How are you proposing to maintain mobility for the normal active set. How do you do that?
Renesas: one Measurement Control can configure both.
Ericsson: do we need to change the definition of measurement control and 25.331?
Renesas: one active set for legacy and one for Mflow. How to configure the measurement is up to the network.
Ericsson: why do you need to maintain two sets?
Renesas: why the UE doesn't need to maintain the cells for Mflow?
Ericsson: are you proposing to reuse the existing measurement IEs but take care of two sets, and that is up to the network.
Renesas: some ASN.1 change are needed.
Ericsson: what is the complexity of this change? Equivalent to the introduction of a new measurement event.
Renesas: not really. We can save to think about what new parameters we need.
Huawei: so there are cases where we need to maintain 3 sets?
Renesas: yes
Huawei: are the two HSPA sets independent?
Renesas: in principle yes. It's independent on each carrier.
Huawei: what about the additional complexity?
Renesas: we don't think it is complex.
ALU: it looks quite similar to our proposal. Is it?
Renesas: I think so. Our solution should satisfy your expectations.
QC: did you do any evaluation of the gains (vs. pains)?
ALU: we think we might need something.
QC: what is the gain of a new event introduction?
ALU: are you asking for simulations?
Renesas: the gain is very clear: we can support mobility.
Huawei: same concerns as QC.
Renesas: existing intra frequency measurements should be used for legacy features. The parameters are already optimised for those. For Mflow the network might need something else.
ALU: in RAN1 we had simulations.
QC: we think we don't need to define new events.
RIM: general comment: can a way forward be to specify the scenarios first, then see if we need something new?
Renesas: ALU provided the scenarios last meeting, that's why we proposed our solution. To make ALU happy.
Renesas: maybe we proposed too many events. Maybe 1J (similar to Huawei 1K) is enough?
=> Noted

R2-116255 Mobility considerations for multiflow operation InterDigital Communications Disc
=> withdrawn

10.4.4 Intra Node B aggregation

R2-116016 Configuration for Intra-NodeB multiflow transmission Huawei, HiSilicon Disc
=> Not treated

IPR2025-00720, OnePlus Ex. 1004
Page 194 of 700

10.4.5 Inter Node B aggregation

Including analysis on data split options and complexity analysis

R2-115870 Discussion on packet skew in inter-NB multi-flow transmission Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc

Proposal 1: The NB provides information/indication to the RNC for determining the probability that a packet is lost or skewed.

NSN: we agree that there can be benefit, but this cannot happen in real time.
This doesn't exclude any help for the UE (UE centric solution)
Huawei: does the Node B need to decode the RLC PDU? The SN in the header.
ALU: yes, the header. You use the functionality in case the packets are pre-empted by higher priority packets.
Renesas: is this good to have or mandatory?
ALU: good to have.
=> Noted

R2-115904 Multiflow HSDPA data split options Ericsson, ST-Ericsson Disc

Proposal 1: RLC data split is adopted as data split option for inter-NodeB aggregation
Proposal 2: the RNC-centric RLC data split option should always be allowed. If any UE-centric solution is agreed, it should be possible for the network to enable/disable it. It should be possible to combine UE-centric and RNC-centric RLC data split solutions

ZTE: where there be additional gain if we apply the two schemes at the same time?
Ericsson: we see that the network should keep the control
ZTE: in your paper you say that these schemes could be combined. What is the advantage in this case?
Ericsson: the network can have the choice between the two.
Ericsson: it is difficult to quantify, we don't have numbers.
Huawei: we don't see the gains. It will require more signalling (to activate / deactivate).
ALU: you said that the network knows the link load. In RNC or NodeB? How does it work?
Ericsson: RNC centric methods do not require any standardization effort.
ALU: then you need proprietary signalling between Node B and RNC?
Ericsson: not necessarily.
ALU: any RAN3 impact?
Ericsson: we don't know yet.
NSN: in the RNC centric you can chose a proper timer value. Can you elaborate?
There might be drawbacks.
Ericsson: it doesn't mitigate the skew, but the number of ACKs that are sent. The amount of info.
NSN: you need to signal larger values, but then you compromise the performance.
Ericsson: the UE solutions seen so far are without TSP.
NSN: I am not convinced.
=> Noted

R2-115905 Multiflow HSDPA multiple transmissions of RLC PDUs Ericsson, ST-Ericsson Disc
=> Noted

R2-116000 Skew handling for HSDPA Multiflow Nokia Siemens Networks Disc

Proposal: Data split for inter-site Multiflow should be made at RLC layer with UE centric skew handling (i.e. UE should delay transmission of RLC status PDUs when it detects skew).

Huawei: the proposal and the results from the simulation are contradicting, es. figure.
NSN: we have 2 curves. Flow control ideal is really ideal.
NSN: To have low skew you need small target Node B buffer size and to have that you need very fast and reliable flow control. So we think do to that we need some help from the UE.
Huawei: RNC will know better how serious is the skew.
Renesas: if the skew size is increase, how bad is that, apart from unnecessary re-transmission?
NSN: that's the main problem.
Renesas: in that case, we can implement a network work-around, as Ericsson proposed.
ZTE: we like the UE centric scheme, but is that sensitive to the timer setting?
NSN: good question.

IPR2025-00720, OnePlus Ex. 1004

ZTE: will the timer be re-configured dynamically?
NSN: we don't think it is necessary
=> Noted

R2-116013 Further considerations on RLC-based data split for multiflow Huawei, HiSilicon Disc
Proposal: If RLC-based data split is chosen for Inter-NodeB multiflow, the Network-centric solution to skew problem should be adopted.
NSN: "theoretically if the skew information (e.g. gap size) is available it would help the flow control."?
Huawei: RNC can know which radio link is responsible for the skew, so it can use this info by for example reducing the packet to be sent on that radio link.
NSN: how can a RNC know if that was a drop or a skew, if it sees a NACK?
Huawei: by using some "history". For the UE centric it will be difficult.
Ericsson: by looking at the "history".
NSN: we have example where the RNC doesn't know.
Huawei: for this case the UE solution has the same problem.
NSN: no. Look at our paper.
Huawei: in which scenario the UE can do better than RNC?
NSN: example 1 and example 2. The UE can help. By avoiding unecessary NACKs. In this cases the network doesn't know, but the UE does know.
Huawei: we don't agree.
=> Noted

R2-116059 On RLC split for inter-site multi-point transmission in HSDPA Qualcomm Incorporated Disc
Proposal: Discuss and agree on one RLC split solution, between UE and RNC based split, to be adopted going forward for Rel-11 MP-Tx.
=> Noted

R2-116206 Considerations for HSDPA multiflow skew problem Renesas Mobile Europe Ltd Disc
Proposal: Non-skew aware NW centric RLC split solution is used for HSDPA multiflow data transmission operation.
NSN: is it the same as QC was proposing?
Renesas: maybe
NSN: it looks the same that we saw about one year ago. We discussed this before. There were pros and cons. Anything new year?
QC: I don't know
ALU: Renesas starts the timer every time, QC no.
Renesas: starts timer every time the network receive a NACK.
Huawei: fine with the proposal, but it depends on network implementation.
QC: our proposal was a little bit different.
=> Noted

R2-116254 Analysis on data splitting options for inter-Node multiflow transmissions InterDigital Communications Disc
Proposal 1: Agree that RAN2 should introduce and focus on RLC data splitting solutions as a way forward
Proposal 2: RAN2 should further investigate the possibility of introducing a simpler network centric solution
Proposal 3: The complexity level of any UE centric solution should be minimal
NSN: what is a simple solution on the UE side?
IDT: among what we have seen so far, just having a timer, but not keep track.
We are not proposing a UE solution, but if we need to have one, we need to keep it simple.
=> Noted

Discussion on the papers in AI 10.4.5:
ALU: if you need a bit more info from the UE, we need some standard impact, in RAN3.
NSN: we confirm.
Chair: is it possible to have a network centric solution without standard impact?
Renesas, Huawei, Ericsson, QC: It is possible.
NSN: RAN2 only or RAN3 also?
Without RAN2 impact is possible. We still don't know about RAN3?
Ericsson: we haven't even considered the impact in RAN3. There will be some probably.
ALU: we think there will be RAN3 impact.
Huawei: does Ericsson want two solutions?

IPR2025-00720, OnePlus Ex. 1004

Agreements:
RLC data split is adopted as data split option for inter-NodeB aggregation.
PDCP split will not be considered any more.
The RNC-centric RLC data split option should always be allowed.
If any UE-centric solution is agreed, it should be possible for the network to enable/disable it.
If any UE-centric solution is agreed, it should be possible to combine UE-centric and RNC-centric RLC data split solutions.
UE solutions will be considered further.

10.4.6 Others

Including UE categories, possible optimisations and enhancements

R2-115871 On HS-SCCH order for cell activation/deactivation in multi-flow transmission Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
=> Not treated

10.5 WI: Other Rel-11 WIs

i.e. for WIs for which RAN2 is not prime responsible WG.

10.5.1 ULTD – CL (RP-110374)

(HSPA_UL_TxDiv-CL-Core, leading WG: RAN1, REL-11, started: Dec.10, target: March 12, WID: RP-110374)

Chair: what's the status in RAN4?
Huawei: we send an LS to RAN4 and we don't have a reply. Tomorrow morning there is another session tomorrow morning.
Another point: CLTD activation and deactivation might have some signalling impact, also depending on RAN4.

R2-115960 Signaling design to Enable and Disable CLTD Qualcomm Incorporated Disc REL-11 HSPA_UL_TxDiv-CL-Core
Proposal 1: Mandate the use of MAC-i/is with closed loop transmit diversity when configured in conjunction with E-DCH transport channel
Proposal 2a: Introduce new MAC-i Header Control Elements through the use of reserved 'spare bits', to signal the UE request to enable/disable CLTD when configured in conjunction with E-DCH transport channel
Proposal 2b: As part of the new MAC-i Header Control Elements, reserve LCH-ID of '1111' i.e. LCH-ID$_0$ in CELL_DCH state, to signal the UE request to enable/disable CLTD when configured in conjunction with E-DCH transport channel
Proposal 3: Introduce a NW configurable prohibit timer to limit the frequency of UE requests to enable/disable CLTD
Proposal 4: Introduce a new RRC Event X which is triggered by the UE to indicate to the NW to enable/disable CLTD when configured in conjunction with only a DCH transport channel. The conditions under which to trigger the event are left to UE implementation.

Renesas: any reason why we cannot use the same solution for DCH and E-DCH cases?
QC: it depends also on RAN1. RNC/Node B are different cases.
Renesas: RAN1 said what?
QC: is in the intro. "Any potential UE requests for deactivation/activation of CLTD should be sent to serving Node-B **only** (i.e. the S-RNC does not need to be involved)".
Ericsson: it doesn't look like a RAN1 agreement.
QC: this was in Athens, so not the last meeting but before.
NSN: any "potential" UE request.
Proposal 1: Mandate the use of MAC-i/is with closed loop transmit diversity when configured in conjunction with E-DCH transport channel
Chair: can we agree on this?
Renesas: what about cases without MAC-i/is?

IPR2025-00720, OnePlus Ex. 1004
Page 197 of 700

QC: P2-4 need P1 first to be agreed.
Renesas: we still can have gains without using MAC-i/is?
QC: we would like to limit configuration and testing.
Ericsson: I still cannot find this.
Renesas: more time needed.
=> Noted

R2-116005 Update of uplink CLTD stage-2 Huawei, HiSilicon CR 25.319 (0098) - F REL-11 HSPA_UL_TxDiv-CL-Core
Chair: changes on changes.
Intel: HSUPA is wrong in cover sheet
Intel: Scheduling procedures. We should be more precise.
Huawei: for DCH there is no scheduling.
Intel: precisely, we need to be more precise.
Intel we can say "for E-DCH …"
=> The CR is revised in R2-116452

R2-116452 Update of uplink CLTD stage-2 Huawei, HiSilicon CR 25.319 0098 - F REL-11 HSPA_UL_TxDiv-CL-Core
=> The CR is agreed

R2-116002 Introduction of uplink CLTD in 25.302 Huawei, HiSilicon CR 25.302 (0207) - B REL-11 HSPA_UL_TxDiv-CL-Core
ALU: today in RAN1 they changed the name of "F-PCICH" to "F-TPICH".
There is an LS coming.
ALU: we reduced the numbers of rows in a controlled way.
We prepared another 25.302 CR that combines 8C and CLTD, in case.
Chair: any more comments or impact on 25.302 from the incoming LS?
Ericsson: we need more time to check.
=> The CR is revised in R2-116430

R2-116430 Introduction of uplink CLTD in 25.302 Huawei, HiSilicon CR 25.302 0207 - B REL-11 HSPA_UL_TxDiv-CL-Core.
ALU: OK
Ericsson: the last sentence in 6.1 can be removed, perhaps?
With the removal of the sentence
Ericsson: 25.331 has not be updated according to our comments.
=> revised in R2-116474, with the removal of the sentence the CR is agreed in R2-116474 Rev1

R2-116474 Introduction of uplink CLTD in 25.302 Huawei, HiSilicon CR 25.302 0207 rev1 B REL-11 HSPA_UL_TxDiv-CL-Core.
=> The CR is agreed

Agreement: In case both CLTD and 8C CR on 25.302 gets agreed the rapporteur of 25.302 (ALU) will bring a company CR to RAN plenary to easy the merge in 25.302.

R2-116003 Introduction of uplink CLTD in 25.306 Huawei, HiSilicon CR 25.306 (0337) - B REL-11 HSPA_UL_TxDiv-CL-Core
Huawei: should we add "per frequency band"?
Chair: so we will add it
=> Revised in R2-116453

R2-116453 Introduction of uplink CLTD in 25.306 Huawei, HiSilicon CR 25.306 0337 - B REL-11 HSPA_UL_TxDiv-CL-Core
QC: any changes in here?
Huawei: only the change above.
=> The CR is agreed.

R2-116004 Introduction of uplink CLTD in 25.331 Huawei, HiSilicon CR 25.331 (4847) - B REL-11 HSPA_UL_TxDiv-CL-Core
Huawei: in 8.5.xx we need to change this: "> indicate to lower layers to switch to the 1st uplink CLTD activation state (as described in [27]).
Because of RAN1 new agreement.

IPR2025-00720, OnePlus Ex. 1004

Huawei: similar changes in 8.5.xx
F-PCICH needs to be changed.
Ericsson: 8.6.6.24 are we mixing OL and CL here?
Huawei: this OL is for the DL channel, so it's legacy, not the new OL UL.
NSN: where are the changes coming from?
Intel: in RAN1.
Renesas: The procedural part is fine for Cell Update and URA Update. So is the tabular and ASN.1.
About URA Update Confirm, we don't think these messages should be able to configure the feature.
About Cell Update Confirm, the procedural part is missing, so 8.3.1.6 needs to be updated in the same way as 8.2.2.3.
Ericsson: why not in "URA Update Confirm"?
Renesas: URA update confirm cannot contain any DCH parameter.
Ericsson: ASN.1 doesn't compile.
Ericsson: The capability is only added in some places. What about Inter-RAT HO info? This is for OL and also CL.
Ericsson: generic definition for UPH. This was decided in RAN1. We could have the same approach for event 6x.
Huawei: we will still need to discuss if we need the event 6x after the LS.
Ericsson: Ericsson cannot agree on the CR unless there is a conclusion in RAN4 (and hopefully an LS to RAN2) or a generic definition for event 6x.
=> CR revised in R2-116454

R2-116454 Introduction of uplink CLTD in 25.331 Huawei, HiSilicon CR 25.331 4847 - B REL-11 HSPA_UL_TxDiv-CL-Core
Huawei: there are updates in RAN1 but we still haven't received an LS, so we would like email approval.
Intel: we don't need to consider the latest RAN1 agreement that will be received after this meeting by RAN2.
Huawei: if the LS will be presented today, yes.
Magnolia: we have the same issues that were identified for the open loop CR in 8.5.xx etc.
Ericsson: this update of the CR doesn't say anything on event 6. Why?
It should capture the case where we have full power PA and half power PA.
Huawei: we are waiting for RAN4 LS yes, so can take that into account after we received the reply LS.
Ericsson: we think it doesn't matter when we receive the LS. We said this before.
Huawei: we understood that Ericsson in RAN4 proposes to have the full power PA.
Ericsson: yes, but RAN4 didn't agree on anything.
ALU: is this so critical for havng the CR agreed? We can have a FFS in the CR or not mention that and agree on that.
Ericsson: for us this is critical and the CR cannot be agreed.
Huawei: so critical to block the CR. RAN2 needs to provide the 25.331 to RAN plenary.
Huawei: in the current spec it looks generic enough , so we don't need to update event 6 part. So how can this be more generic?
NSN: no strong opinion, but why we need to have the generic description. We can omit and do it later.
Ericsson: RAN1 is doing a generic definition for UPH so it shouldn't be a big deal to do something similar for the event 6.
Huawei: we can put FFS in the spec as a compromise.
Ericsson: we think the compromise is to have a generic definition.
If we don't have a generic definition, we don't know if the feature will work. We don't want to send an incorrect CR to Ran plenary.
ALU: we think we don't need to wait. We are not sure what sort of generic definition Ericsson wants.
Huawei: we asked Ericsson for suggestion on the text but we didn't receive a suggestion.
Ericsson: our RAN1 colleague has a suggestion. We asked Huawei to talk to him.
Huawei: one company is blocking and not providing a suggestion.
Ericsson: RAN1 will have a email discussion with short deadline.RAN2 needs to have a deadline after that. For example we don't want to have all FFS in the parameters. These depends on RAN1.
=> 4) Email discussion n.4) [76#02] for the agreement of the CR in R2-116454. FFS deadline (Thursday midnight pacific time after checked with RAN2 secretary). Rapporteur: Huawei.

IPR2025-00720, OnePlus Ex. 1004

R2-116161 Open issues for CLTD Ericsson, ST-Ericsson Disc REL-11 HSPA_UL_TxDiv-CL-Core
=> Not treated.

10.5.2 ULTD – OL (RP-110374)

(HSPA_UL_TxDiv-OL-Core, leading WG: RAN4, REL-11, started: Dec.10, target: March 12, WID: RP-110374)

R2-116009 Update of uplink OLTD stage-2 Huawei, HiSilicon CR 25.319 (0099) - F REL-11 HSPA_UL_TxDiv-OL-Core
Renesas: not clear what is this feature from this.
Ericsson: we support this observation.
Huawei: are you ok with stage 2 without this CR?
Ericsson: equally unsatisfied.
Huawei: we removed most of the content of this stage 2 because of Ericsson comments before.
Ericsson: we could add just a few lines.
=> Revised in R2-116448.

R2-116448 Update of uplink OLTD stage-2 Huawei, HiSilicon CR 25.319 0099 - F REL-11 HSPA_UL_TxDiv-OL-Core

After offline:
Companies need more time to check so we can have email approval.
Intel: other specd affected?
Huawei: this is cat F.
Ericsson: what about a brief description before the bullet list?
=> The CR is on email approval (n.3)
Email approval n. 3) [76#01] in order to agree on the CRs in R2-116448, R2-116451, R2-116450. Rapporteur Huawei, deadline Thursday midnight pacific time.

R2-116006 Introduction of uplink OLTD in 25.306 Huawei, HiSilicon CR 25.306 (0338) - B REL-11 HSPA_UL_TxDiv-OL-Core
Renesas: do we need to add “per-frequency”?
Huawei: we removed based on previous comments, we can add it again.
NSN: fine to add it back.
=> Revised in R2-116449

R2-116449 Introduction of uplink OLTD in 25.306 Huawei, HiSilicon CR 25.306 0338 - B REL-11 HSPA_UL_TxDiv-OL-Core
=> The CR is agreed.

R2-116010 Early implementation of OLTD Huawei, HiSilicon Disc REL-11 HSPA_UL_TxDiv-OL-Core
Ericsson: we think we are going against the principle, but as a conscious decision.
Renesas: what is P2? Rel-10 is frozen. What does it mean?
Ericsson: we can skip P2 for now.
=> Noted

Proposal 1: Adopt the Option b (CSoverHSPA like approach) as the way forward for the early implementation of OLTD.
=> The proposal is agreed.

R2-116008 Support early implementation of uplink OLTD in Rel-10 Huawei, HiSilicon CR 25.331 - - B REL-10 HSPA_UL_TxDiv-OL-Core
no cat.B CR to frozen REL and no REL-10 CR for REL-11 WI allowed
Renesas: Rel-10 is frozen, so we cannot add xyz, but use the next version.
ALU: maxFreqBandsFDD is 8. Is that OK?
For example this “maxFreqBandsFDD-ext2” is bigger value.
Huawei: good question. We can check offline.
Huawei: what about the Multicarrier case?
Now we have the same thing for 8C and for CLTD.

IPR2025-00720, OnePlus Ex. 1004

Orange: we are a bit disappointed that we have late comments. We had an email discussion for this.
=> The CR is revised in R2-116450:

R2-116450 Support early implementation of uplink OLTD in Rel-10 Huawei, HiSilicon CR 25.331 - 4886 B REL-10 HSPA_UL_TxDiv-OL-Core

ALU: we need to think about the max number of bands.
Huawei: this is also in Rel-10. So maybe we need to take it separately?
ALU: maybe we are fine with that number. We don't know if we have done it wrong.
ALU: email approval is fine.
Huawei: we would like to keep it separate and if this issue is not solved in the email discussion this should not block the CR approval.
Renesas: this is possible if we have two separate CRs.
ALU: maybe we can then agree on the CR now then.
Huawei: can we?
Renesas: email discussion for companies to check on the value.
Huawei: this should be a separate discussion. This second issue is also for CLTD and 8C.
ALU: not much value to have two discussions.
VDF: we would like to have this in Rel-10.
Orange: is this new issue critical? We would prefer not to delay the CR.
Renesas: because Rel-10 is frozen, we need to be sure is right.
Huawei: so if we cannot decide in the next 4 days, what will happen of the Rel-10 CR?
ALU: we expect that the CR will be accepted as it is.
Huawei: fine.
Renesas: we are not sure.What about the new extension indicator for signal up to 64 (?) bands? Do we need a correction?
Huawei: OLTD should be band agnostic, i.e. it could be applicable to new band or old band.
Huawei: we could apply to old existing bands for now.
Chair: email approval on this version of the CR or not?
Renesas: without the capability the feature is useless.
So this CR and the Rel-11 CR needs to be on email approval.
VDF: if it doesn't converge on email approval there could be a company CR for plenary.
ALU: 8 bands sounds like a lot of band to support fo the uE, so after we check we might find this perfectly acceptable. We will see.
=> The CR goes on email approval n. 3) [76#01]

R2-116007 Introduction of uplink OLTD in 25.331 Huawei, HiSilicon CR 25.331 (4848) - B REL-11 HSPA_UL_TxDiv-OL-Core

Renesas: the capability should be va60, but every other NCE should be vb.
You can look at CS over HSPA as a guideline.

```
criticalExtensions              CHOICE {
                        r10                             SEQUENCE {
                            activeSetUpdate-r10             ActiveSetUpdate-r10-IEs,
                            -- Container for adding non critical extensions after freezing
                            -- REL-11
                            activeSetUpdate-r10-add-ext     BIT STRING      OPTIONAL,
                            vaxyNonCriticalExtensions       SEQUENCE {

                                activeSetUpdate-vaxyext         ActiveSetUpdate-vaxyext-IEs,
                                nonCriticalExtensions           SEQUENCE {}     OPTIONAL
                            }   OPTIONAL
                        },
```

And then the P2 from the discussion paper should be to freeze the Rel-11 NCE include in the Rel-10 CE.
Huawei: about UE capability report?
Renesas: everything that appears only in Rel-11 should have a Rel-11 name.
Ericsson: that's the way it was done for CS over HSPA.
The capability is only added in some places. What about Inter-RAT HO info? This is for OL and also CL.
Huawei: quite a lot of capabilities are not included there.
Ericsson: which ones are you talking about?
We think we should add those.

IPR2025-00720, OnePlus Ex. 1004

New IE from 10.3.3 needs to go to 10.3.6.
Renesas: URA Update Confirm is missing from the updates of tabular and ASN.1. We think is needed. The procedure is missing for Cell Update and URA Update. (should be a copy/paste).
Huawei: OK
Renesas: we need to amend our comment. The procedural part is fine for Cell Update and URA Update. So is the tabular and ASN.1.
About URA Update Confirm, we don't think these messages should be able to configure the feature.
About Cell Update Confirm, the procedural part is missing, so 8.3.1.6 needs to be updated in the same way as 8.2.2.3.
=> The CR is revised in R2-116451

R2-116451 Introduction of uplink OLTD in 25.331 Huawei, HiSilicon CR 25.331 4848 - B REL-11 HSPA_UL_TxDiv-OL-Core
Ericsson: E-DCH has not to be supported, so 8.5.xx should not have the mandatory check of a variable that only if a UE supporting E-DCH will have. We could have an "if" clause.
Huawei: OK
Do we need to add the "IE" in the RRC Connection Release?
Renesas: maybe not.
Huawei: there are other examples.
Ericsson: maybe some examples make sense and other don't.
Renesas: is it there?
Huawei: it is not there.
Huawei: on 8.6.6.xx. Do you want to remove :" Determine the value for the variable UPLINK_OLTD_TRANSMISSION and take the corresponding actions as described in subclause 8.5.XX."?
Ericsson: we need time. If we have conditions for all the IEs, maybe we don't need this. We need to check.
=> The CR goes on Email approval n. 3) [76#01].

10.5.3 Extending 850 MHz Upper Band (RP-111396)

(e850_UB-Core, leading WG: RAN4, REL-11, started: Dec.10, target: Dec.11, WID: RP-111396)

No contributions.

10.5.4 Others

(SONenh2_LTE_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, target: Sep.12, WID: RP-111328)

R2-115863 Introduction of CSG ANR Huawei, HiSilicon Disc REL-11 SONenh2_LTE_UTRA-Core
Not treated

(NC_4C_HSDPA-Core, leading WG: RAN4, REL-11, started: March 11, target: June 12, WID: RP-110416)

R2-116208 Measurement events for NC-4C-HSDPA Renesas Mobile Europe Ltd Disc REL-11 NC_4C_HSDPA-Core
Withdrawn

(Sec11, leading WG: SA3, REL-11, started: June 09, target: Sep.12, WID: none)

No contributions.

10.6 SI: Other Rel-11 SIs

i.e. for SIs for which RAN2 is not prime responsible WG.

(FS_EHNB_enh, leading WG: RAN3, REL-11, started: March 11, target: Dec. 11, WID: RP-110456)

IPR2025-00720, OnePlus Ex. 1004

ALU: after RAN3 input the SI is going to be extended for 3 months.

R2-116431 Identification of the issues for CELL_FACH mobility to/from HNB cells Disc Alcatel-Lucent
Not treated

R2-115907 on mobility issues for HNB RAN sharing Huawei, HiSilicon Disc
Not treated

R2-115908 on CELL_FACH mobility for CSG cells Huawei, HiSilicon Disc
Not treated

R2-116139 RAN2 input for TR37.803 on Enhanced HNB mobility in CELL_FACHAlcatel-Lucent TP 37.803
Note: TR 37.803 is under RAN3 control and the SI FS_EHNB_enh is related to LTE and UTRA.
Not treated

R2-116344 Modification of the security context storage on the UICC Nokia Siemens Networks, Nokia Corporation, Renesas Mobile Europe Ltd. REL-11 Sec11
ST-E: what's the status in CT1?
NSN: not agreed yet.
=> The CR is postponed

10.7 WI: TEI11

R2-115861 CSG cell measurement for inter-frequency detected set Huawei, HiSilicon Disc REL-11 TEI11
Not treated

R2-115914 Preparation of REL-11 ASN.1 critical extensions Ericsson, ST-Ericsson CR 25.331 (4835) - B REL-11 TEI11
Ericsson: we would like to technically endorse this CR.
Chair: OK?.
=> The CR is revised in R2-116478

R2-116478 Preparation of REL-11 ASN.1 critical extensions Ericsson, ST-Ericsson CR 25.331 4835 - B REL-11 TEI11
=> The CR is technically endorsed

11 Outgoing LSs and email discussions for UTRA

R2-116424 Reply LS on CSFB awareness in UMTS (R3-113052; contact: Vodafone)
REL-11 TEI11 (R3-113052; contact: Vodafone) RAN3
to: RAN3 CC:SA2
VDF: can we really use those IEs in a deterministic way?
Broadcom: I think yes.
VDF: maybe not. The absence doesn't say anything deterministic.
Renesas: we agree with VDF. So that one could be misleading in the LS.
VDF: is there any possibility to know for sure based on these parameters that it was a CS fallback? Yes or no?
NSN: CS fallback is not defined in RAN2 specs.
ST-E: typically there is no location area update. While in E-UTRA the UE is already registered in CS domain.
VDF: this is not always the case.
ST-E: ok.
VDF: so in the end it is likely, but not sure. We would like a deterministic counter.
TIM: original LS from SA2 was targeting CS fallback. Difficult for us to go beyond answering the question from RAN3.
VDF: our paper in RAN3 was not related to the SA2 discussion.
Chair: based on this discussion, do we need to remove the second part then?
Renesas: we think that there is no mechanism that works in all the situations.

IPR2025-00720, OnePlus Ex. 1004

Chair: after “LTE and no RRC mechanisms to identify a CSFB call at target RNC “ we add “in all the cases” and we cut all the rest.
⇨ LS is agreed in R2-116429.

R2-116429 Reply LS on CSFB awareness in UMTS (R3-113052; contact: Vodafone)
REL-11 TEI11 (R3-113052; contact: Vodafone) RAN3
to: RAN3 CC: SA2
⇨ LS is agreed

11.1 Agreed outgoing LSs of UTRA session

R2-116422 LS on Default Radio Configurations for TDD (to: RAN5, GERAN3; cc: -; contact: Anritsu) RAN2 LSout REL-4 TEI4

R2-116429 Reply LS to R3-113052 = R2-115680 on CSFB awareness in UMTS (to: RAN3; cc: SA2; contact: Vodafone) RAN2 LSout REL-8 TEI8
LS was sent out on Wed of RAN2 #76

R2-116476 LS on peak rate limitations in CT1 specifications for 8C-HSDPA (to: CT1; cc: CT4, RAN3; contact: Ericsson) RAN2 LSout REL-11 8C_HSDPA-Core

11.2 Email discussions for UTRA

1) Email discussion n. 1) [76#00] to check that the CRs in R2-116407, R2-116408, R2-116409 correctly implement the way forward agreed in RAN2 previously.
Purpose: agree on the CRs for Rel-8-9-10.
Deadline: up to Thursday midnight Pacific Time
Rapporteur: NSN.

2) Email discussion n. 2) [76#30] on the problem in R2-115849 (Discussion on H-RNTI handling in Cell Update procedure)..
Purpose: to progress on this issue and possibly provide CRs (to be requested via AND tool)..
Deadline: until next meeting (submission deadline)
Rapporteur: QC

3) Email approval n. 3) [76#01] in order to agree on the CRs in R2-116448, R2-116451 and R2-116450.
Purpose: agree on the CRs
Deadline: Thursday midnight pacific time.
Rapporteur Huawei,

4) Email discussion n. 4) [76#02] for the agreement of the CR in R2-116454.
Purpose: agreement of the CR
Deadline Thursday Midnight Pacific Time.
Rapporteur: Huawei.

5)Email approval n. 5) [76#03] on the CR in R2-116459.
Purpose: agreement of the CR
Deadline Thursday midnight pacific time.
Rapporteur Ericsson.

6) Email approval n. 6) [76#04] on the CR in R2-116412
Purpose agreement of the CR in R2-116412. The final CR will be in Tdoc R2-116479 CR 4874 rev1.:
Deadline Thursday midnight pacific time.
Rapporteur: QC

7) Email approval n.7) [76#05] to get the note right in the CR in R2-116413.
Purpose: to agree on the CR in R2-116413
Deadline: Thursday midnight pacific time..
Rapporteur: Ericsson

See Annex F for the final email discussions.

IPR2025-00720, OnePlus Ex. 1004

12 Left-overs

12.1 LTE adhoc session

No LTE ad hoc session was held.

12.2 UMTS

No left-overs from UMTS ad hoc session.

12.3 Email Discussions

Note: This is a draft list of Email discussions. The final list including detailed content, responsible company and email discussion number will be distributed on the RAN2 reflector after the meeting.

- ✉ Email discussion until next meeting on the details of the information update procedure. Can try to discuss impact of a new SIB or an existing SIB (Huawei).
- ✉ Email discussion to capture agreements until next meeting. Attempt to start with running stage-3 CRs 25.331 and 36.331 (Huawei).
- ✉ One week email discussion to agree a running stage-2 CR capturing agreements on MDT made so far (based on version in R2-116518). (MediaTek)
- ✉ Email discussion until next meeting on Scheduled IP-Throughput measurements and how to used them (in continuation of the agreement made in this meeting) (MediaTek)
- ✉ Email discussion until next meeting on location information enhancements. Two tracks (MediaTek)
- ✉ Email discussion until next meeting to discuss UE category in presence of MCH reception. (QC)
- ✉ Email discussion until next meeting to discuss how to realize handling of FDD/TDD capabilities. This email discussion will only be kicked-off after the RAN-54 if RAN agrees that a solution is needed. (QC)
- ✉ One week email discussion to capture the agreements on CA from this meeting in the running stage-2 CR (Nokia). Endorsed version can be provided in R2-116503.
- ✉ Will have an email discussion until next meeting to try to agree on which evaluations on RRC Signalling and DRX to include in the TR. (RIM)
- ✉ Email discussion until Thursday after meeting to update the TR with the agreements from this meeting (RIM). Update can be provided in R2-116504 TR36.822 v0.1.1
- ✉ Email discussion until Thursday after meeting to update running CR with agreements from this meeting (Huawei). Update can be provided R2-116508. Will not be submitted to plenary
- ✉ Email discussion until next meeting to discuss how to use the SAI (what to include in SIB and for which purpose…) (Huawei)
- ✉ Email discussion until next meeting to discuss congestion handling (focus on the two approaches outlined in this meeting) (Nokia)
- ✉ Email discussion until next meeting on IDC triggers (MediaTek). How can the UE evaluate the IDC interference level from and to ISM? (measurement and/or internal assessment?) When does the UE trigger an IDC indication? (Does the network need to know/control the threshold? Or can the network trust the assessment of the UE?). Should the UE indicate the level (share of affected subframes and/or interference level) of interference problem or just that there is a problem? Should attempt to align terminology (usable/unusable frequency,…).
- ✉ Email discussion until Thursday after the meeting for capturing agreements from this meeting in running stage-2 CR? (CMCC). Update can be provided in R2-116510

IPR2025-00720, OnePlus Ex. 1004
Page 205 of 700

- ☒ Email discussion 1 month to discuss and collect final calibration simulation results. Results can be included in TR (ALU).
- ☒ Email discussion until Thursday after the meeting for capturing agreements from this meeting and the updates proposed in R2-116150 in the TR? An update can be provided in R2-116517 v0.3.1. Will not be provided to plenary for information
- ☒ One week email discussion to try to include some figures related to Question B. If no more accurate figures can be found the LS will be sent with the change listed above (add "by SA3") (RIM). The final LS can be provided R2-116558

For final plans for email discussions after RAN2 #76 see Annex F.

13 Outgoing LS and output to other groups for LTE/joint

R2-115899 Draft Reply LS on MDT positioning; Huawei, HiSilicon; LSout;
draft reply to S5=113283 = R2-115676
not treated, RAN2 has not yet concluded

R2-115924 Proposed LS on UE category in the presence of MCH reception; Qualcomm Incorporated; LSout; REL-10 MBMS_LTE
related to Disc Tdoc *R2-115922*
not treated, see email discussion [76#35]

R2-116030 Draft LS to CT1 on UE capability handling for FDD/TDD UE; Samsung; LSout;
related to Disc Tdoc R2-116028
not treated, see email discussion [76#36]

R2-116365 Draft LS to CT1 capturing the current network behaviour as captured in the agreement; ALU
=> Change first bullet to "The Rel-10 UE behaviour is that AS forwards the EWT to NAS if it supports EWT"
=> Change last bullet to "There is no other UE capability signalling for EWT"
- ALU received comments offline that we should include the expected behaviour: "NAS should block only mobile originating delay tolerant accesses with EWT".
=> With these changes the LS is approved in R2-116375

R2-116362 Draft reply LS on MDT and RAN sharing (related to R2-115675), NSN
- Offline discussion concluded that the LS is not needed
- SA5 removed the restriction that limited the scope of MDT to the pPLMN
=> LS will not be sent. TDoc withdrawn

R2-116363 Draft reply LS on MBMS FEC Evaluation Framework (related to R2-115678), QC
=> The LS is approved in R2-116515

To RAN4:
R2-116377 Reply LS on UE measurements with blank MBSFN subframes for eICIC, , Ericsson
=> Should remove "(e.g., with NeighCellConfig set to 00 as defined in Section 6.3.6)"
=> Change the TDoc number of the attached CR
=> With this change the LS is approved in R2-116512

To RAN1, CC RAN4:
R2-116501 LS on Parallel transmissions of PRACH and PUSCH/PUCCH/SRS, ALU
=> LS is approved R2-116552

To SA2:
R2-116372 LS on Limitation on PS voice RAB for Intra UMTS SRVCC, HTC
=> LS is approved in R2-116553

RAN:

IPR2025-00720, OnePlus Ex. 1004
Page 206 of 700

R2-116555 LS on Capability handling of LTE TDD and FDD modes, QC
- QC indicates that it was agreed offline not to include SA2 for the time being. QC thinks if RAN would agree something on solution level they could of course include SA2/CT1 in their response.
- Samsung thinks that we should not discuss technical solution at RAN but take such discussions and decisions here in RAN2. And then we would LS SA2 or CT1 as necessary.

=> The LS is approved in R2-116557

To SA3, CC: TSG CT WG1, TSG SA WG1, TSG SA WG2, TSG GERAN WG2:

R2-116554 Reply LS on length of security in PWS, RIM
- NSN wonders about the highlight: RAN2 provides the information transparently to higher layers. The text seems to indicate that it is a RAN2 issue and would prefer to remove that sentence. DOCOMO would like to have the sentence since there is an IE in RAN2 specifications. NSN suggests to reword so that it does not sound as if RAN2 intending to include the missing method. Samsung agrees with NSN that this sentence could be removed since it is not our business. Vdf agrees that this sentence could be removed. DOCOMO thinks that there are test cases for this and they would need to be removed. ST-Ericsson thinks that security is not completely transparent and thinks the sentence might be helpful.

=> Change “algorithm is not provided” to “algorithm is not provided by SA3”
- Vdf wonders about question B. It might not provide much useful information. Vdf wonders whether we could provide some estimates within a week or so. RIM thinks it could be difficult to agree on figure. RIM would prefer to provide at least this answer now.

✉ **One week email discussion [76#12] to try to include some figures related to Question B. If no more accurate figures can be found the LS will be sent with the change listed above (add “by SA3”) (RIM). The final LS can be provided R2-116558**

To: GERAN WG2:

R2-116371 LS on Clarification of inter-RAT Cell reselection enhancements, DOCOMO

=> Change “GERAN” to “GERAN2”

=> With this change the LS is approved in R2-116524

To CT1, CC: SA2:

R2-116522 LS on NAS->AS indication for access requests subject to EAB, ZTE

=> Change “there would be problems” to “there could be problems”

=> With this change the LS is approved in R2-116525

To SA4, CC: SA2:

R2-116505 Response LS on MBMS assistance information for service continuity (QC)

=> LS is approved in R2-116526

14 Any other business

Meeting schedule 2011/2012/2013:

MEETING	DATES	LOCATION	HOST	CO-LOCATION
RAN2 #72bis	17 Jan – 21 Jan 2011	Dublin, Ireland	EF3	RAN1/2/3
RAN2 #73	21 Feb – 25 Feb 2011	Taipei, Taiwan	HTC	RAN 1/2/3/4/5
RAN #51	15 March – 18 March 2011	Kansas City, USA	Sprint Nextel	
RAN2 #73bis	11 April – 15 April 2011	Shanghai, China	ZTE	RAN 2/4
RAN2 #74	9 May – 13 May 2011	Barcelona, Spain**	EF3	RAN 1/2/3/4/5
RAN #52	31 May – 3 June 2011	Bratislava, Slovakia	EF3	
RAN2 #75	22 Aug. – 26 Aug. 2011	Athens, Greece	EF3	RAN 1/2/3/4/5
RAN #53	13 Sep. – 16 Sep. 2011	Fukuoka, Japan	ARIB, TTC	
RAN2 #75bis	10 Oct. – 14 Oct. 2011	Zhuhai, China	CATT	RAN1/2/3/4
RAN2 #76	14 Nov. – 18 Nov. 2011	San Francisco, USA	NAF3	RAN 1/2/3/4/5 ++

IPR2025-00720, OnePlus Ex. 1004
Page 207 of 700

MEETING	DATES	LOCATION	HOST	CO-LOCATION
RAN #54	6 Dec. – 9 Dec. 2011	Berlin, Germany	EF3	
RAN2 #77	6 Feb – 10 Feb 2012	Dresden, Germany	EF3	RAN 1/2/3/4/5
RAN #55	28 Feb – 2 March 2012	Xiamen, China	ZTE, CMCC	
RAN2 #77bis	26 March – 30 March 2012	Jeju, Korea	Samsung	RAN 1/2/4
RAN2 #78	21 May – 25 May 2012	Prague, Czech Republik	EF3	RAN 1/2/3/4
workshop RAN #56	11 June – 12 June 2012 13 June – 15 June 2012	Ljubljana, Slovenia Ljubljana, Slovenia	EF3	
RAN2 #79	13 Aug. – 17 Aug. 2012	Tsing Dao, China	Huawei	RAN 1/2/3/4/5
RAN #57	4 Sep. – 7 Sep. 2012	?, USA	NAF3	
RAN2 #79bis	8 Oct. – 12 Oct. 2012	Bratislava, Slovakia	EF3	RAN2 only
RAN2 #80	12 Nov. – 16 Nov. 2012	?, USA	NAF3	RAN 1/2/3/4, other
RAN #58	4 Dec. – 7 Dec. 2012	Barcelona, Spain	EF3	
RAN2 #81	28 Jan – 1 Feb 2013	Europe	EF3	RAN 1/2/3/4/5
RAN #59	26 Feb – 1 March 2013	Vienna, Austria	EF3	
RAN2 #81bis	15 April – 19 April 2013			RAN2 only
RAN2 #82	20 May – 24 May 2013	?, Japan	JF3	RAN 1/2/3/4/5
RAN #60	11 June – 14 June 2013			
RAN2 #83	19 Aug. – 23 Aug. 2013	Europe	EF3	RAN 1/2/3/4
RAN #61	3 Sep. – 6 Sep. 2013	Porto (tbc)	Portugal	EF3
RAN2 #83bis	7 Oct. – 11 Oct. 2013			RAN2 only
RAN2 #84	11 Nov. – 15 Nov. 2013			RAN 1/2/3/4/5
RAN #62	3 Dec. – 6 Dec. 2013			

EF3: European Friends of 3GPP
NAF3: North American Friends of 3GPP
JF3: Japanese Friends of 3GPP

**: original meeting place Kobe, Japan (hosted by JF3) was changed acc. to chairman's email of 29.03.11 on RAN2 email reflector

++: SA1, SA2, SA3 LI, SA5, CT1, CT3, CT4, CT6 also co-located

15 Closing of the meeting

The TSG RAN WG2 chairman Henning Wiemann thanked the delegates for participating and contributing to RAN WG2 meeting #76. He thanked the North American Friends of 3GPP (EF3) for hosting this meeting and closed the meeting on Friday November 18th, 2011 at about 17:00.

IPR2025-00720, OnePlus Ex. 1004

Annex A:
List of participants

The list of participants of this RAN WG2 meeting #76 is attached to this report.

Total number of participants: 208 (registered just before the meeting: 304).

Annex B:
List of Tdocs

The list of Tdocs of this RAN WG2 meeting #76 is attached to this report.

Total number of Tdocs: 900 (R2-115660 - R2-116559) of which 846 Tdocs are available, i.e. 54 are not provided.

Annex C:
Incoming liaison statements for TSG RAN WG2 #76

RAN2 Tdoc	title (original Tdoc, contact)	source	status	LS answer	additional comments
R2-115662	**LS Reply to S3-110836 = R2-113735 on the length of security information in PWS (C1-114450; contact: Ericsson)**	**CT1**	**noted**	**no**	
R2-115663	**Reply LS To R2-114804 on EAB Requirements (C1-114451; contact: NSN)**	**CT1**	**noted**	**no**	
R2-115664	**Reply LS to R2-114802 on Applicability of ePLMN to MDT (C1-114463; contact: Huawei)**	**CT1**	**noted**	**no**	
R2-115665	**LS on outstanding issues for video SRVCC (C1-114474; contact: Samsung)**	**CT1**	**noted**	**no**	
R2-115666	**LS on additional carrier types for carrier aggregation enhancement (R1-113551; contact: Alcatel-Lucent)**	**RAN1**	**noted**	**no**	
R2-115667	**Reply LS to S4-110800 = R2-113746 on Radio metrics with respect to QoE (R1-113605; contact: Qualcomm)**	**RAN1**	**noted**	**no**	

IPR2025-00720, OnePlus Ex. 1004
Page 209 of 700

RAN2 Tdoc	title (original Tdoc, contact)	source	status	LS answer	additional comments
R2-115668	**LS on RAN1 agreements on uplink Closed Loop Transmit Diversity for HSPA (R1-113613; contact: Huawei)**	**RAN1**	**noted**	**no**	
R2-115669	**LS on RAN1 agreements on Further Enhancements for Cell_FACH (R1-113614; contact: Qualcomm)**	**RAN1**	**noted**	**no**	
R2-115670	**LS on "per band OLTD capability" signalling (R4-114989; contact: Huawei)**	**RAN4**	**noted**	**no**	
R2-115671	**LS reply to R1-112867 = R2-114860 on TDD inter-band CA with different UL-DL configurations on different bands (R4-115437; contact: CATT)**	**RAN4**	**noted**	**no**	
R2-115672	**Reply to LS to C1-113759 = R2-114852 on the scope of extended wait time on AS layer (S2-114498; contact: HTC)**	**SA2**	**noted**	**no**	
R2-115673	**Reply to LS to R2-114804 on EAB Requirements (S2-114698; contact: Vodafone)**	**SA2**	**noted**	**no**	
R2-115674	**Reply LS to R2-114808 on SRVCC capability bit setting mismatch in AS and NAS (S2-114702; contact: Ericsson)**	**SA2**	**noted**	**no**	
R2-115675	**Reply LS to R2-114807 on MDT and RAN sharing (S5-113214; contact: NSN)**	**SA5**	**noted**	**no**	
R2-115676	**LS on MDT positioning (S5-113283; contact: Ericsson)**	**SA5**	**noted**	**postponed**	
R2-115677	**Reply LS to R2-114814, C1-114450 = R2-115662, GP-111304 = R2-114854 on length of security in PWS (S3-111225; contact: RIM)**	**SA3**	**noted**	**R2-116558**	
R2-115678	**LS on MBMS FEC Evaluation Framework (S4-111114; contact: Qualcomm)**	**SA4**	**noted**	**R2-116515**	
R2-115679	**Reply LS to R2-115647 on MBMS assistance information for service continuity (S4-111124; contact: Qualcomm)**	**SA4**	**noted**	**R2-116526**	
R2-115680	**LS on CSFB awareness in UMTS (R3-113052; contact: Vodafone)**	**RAN3**	**noted**	**R2-116429**	**received on Mon of RAN2 #76; LS was handled in UTRA session**
R2-115715	**Response LS to R2-115646 on physical-layer measurement for network-based positioning (R1-114454; contact: Ericsson)**	**RAN1**	**not treated**	**-**	**received on Fri afternoon of RAN2 #76**
R2-115716	**Reply LS to R2-115649 on Physical Layer Measurement for network positioning (R1-114456; contact: Alcatel-Lucent)**	**RAN1**	**not treated**	**-**	**received on Fri afternoon of RAN2 #76**
R2-115717	**LS response to R2-115646 on Physical Layer measurement for network-based positioning (R4-116300; contact: Ericsson)**	**RAN4**	**not treated**	**-**	**received on Fri afternoon of RAN2 #76**

postponed: LS answer was postponed to next RAN2 meeting (note: incoming LS will not be presented again at the next meeting and involved parties are requested to submit proposal for draft outgoing LS answer to next meeting).

IPR2025-00720, OnePlus Ex. 1004
Page 210 of 700

Summary:

- In total: 22 LSs received for RAN2 #76: 6 related to LTE/E-UTRA, 3 related to UTRA, 13 related to joint aspects
- 0 resubmission from RAN2 #75bis
- 4 of the 22 LSs were received during RAN2 #76 meeting:
  - R2-115680 = R3-113052
  - R2-115715 = R1-114454
  - R2-115716 = R1-114456
  - R2-115717 = R4-116300
- 19 of the 22 LSs noted; 3 LSs not treated and will be resubmitted to RAN2 #77:
  - R2-115715 = R1-114454
  - R2-115716 = R1-114456
  - R2-115717 = R4-116300

IPR2025-00720, OnePlus Ex. 1004
Page 211 of 700

Annex D:
Outgoing liaison statements of TSG RAN WG2 #76

Only final outgoing LSs are listed here.

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
R2-116375	**Scope of extended wait time on AS layer**	**CT1**	**SA2**	**Alcatel-Lucent**	**C1-113759 = R2-114852**	**REL-10**	**NIMTC-RAN_overload**	**LS was sent out on Tue of RAN2 #76**
R2-116422	**Default Radio Configurations for TDD**	**RAN5, GERAN3**	**-**	**Anritsu**	**-**	**REL-4**	**TEI4**	
R2-116429	**CSFB awareness in UMTS**	**RAN3**	**SA2**	**Vodafone**	**R3-113052 = R2-115680**	**REL-8**	**TEI8**	**LS was sent out on Wed of RAN2 #76**
R2-116476	**Peak rate limitations in CT1 specifications for 8C-HSDPA**	**CT1**	**CT4, RAN3**	**Ericsson**	**-**	**REL-11**	**8C_HSDPA-Core**	
R2-116512	**UE measurements with blank MBSFN subframes for eICIC**	**RAN4**	**-**	**Ericsson**	**R4-114853 = R2-114873**	**REL-10**	**eICIC_LTE-Core**	**LS was sent out on Fri morning of RAN2 #76**
R2-116515	**MBMS FEC Evaluation Framework**	**SA4**	**RAN1**	**Qualcomm**	**S4-111114 = R2-115678**	**REL-11**	**EMM-EFEC**	
R2-116524	**Clarification of inter-RAT Cell reselection enhancements**	**GERAN2**	**-**	**NTT DOCOMO**	**-**	**REL-9**	**TEI9, LTE-L23**	
R2-116525	**NAS->AS indication for access requests subject to EAB**	**CT1**	**SA2**	**ZTE**		**REL-11**	**SIMTC-RAN_OC-Core**	
R2-116526	**MBMS assistance information for service continuity**	**SA4**	**-**	**Qualcomm**	**S4-111124 = R2-115679**	**REL-11**	**MBMS_LTE_SC-Core**	
R2-116552	**Parallel transmissions of PRACH and PUSCH/PUCCH/SRS**	**RAN1**	**RAN4**	**Alcatel-Lucent**	**-**	**REL-11**	**LTE_CA_enh-Core**	
R2-116553	**Limitation on PS voice RAB for Intra UMTS SRVCC**	**SA2**	**-**	**HTC**	**-**	**REL-8**	**RANimp-HSPAVoIP**	
R2-116557	**Capability handling of LTE TDD and FDD modes**	**RAN**	**-**	**Qualcomm**	**-**	**REL-9**	**TEI9, LTE-L23**	
R2-116558	**Length of security in PWS**	**SA3**	**CT1, SA1, SA2, GERAN2**	**RIM**	**S3-111225 = R2-115677**	**REL-11**	**PWS_Sec**	**agreed by email discussion [76#12]**

Summary:

In total 13 outgoing LSs of RAN2 #76 (including 1 LS agreed by email): 5 related to LTE/E-UTRA, 3 related to UTRA, 5 related to joint aspects.

IPR2025-00720, OnePlus Ex. 1004
Page 212 of 700

Annex E:
List of agreed CRs for RAN #54

Overview of 113 agreed and 1 technically endorsed RAN2 CRs submitted to RAN #54 (Berlin): see also RP-111424:

spec	REL-4	REL-5	REL-6	REL-7	REL-8	REL-9	REL-10	REL-11	CRs	specs
25.302	0	0	0	0	0	0	0	2+1*+1**	**2+1*+1****	**1**
25.304	0	0	0	0	0	2	2	0	**4**	**2**
25.306	0	0	0	1	0	0	3	3	**7**	**3**
25.308	0	0	0	0	0	0	1	1	**2**	**2**
25.319	0	0	0	0	1	1	2	5	**9**	**4**
25.321	0	0	0	0	0	0	3	1	**4**	**2**
25.331	1	1	1	4	5	5	14	4	**35**	**8**
34.109	0	0	0	0	0	0	1	0	**1**	**1**
36.300	0	0	0	0	0	1	8+1*	2+1*	**11+2***	**3**
36.302	0	0	0	0	0	0	1	0	**1**	**1**
36.304	0	0	0	0	0	1	1	0	**2**	**2**
36.306	0	0	0	0	0	2	4	0	**6**	**2**
36.321	0	0	0	0	1	1	3+2*	0	**5+2***	**3**
36.331	0	0	0	0	4	4+1*+2**	10+1*+2**	0	**18+2*+4****	**3**
36.355	0	0	0	0	0	2	2	0	**4**	**2**
36.816	0	0	0	0	0	0	0	1	**1**	**1**
37.320	0	0	0	0	0	0	2	0	**2**	**1**
UTRA	1	1	1	5	6	8	26	16+1*+1**	**64+1*+1****	**23**
LTE	0	0	0	0	5	11+1*+2**	31+4*+2**	3+1*	**50+6*+4****	**18**
total	1	1	1	5	11	19+1*+2**	57+4*+2**	17+1*	**114+7*+5****	**41**

IPR2025-00720, OnePlus Ex. 1004
Page 213 of 700

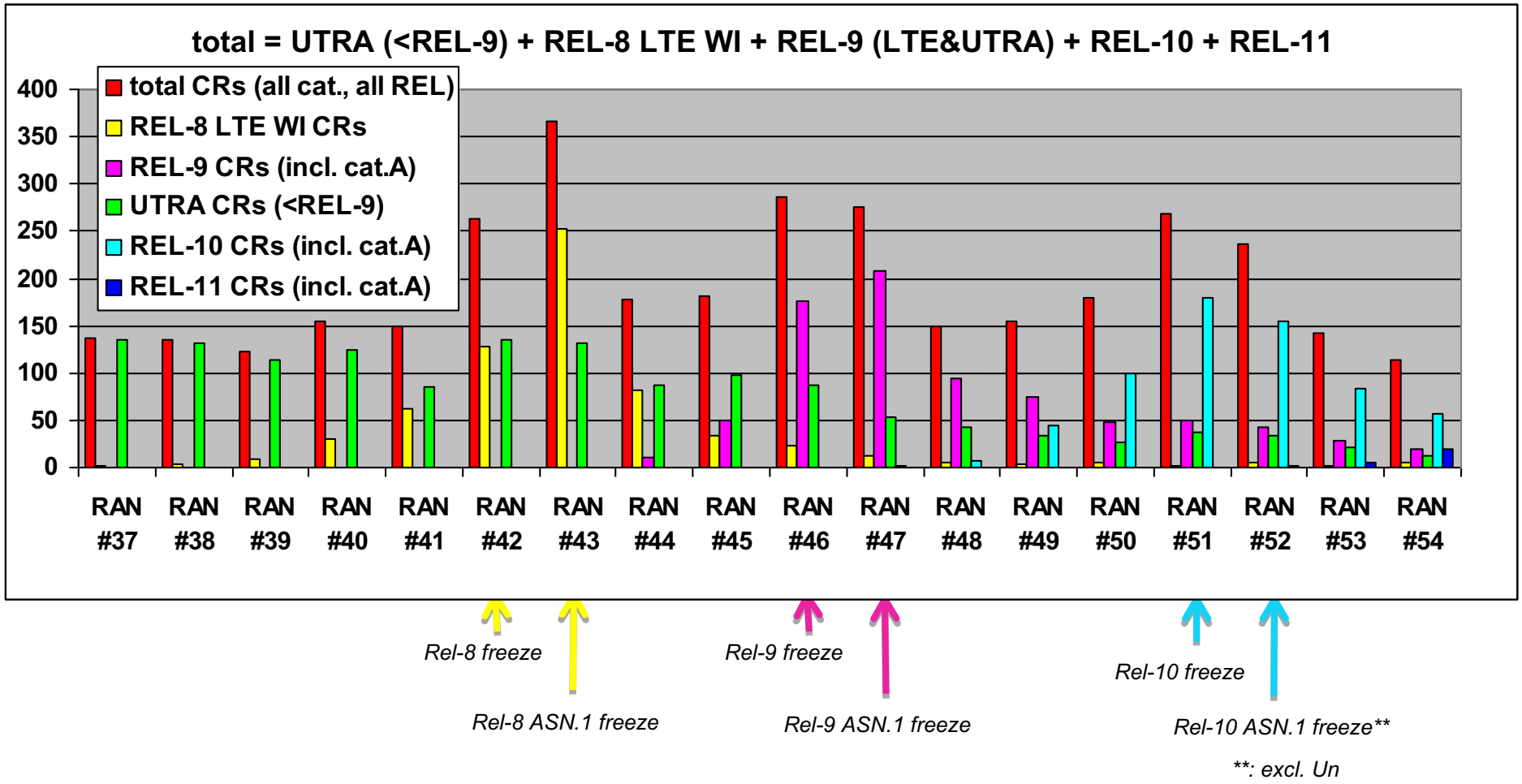


Figure E-1: RAN2 CRs submitted to the previous and the coming RAN plenary #54

IPR2025-00720, OnePlus Ex. 1004
Page 214 of 700

The following table includes the RAN2 CRs submitted to RAN #54 in Berlin:

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
25.302	0206	-	B	REL-11	R2-116473	Introduction of 8C-HSDPA in 25.302	8C_HSDPA-Core	Ericsson, ST-Ericsson	RP-111717	withdrawn	replaced by company contribution RP-111622 at RAN #54 which was then revised in RP-111736
25.302	0207	1	B	REL-11	R2-116474	Introduction of uplink CLTD in 25.302	HSPA_UL_TxDiv-CL-Core	Huawei, HiSilicon	RP-111718	revised	revised in company contribution RP-111622 at RAN #54
25.302	0207	2	B	REL-11	-	Introduction of uplink CLTD and 8C-HSDPA into 25.302	8C_HSDPA-Core, HSPA_UL_TxDiv-CL-Core	-	RP-111622	revised	revised in company contribution RP-111736 at RAN #54
25.302	0207	3	B	REL-11	-	Introduction of uplink CLTD and 8C-HSDPA into 25.302	8C_HSDPA-Core, HSPA_UL_TxDiv-CL-Core	-	RP-111736	approved	company contribution to replace 8C HSDPA CR R2-116473 and UL CLTD CR R2-116474 in case both get approved; RP-111736 is a revision of RP-111622
25.304	0298	1	F	REL-9	R2-116369	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	TEI9, LTE-L23	NTT DOCOMO, INC.	RP-111710	approved	
25.304	0299	1	A	REL-10	R2-116370	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	TEI9, LTE-L23	NTT DOCOMO, INC.	RP-111710	approved	
25.304	0301	-	F	REL-9	R2-116410	Clarification to absolute priority based criteria	TEI9	Research In Motion UK Limited	RP-111712	approved	
25.304	0302	-	A	REL-10	R2-116411	Clarification to absolute priority based criteria	TEI9	Research In Motion UK Limited	RP-111712	approved	
25.306	0332	-	F	REL-10	R2-116427	Correction of capability table	TEI10	ZTE Corporation, Panasonic	RP-111715	approved	correcting aspect that was introduced in REL-8
25.306	0333	2	F	REL-10	R2-116482	Addition of the missing value ranges for 1.28Mbps TDD capabilities	TEI10	CATT	RP-111715	approved	
25.306	0334	-	B	REL-11	R2-116455	Introduction of 8C-HSDPA in 25.306	8C_HSDPA-Core	Ericsson, ST-Ericsson	RP-111717	approved	
25.306	0336	-	F	REL-10	R2-116443	Introduction of the frequency specific compressed mode	TEI10	Nokia Siemens Networks	RP-111715	approved	
25.306	0337	-	B	REL-11	R2-116453	Introduction of uplink CLTD in 25.306	HSPA_UL_TxDiv-CL-Core	Huawei, HiSilicon	RP-111718	approved	
25.306	0338	-	B	REL-11	R2-116449	Introduction of uplink OLTD in 25.306	HSPA_UL_TxDiv-OL-Core	Huawei, HiSilicon	RP-111719	approved	
25.306	0340	1	F	REL-7	R2-116441	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	RANimp-64QamDownlink, MIMO-L23	Qualcomm Incorporated, Renesas Mobile Europe Ltd.	RP-111705	approved	no cat.A CRs needed
25.308	0118	1	F	REL-10	R2-116434	Downlink related corrections in TS 25.308 for LCR TDD	TEI10	TD Tech	RP-111715	approved	
25.308	0119	-	B	REL-11	R2-116456	Introduction of 8C-HSDPA in 25.308	8C_HSDPA-Core	Ericsson, ST-Ericsson	RP-111717	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 215 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
25.319	0091	1	F	REL-8	R2-116345	Cleanup corrections for enhanced uplink operation with MAC-i	RANimp-UplinkL2dataRates	ZTE Corporation	RP-111708	approved	
25.319	0092	1	A	REL-9	R2-116346	Cleanup corrections for enhanced uplink operation with MAC-i	RANimp-UplinkL2dataRates	ZTE Corporation	RP-111708	approved	
25.319	0093	1	A	REL-10	R2-116347	Cleanup corrections for enhanced uplink operation with MAC-i	RANimp-UplinkL2dataRates	ZTE Corporation	RP-111708	approved	
25.319	0094	1	A	REL-11	R2-116348	Cleanup corrections for enhanced uplink operation with MAC-i	RANimp-UplinkL2dataRates	ZTE Corporation	RP-111708	approved	
25.319	0095	1	F	REL-10	R2-116446	Uplink related corrections in TS 25.319 for LCR TDD	TEI10	TD Tech	RP-111715	approved	
25.319	0096	-	B	REL-11	R2-116457	Introduction of 8C-HSDPA in 25.319	8C_HSDPA-Core	Ericsson, ST-Ericsson	RP-111717	approved	
25.319	0098	-	F	REL-11	R2-116452	Update of uplink CLTD stage-2	HSPA_UL_TxDiv-CL-Core	Huawei, HiSilicon	RP-111718	approved	
25.319	0099	1	F	REL-11	R2-116541	Update of uplink OLTD stage-2	HSPA_UL_TxDiv-OL-Core	Huawei, HiSilicon	RP-111719	approved	
25.319	0100	1	A	REL-11	R2-116447	Uplink related corrections in TS 25.319 for LCR TDD	TEI10	TD Tech	RP-111715	approved	
25.321	0743	-	F	REL-10	R2-115685	Correction on Multi-frequency HS-DSCH Transport Block Sizes for 1.28 Mcps TDD	TEI10	TD Tech	RP-111715	approved	
25.321	0744	-	F	REL-10	R2-115686	MC-HSUPA related HARQ operation in UE for LCR TDD	TDD_MC_HSUPA	TD Tech	RP-111713	approved	
25.321	0745	-	F	REL-10	R2-116423	E-AGCH ECSN for Multi-carrier HSUPA for LCR TDD	TDD_MC_HSUPA	TD Tech	RP-111713	approved	
25.321	0746	1	B	REL-11	R2-116475	Introduction of 8C-HSDPA in 25.321	8C_HSDPA-Core	Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd, InterDigital, Alcatel-Lucent, Qualcomm Incorporated, Nokia Siemens Networks	RP-111717	approved	
25.331	4806	-	F	REL-8	R2-115687	Correction on the measurement configuration validation for SFN reading	TEI8	Huawei, HiSilicon	RP-111708	approved	
25.331	4807	-	A	REL-9	R2-115688	Correction on the measurement configuration validation for SFN reading	TEI8	Huawei, HiSilicon	RP-111708	approved	
25.331	4808	-	A	REL-10	R2-115689	Correction on the measurement configuration validation for SFN reading	TEI8	Huawei, HiSilicon	RP-111708	approved	
25.331	4810	-	F	REL-8	R2-115691	Corrections of PS keys handling upon PS ISHO	LTE-L23	Renesas Mobile Europe Ltd.	RP-111706	approved	
25.331	4811	-	A	REL-9	R2-115692	Corrections of PS keys handling upon PS ISHO	LTE-L23	Renesas Mobile Europe Ltd.	RP-111706	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 216 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
25.331	4812	-	A	REL-10	R2-115693	Corrections of PS keys handling upon PS ISHO	LTE-L23	Renesas Mobile Europe Ltd.	RP-111706	approved	
25.331	4813	-	F	REL-10	R2-115694	Delete E-HICH, E-RGCH, E-AGCH information when E_DCH is stopped	TEI10, EDCH-L23	Ericsson, ST-Ericsson, Broadcom Corporation, Research In Motion UK Ltd, Alcatel-Lucent, Renesas Mobile Europe Ltd, Nokia Siemens Networks	RP-111702	approved	
25.331	4816	-	F	REL-4	R2-116415	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7	TEI4	Anritsu, CATT	RP-111701	approved	
25.331	4817	-	A	REL-5	R2-116416	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7	TEI4	Anritsu, CATT	RP-111701	approved	
25.331	4818	-	A	REL-6	R2-116417	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	TEI4	Anritsu, CATT	RP-111701	approved	
25.331	4819	-	A	REL-7	R2-116418	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	TEI4	Anritsu, CATT	RP-111701	approved	
25.331	4820	-	A	REL-8	R2-116419	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	TEI4	Anritsu, CATT	RP-111701	approved	
25.331	4821	-	A	REL-9	R2-116420	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	TEI4	Anritsu, CATT	RP-111701	approved	
25.331	4822	-	F	REL-10	R2-116421	Correction to Default Radio Configurations for TDD: number of TFCI coding bits	TEI10	Anritsu, CATT	RP-111701	approved	
25.331	4829	-	F	REL-10	R2-116364	Clarification of PSC range for CSG cells	EHNB-RAN2, TEI10	Nokia Corporation, Nokia Siemens Networks, Renesas Mobile Europe Ltd, Deutsche Telekom, ST-Ericsson, Ericsson, Qualcomm	RP-111711	approved	
25.331	4830	-	F	REL-10	R2-116426	Alignment of the text description for SIB 18 for UEs in idle mode and connected mode	TEI10	Broadcom Corporation	RP-111715	approved	
25.331	4831	1	B	REL-11	R2-116546	Introduction of 8C-HSDPA in 25.331	8C_HSDPA-Core	Ericsson, ST-Ericsson	RP-111717	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 217 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
25.331	4833	1	C	REL-10	R2-116481	Improved Deferred Measurement Control Reading	TEI10	Ericsson, ST-Ericsson, Nvidia	RP-111715	approved	
25.331	4835	-	B	REL-11	R2-116478	Preparation of REL-11 ASN.1 critical extensions	TEI11	Ericsson, ST-Ericsson	RP-111720	withdrawn	Backup solution to introduce "REL-11 ASN.1 critical extensions" in case non of the three 25.331 REL-11 CRs R2-116543 (RP-111719), R2-116544 (RP-111718), R2-116546 (RP-111717) get approved at RAN #54. Finally CR was not needed
25.331	4836	-	F	REL-10	R2-116428	25.331 trivial corrections	TEI10	Ericsson	RP-111715	approved	
25.331	4846	-	F	REL-10	R2-116444	Introduction of the frequency specific compressed mode	TEI10	Nokia Siemens Networks	RP-111715	approved	
25.331	4847	1	B	REL-11	R2-116544	Introduction of uplink CLTD in 25.331	HSPA_UL_TxDiv-CL-Core	Huawei, HiSilicon	RP-111718	approved	
25.331	4848	1	B	REL-11	R2-116543	Introduction of uplink OLTD in 25.331	HSPA_UL_TxDiv-OL-Core	Huawei, HiSilicon	RP-111719	approved	
25.331	4861	1	F	REL-7	R2-116471	Clarification to the handling of HS-DSCH TB size table	RANimp-L2DataRates	Renesas Mobile Europe Ltd	RP-111703	approved	
25.331	4862	2	A	REL-8	R2-116477	Clarification to the handling of HS-DSCH TB size table	RANimp-L2DataRates	Renesas Mobile Europe Ltd	RP-111703	approved	
25.331	4863	1	F	REL-9	R2-116469	Clarification to the handling of HS-DSCH TB size table	RANimp-L2DataRates, TEI9	Renesas Mobile Europe Ltd	RP-111703	approved	
25.331	4864	1	A	REL-10	R2-116470	Clarification to the handling of HS-DSCH TB size table	RANimp-L2DataRates, TEI9	Renesas Mobile Europe Ltd	RP-111703	approved	
25.331	4865	1	F	REL-7	R2-116442	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	RANimp-64QamDownlink, MIMO-L23	Qualcomm Incorporated, Renesas Mobile Europe Ltd.	RP-111705	approved	no cat.A CRs needed
25.331	4870	1	F	REL-7	R2-116437	Correction of BCCH mapping on HS-DSCH	RANimp-EnhState	Qualcomm Incorporated	RP-111704	approved	
25.331	4871	1	A	REL-8	R2-116438	Correction of BCCH mapping on HS-DSCH	RANimp-EnhState	Qualcomm Incorporated	RP-111704	approved	
25.331	4872	1	A	REL-9	R2-116439	Correction of BCCH mapping on HS-DSCH	RANimp-EnhState	Qualcomm Incorporated	RP-111704	approved	
25.331	4873	1	A	REL-10	R2-116440	Correction of BCCH mapping on HS-DSCH	RANimp-EnhState	Qualcomm Incorporated	RP-111704	approved	
25.331	4874	2	F	REL-10	R2-116480	Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs	4C_HSDPA	Qualcomm Incorporated	RP-111713	approved	
25.331	4884	1	F	REL-10	R2-116468	Correction about the presence of Security Revert Status Indicator in CELL UPDATE Message	TEI10	Nokia Siemens Networks	RP-111715	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 218 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
25.331	4886	1	B	REL-10	R2-116542	Support early implementation of uplink OLTD in Rel-10	HSPA_UL_TxDiv-OL-Core	Huawei, HiSilicon	RP-111719	approved	
34.109	0050	-	F	REL-10	R2-116432	Corrections to UE test loop mode 4	TEI10	Ericsson, ST-Ericsson, Telecom Italia, Orange, Deutsche Telekom	RP-111715	approved	
36.300	0411	-	F	REL-10	R2-116528	Correction on RN security	LTE_Relay-Core, TEI10	RAN3	RP-111714	approved	
36.300	0412	-	F	REL-9	R2-116529	Correction of Emergency call	TEI9	RAN3	RP-111647	approved	no REL-10 cat.A CR needed as already fixed there
36.300	0413	-	F	REL-10	R2-116530	HeNB Architecture Clarification	TEI10, EHNB-RAN3	RAN3	RP-111711	approved	
36.300	0414	1	F	REL-10	-	Correction of Support for RACH optimization	SONenh_LTE-Core	-	RP-111604	approved	company contribution since original RAN3 CR R3-112731 = R2-116531 to RAN2 TS 36.300 was based on wrong spec version
36.300	0415	-	F	REL-10	R2-116532	Correction of inbound mobility	TEI10, EHNB-RAN3	RAN3	RP-111711	approved	
36.300	0416	-	F	REL-10	R2-116533	Correction of MBMS Resumption Function	MBMS_LTE_enh-Core	RAN3	RP-111714	approved	
36.300	0417	1	F	REL-11	-	MME behavior in case of broken SCTP connection	TEI11	-	RP-111644	approved	company contribution; note: This CR was developed in RAN3 as R3-112760 and it did not pass email agreement in RAN2 (R2-116534) as wrong spec version was indicated on CR cover
36.300	0418	-	F	REL-10	R2-116535	Routing of MME Direct Information Transfer message	TEI10, EHNB-RAN3	RAN3	RP-111711	approved	
36.300	0419	-	F	REL-10	R2-116536	Correction of support for Mobility Robustness Optimisation	SONenh_LTE-Core	RAN3	RP-111714	approved	
36.300	0420	-	F	REL-10	R2-116537	Clarification of MRO Unnecessary Handover	SONenh_LTE-Core	RAN3	RP-111714	approved	MRO = Mobility Robustness Optimization
36.300	0421	-	F	REL-10	R2-116538	Correction of the MRO stage-2 description	TEI10, LTE-L23	RAN3	RP-111716	approved	Mobility Robustness Optimization
36.300	0422	-	C	REL-11	R2-116539	Addition of M3 Setup	TEI11, MBMS_LTE	RAN3	RP-111721	approved	
36.300	0423	-	C	REL-11	R2-116540	Correction of MCCH Update Synchronization mechanism	TEI11, MBMS_LTE	RAN3	RP-111721	approved	
36.302	0029	-	F	REL-10	R2-115698	Corrections to channel model	TEI10, LTE-L23	Huawei, HiSilicon	RP-111716	approved	
36.304	0166	1	F	REL-9	R2-116367	Clarification of inter-RAT cell reselection enhancements	TEI9, LTE-L23	NTT DOCOMO, INC.	RP-111710	approved	
36.304	0167	1	A	REL-10	R2-116368	Clarification of inter-RAT cell reselection enhancements	TEI9, LTE-L23	NTT DOCOMO, INC.	RP-111710	approved	
36.306	0070	1	F	REL-10	R2-116379	Corrections to enhancedDualLayerTDD	TEI10, LTE-L23	CATT	RP-111716	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 219 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
36.306	0071	-	F	REL-9	R2-115700	Optionality of SR Masking	TEI9, LTE-L23	Qualcomm Incorporated, Nokia Siemens Networks, Nokia Corporation	RP-111710	approved	
36.306	0072	-	A	REL-10	R2-115701	Optionality of SR Masking	TEI9, LTE-L23	Qualcomm Incorporated, Nokia Siemens Networks, Nokia Corporation	RP-111710	approved	
36.306	0073	1	F	REL-9	R2-116381	Optionality of UE Rx-Tx time difference report	LCS_LTE	Panasonic	RP-111709	approved	
36.306	0074	1	A	REL-10	R2-116382	Optionality of UE Rx-Tx time difference report	LCS_LTE	Panasonic	RP-111709	approved	
36.306	0077	-	F	REL-10	R2-116398	Correction to the number of soft channel bits	LTE_CA-Core, LTE-L23	Nokia Siemens Networks, Nokia Corporation, NTT DOCOMO, LG Electronics Inc., Samsung, Fujitsu	RP-111714	approved	
36.321	0514	-	F	REL-8	R2-115704	CSI/SRS reporting at DRX state transitions	LTE-L23	Panasonic	RP-111707	approved	
36.321	0516	1	F	REL-10	R2-116374	UE soft buffer handling in MAC	LTE_CA-Core	Ericsson	RP-111714	approved	
36.321	0521	-	A	REL-9	R2-116378	CSI/SRS reporting at DRX state transitions	LTE-L23	Panasonic	RP-111707	approved	
36.321	0523	-	F	REL-10	R2-116388	Correction on determining SPS occasions	TEI10, LTE-L23	Samsung, Ericsson, LG Electronics Inc., Nokia Siemens Networks, Qualcomm	RP-111716	approved	
36.321	0526	-	A	REL-10	R2-116383	CSI/SRS reporting at DRX state transitions	LTE-L23	Panasonic	RP-111707	revised	revised in company contribution RP-111605
36.321	0526	1	A	REL-10	-	CSI/SRS reporting at DRX state transitions	LTE-L23	-	RP-111605	approved	revision of REL-10 CR R2-116383 of RP-111707; actually R2-116383 of RP-111707 is replaced by 2 CRs: a real cat.A CR RP-111605 and a cat.F CR RP-111606
36.321	0527	-	F	REL-10	-	CSI/SRS reporting at unexpected Active Time stopping	TEI10, LTE-L23	-	RP-111606	approved	REL-10 CR R2-116383 of RP-111707 was replaced by 2 CRs: a real cat.A CR RP-111605 and a cat.F CR RP-111606
36.331	0812	1	F	REL-10	R2-116483	Clarification of PCI range for CSG cells	EHNB-RAN2, TEI10	Qualcomm Incorporated	RP-111711	approved	
36.331	0813	-	F	REL-10	R2-115708	Clarifications to Default Radio Configurations	TEI10, LTE-L23	Potevio	RP-111716	approved	
36.331	0814	1	F	REL-10	R2-116380	Corrections to enhancedDualLayerTDD	TEI10, LTE-L23	CATT	RP-111716	approved	
36.331	0815	-	F	REL-10	R2-115710	Miscellaneous small corrections	TEI10, LTE-L23	Samsung	RP-111716	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 220 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
36.331	0816	1	F	REL-10	R2-116513	Correction on notation of SRS transmission comb	TEI10, LTE-L23	ZTE Corporation	RP-111716	approved	
36.331	0823	1	A	REL-10	R2-116523	36.331 CR SPS reconfiguration	LTE-L23	Huawei, HiSilicon	RP-111706	approved	
36.331	0824	-	F	REL-8	R2-116389	Clarification on SPS intervals	LTE-L23	Samsung, Ericsson, Huawei, HiSilicon, LG Electronics Inc., Nokia Siemens Networks, Qualcomm, ST-Ericsson, ZTE	RP-111706	approved	
36.331	0825	-	A	REL-9	R2-116390	Clarification on SPS intervals	LTE-L23	Samsung, Ericsson, Huawei, HiSilicon, LG Electronics Inc., Nokia Siemens Networks, Qualcomm, ST-Ericsson, ZTE	RP-111706	approved	no REL-10 cat.A CR needed (see 36.321 CR R2-116388 in RP-111716 instead)
36.331	0827	2	F	REL-10	R2-116521	Clarification of list sizes in measurement configuration stored by UE	TEI10, LTE-L23	Ericsson, ST-Ericsson	RP-111716	approved	
36.331	0833	-	F	REL-8	R2-116384	Clarification of the event B1 and ANR related FGI bits	LTE-L23	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE	RP-111706	approved	
36.331	0834	-	A	REL-9	R2-116385	Clarification of the event B1 and ANR related FGI bits	LTE-L23	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE	RP-111706	approved	
36.331	0835	-	A	REL-10	R2-116386	Clarification of the event B1 and ANR related FGI bits	LTE-L23	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE	RP-111706	approved	
36.331	0838	-	F	REL-8	R2-116395	Clarification on parallel message transmission upon connection re-establishment	LTE-L23	Samsung	RP-111706	approved	
36.331	0840	1	F	REL-10	R2-116511	Clarification on MBSFN and measurement resource restrictions	eICIC_LTE-Core	Ericsson, ST-Ericsson	RP-111714	approved	
36.331	0842	-	F	REL-8	R2-116392	36.331 CR SPS reconfiguration	LTE-L23	Huawei, HiSilicon	RP-111706	approved	
36.331	0843	-	A	REL-9	R2-116393	36.331 CR SPS reconfiguration	LTE-L23	Huawei, HiSilicon	RP-111706	approved	
36.331	0844	-	A	REL-9	R2-116550	Clarification on parallel message transmission upon connection re-establishment	LTE-L23	Samsung	RP-111706	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 221 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #53	RAN status	Remarks
36.331	0845	-	A	REL-10	R2-116551	Clarification on parallel message transmission upon connection re-establishment	LTE-L23	Samsung	RP-111706	approved	
36.331	0846	-	F	REL-9	-	Rel-9 CR to 36.331 for Mandating setting FGI bit 27 to "1"	TEI9, LTE-L23	-	RP-111632	revised	company contribution that was revised in RP-111731
36.331	0846	1	F	REL-9	-	Rel-9 CR to 36.331 for Mandating setting FGI bit 27 to "1"	TEI9, LTE-L23	-	RP-111731	revised	company contribution that was revised in RP-111738
36.331	0846	2	F	REL-9	-	Rel-9 CR to 36.331 for Mandating setting FGI bit 27 to "1"	TEI9, LTE-L23	-	RP-111738	withdrawn	company contributions that was finally withdrawn, instead LS RP-111769 was sent
36.331	0847	-	A	REL-10	-	Rel-9 CR to 36.331 for Mandating setting FGI bit 27 to "1"	TEI9, LTE-L23	-	RP-111633	revised	company contribution that was revised in RP-111732
36.331	0847	1	A	REL-10	-	Rel-9 CR to 36.331 for Mandating setting FGI bit 27 to "1"	TEI9, LTE-L23	-	RP-111732	revised	company contribution that was revised in RP-111739
36.331	0847	2	A	REL-10	-	Rel-9 CR to 36.331 for Mandating setting FGI bit 27 to "1"	TEI9, LTE-L23	-	RP-111739	withdrawn	company contributions that was finally withdrawn, instead LS RP-111769 was sent
36.355	0065	-	F	REL-9	R2-115711	Clarification of packed encoding rules of LPP	LCS_LTE	Qualcomm Incorporated	RP-111709	approved	
36.355	0066	-	A	REL-10	R2-115712	Clarification of packed encoding rules of LPP	LCS_LTE	Qualcomm Incorporated	RP-111709	approved	
36.355	0067	-	F	REL-9	R2-116399	Clarification of first bit in BIT STRING definitions	LCS_LTE	Qualcomm Incorporated	RP-111709	approved	
36.355	0068	-	A	REL-10	R2-116500	Clarification of first bit in BIT STRING definitions	LCS_LTE	Qualcomm Incorporated	RP-111709	approved	
36.816	0009	-	F	REL-11	R2-115713	CR to 36.816 on DRX based TDM solution	FS_SPIA_IDC	CMCC, CATT	RP-111722	approved	
37.320	0038	-	F	REL-10	R2-115714	CR to 37.320 on Immediate MDT handling at handover	MDT_UMTSLTE-Core	Nokia Siemens Networks	RP-111714	approved	
37.320	0039	-	F	REL-10	R2-116373	Small Corrections to 37.320	MDT_UMTSLTE-Core	CATT	RP-111714	approved	

Rows highlighted in yellow indicate company contributions treated at RAN #54 for which no Tdoc was submitted to RAN2.

The table above has 126 entries (rows excl. header row):

- 113 CRs agreed by RAN2 of which then 110 CRs were approved by RAN #54, 2 were revised in company contributions, 1 was withdrawn at RAN #54.
- 1 CR technically endorsed by RAN2 #76 (R2-116478) which was finally withdrawn at RAN #54.
- 12 company contributions (highlighted in yellow) of which then 5 were approved, 5 revised and 2 were withdrawn at RAN #54.

IPR2025-00720, OnePlus Ex. 1004
Page 222 of 700

So finally: Approved RAN2 CRs after RAN #54: 115.

spec	REL-4	REL-5	REL-6	REL-7	REL-8	REL-9	REL-10	REL-11	CRs	specs	rapporteur	email
25.302	0	0	0	0	0	0	0	1	**1**	**1**	Nicola Puddle (Alcatel-Lucent)	nicola.puddle@alcatel-lucent.com
25.304	0	0	0	0	0	2	2	0	**4**	**2**	Brian Martin (Renesas)	brian.martin@renesasmobile.com
25.306	0	0	0	1	0	0	3	3	**7**	**3**	Anders Berggren (ST Ericsson)	anders.y.berggren@stericsson.com
25.308	0	0	0	0	0	0	1	1	**2**	**2**	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	1	1	2	5	**9**	**4**	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.321	0	0	0	0	0	0	3	1	**4**	**2**	He Jing (NSN)	he.jing@nsn.com
25.331	1	1	1	4	5	5	14	3X	**34**	**8**	Paulson Angelo Vijay Silveris *1 (Ericsson) ASN.1: Brian Martin (Renesas)	paulson.angelo.vijay.silveris@ERICSSON.COM brian.martin@renesasmobile.com
34.109	0	0	0	0	0	0	1	0	**1**	**1**	Anders Berggren (ST Ericsson)	anders.y.berggren@stericsson.com
36.300	0	0	0	0	0	1	9.	3	**13**	**3**	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.302	0	0	0	0	0	0	1	0	**1**	**1**	Seau Sian Lim (Alcatel-Lucent) *3	seaulim@alcatel-lucent.com
36.304	0	0	0	0	0	1	1	0	**2**	**2**	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.306	0	0	0	0	0	2	4	0	**6**	**2**	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.321	0	0	0	0	1	1	4	0	**6**	**3**	Magnus Stattin (Ericsson) *2	magnus.stattin@ericsson.com
36.331	0	0	0	0	4	4	10	0	**18**	**3**	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	2	2	0	**4**	**2**	Masato Kitazoe (Qualcomm)	ntenny@qualcomm.com
36.816	0	0	0	0	0	0	0	1	**1**	**1**	Zhenping Hu (CMCC)	huzhenping@chinamobile.com
37.320	0	0	0	0	0	0	2	0	**2**	**1**	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
UTRA	1	1	1	5	6	8	26	14	**62**	**23**		
LTE	0	0	0	0	5	11	33	4	**53**	**18**		
total	1	1	1	5	11	19	59	18	**115**	**41**		

IPR2025-00720, OnePlus Ex. 1004
Page 223 of 700

Annex F:
RAN WG2 meeting #76 post processing

Email discussions/approvals

Rapporteur companies are requested to kick-off email discussions as soon as possible via the RAN2 email reflector. Important: In the beginning of the subject of each email the corresponding identifier [...] of the email discussion has to be used in order to allow sorting of the different email discussions.

RAN2 chairman: Note that in order to meet the deadline for an email discussion, documents should be provided with sufficient time to review the final version.
I.e. an “almost final version” should be available 24 hours before the deadline.

Up to Thursday, Nov. 24, 2011, midnight Pacific time, i.e. Fri Nov 25, 2011 9am CET:

[76#00] - UMTS: Default radio configurations in CELL_FACH [NSN]
- Check that the CRs in R2-116407, R2-116408, R2-116409 correctly implement the way forward agreed in RAN2 previously.

=> Intended outcome: Agreed set of CRs to be provided to RAN-54
conclusion: Email discussion was kicked off by Guillaume Decarreau (NSN) on 21.11.2011. R2-116407, R2-116408, R2-116409 are not agreed but proponents can further discuss updated CRs under [76#00] and may consider company contributions for RAN #54. Finally no company contributions were provided to RAN #54 for this.

[76#01] - UMTS: Uplink OLTD CRs [Huawei]
- Discuss CRs in R2-116448, R2-116451 and R2-116450

=> Intended outcome: Agreed set of CRs to be provided to RAN-54
conclusion: Email discussion was kicked off by Jeff Gao (Huawei) on 22.11.2011.
R2-116541 Update of uplink OLTD stage-2 Huawei, HiSilicon CR 25.319 0099 1 F REL-11 HSPA_UL_TxDiv-OL-Core
R2-116542 Support early implementation of uplink OLTD in Rel-10 Huawei, HiSilicon CR 25.331 4886 1 B REL-10 HSPA_UL_TxDiv-OL-Core
R2-116543 Introduction of uplink OLTD in 25.331 Huawei, HiSilicon CR 25.331 4848 1 B REL-11 HSPA_UL_TxDiv-OL-Core
CRs R2-116541, R2-116542 and R2-116543 were agreed
(but note: No consensus about the text in [ ] in R2-116543, i.e. further update possible).

[76#02] - UMTS: Uplink CLTD CR [Huawei]
- Discuss CR in R2-116454

=> Intended outcome: Agreed CR to be provided to RAN-54
conclusion: Email discussion was kicked off by Jeff Gao (Huawei) on 22.11.2011.
R2-116544 Introduction of uplink CLTD in 25.331 Huawei, HiSilicon CR 25.331 4847 1 B email discussion [76#02] REL-11 HSPA_UL_TxDiv-CL-Core
CR R2-116544 was agreed
(but note: No consensus about the text in [ ] in R2-116544, i.e. further update possible).

[76#03] - UMTS: 8C-HSDPA [Ericsson]
- Discuss CR in R2-116459

=> Intended outcome: Agreed CR to be provided to RAN-54
conclusion: Email discussion was kicked off by Jose Luis Pradas (Ericsson) on 21.11.2011.
R2-116546 Introduction of 8C-HSDPA in 25.331 Ericsson, ST-Ericsson CR 25.331 4831 1 B REL-11 8C_HSDPA-Core
CR R2-116546 was agreed on 25.11.2011.

[76#04] - UMTS: Inconsistent HARQ memory partitioning for high-peak-rate UEs [QC]

- Discuss CR in R2-116412
- An agreed CR can be provided in R2-116479 CR 4874 R1

=> Intended outcome: Agreed CR to be provided to RAN-54

conclusion: Email discussion was kicked off by Yongshen Shi (Qualcomm) on 21.11.2011.

R2-116480 Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs Qualcomm Incorporated CR 25.331 4874 2 F REL-10 4C_HSDPA

CR R2-116480 was agreed on 25.11.2011.

[76#05] - UMTS: Improved Deferred Measurement Control Reading [Ericsson]

- Discuss CR in R2-116413

=> Intended outcome: Agreed CR to be provided to RAN-54

conclusion: Email discussion was kicked off by Paulson Angelo Vijay Silveris (Ericsson) on 22.11.2011.

R2-116481 Improved Deferred Measurement Control Reading Ericsson, ST-Ericsson, Nvidia CR 25.331 4833 1 C REL-10 TEI10

CR R2-116481 was agreed on 25.11.2011.

[76#06] - Joint: MDT running stage-2 CR [MediaTek]

- Based on version in R2-116518
- CR will not be sent to RAN-54

=> Intended outcome: Agree a running stage-2 CR capturing agreements on MDT made so far

conclusion: Email discussion was kicked off by Johan Johansson (MediaTek) on 21.11.2011.

R2-116547 Introduction of MDT enhancementsMediaTek CR 37.320 - - B REL-11 eMDT_UMTSLTE-Core

CR R2-116547 was endorsed on 26.11.2011 but the CR will not be provided to RAN #54.

[76#07] - LTE: CA running stage-2 CR [Nokia]

- Capture the agreements on CA from this meeting in the running stage-2 CR
- CR will not be sent to RAN-54

=> Intended outcome: Endorsed version provided in R2-116503

conclusion: Email discussion was kicked off by Jarkko Koskela (Nokia) on 22.11.2011.

R2-116503 36.300 CR introducing LTE Carrier Aggregation Enhancements Nokia Corporation CR 36.300 - - B REL-11 LTE_CA_enh-Core

CR R2-116503 was endorsed on 25.11.2011 but the CR will not be provided to RAN #54.

[76#08] - LTE: EDDA updated TR [RIM]

- Update the TR with the agreements from this meeting.
- Update can be provided in R2-116504 TR36.822 v0.1.1

=> Intended outcome: Updated TR

conclusion: Email discussion was kicked off by Nicholas Anderson (RIM) on 24.11.2011.
R2-116504 TR 36.822 v0.1.1 was provided on 29.11.2011.
The agreed TR 36.822 v0.2.0 was provided in R2-116559 on 30.11.2011.

[76#09] - LTE: MBMS running stage-2 36.300 CR [Huawei]

- Update running CR with agreements from this meeting.
- Will not be submitted to RAN-54

=> Intended outcome: Endorsed version provided in R2-116508

conclusion: Email discussion was kicked off by David Lecompte (Huawei) on 21.11.2011.

R2-116508 Stage 2 agreements on service continuity and location information for MBMS for LTE Huawei CR 36.300 - - B REL-11 MBMS_LTE_SC-Core

CR R2-116508 was endorsed on 27.11.2011 but the CR will not be provided to RAN #54.

[76#10] - LTE: IDC running stage-2 CR [CMCC]

- Capture agreements from this meeting in running stage-2 CR (CMCC).
- Will not be submitted to RAN-54

=> Intended outcome: Endorsed version provided in R2-116510

conclusion: Email discussion was kicked off by Zhenping Hu (CMCC) on 22.11.2011.

IPR2025-00720, OnePlus Ex. 1004

R2-116510 36.300 CR introducing Signalling and procedure for interference avoidance for in-device coexistence (status after RAN2 #76) CMCC CR 36.300 - - B REL-11 SPIA_IDC_LTE-Core
CR R2-116510 was endorsed on 26.11.2011 but the CR will not be provided to RAN #54.

[76#11] - LTE: HetNet Mobility TR update [ALU]
- Capture agreements from this meeting and the updates proposed in R2-116150 in the TR.
- Will not be submitted to RAN-54

=> Intended outcome: An update provided in R2-116517 v0.3.1
conclusion: Email discussion was kicked off by Sudeep Palat (Alcatel-Lucent) on 21.11.2011.
R2-116545 TR 36.839 v0.4.0 on HetNet mobility enhancements Alcatel-Lucent TR 36.839 REL-11 FS_HetNet_eMOB_LTE
TR 36.839 v0.4.0 was agreed on 29.11.2011 in R2-116545.

[76#12] - Joint: Email approval of Reply LS on length of security in PWS [RIM]
- Try to include some figures related to Question B. If no more accurate figures can be found the LS will be sent with the change listed above (add “by SA3”)

=> Intended outcome: Approved LS provided in R2-116558
conclusion: Email discussion was kicked off by Takashi Suzuki (RIM) on 21.11.2011.
R2-116558 Reply LS to S3-111225 = R2-115677 on length of security in PWS (to: SA3; cc: CT1, SA1, SA2, GERAN2; contact: RIM) RAN2 LSout REL-11 PWS_Sec
LSout R2-116558 was agreed on 25.11.2011.

Up to Thursday, Dec. 15, 2011, midnight Pacific time, i.e. Fri Dec. 16, 2011 9am CET:

[76#20] - LTE: HetNet Mobility calibration simulations [ALU]
- Discuss and collect final calibration simulation results
- Results can be included in TR 36.839 (ALU)

=> Intended outcome: Updated TR to be provided and agreed at next meeting
conclusion: Email discussion was kicked off by Jialin Zou (Alcatel-Lucent) on 29.11.2011.
Email discussion report is provided to RAN2 #77 in R2-120797.

Up to Monday, Jan. 30, 2011, midnight Pacific time, i.e. Tuesday Jan. 31, 2011 9am CET:

[76#30] - UMTS: H-RNTI handling in Cell Update procedure [QC]
- Discuss the problem raised in R2-115849

=> Intended outcome: progress on this issue and possibly provide CRs (to be requested via ADN tool).
conclusion: Email discussion was kicked off by Yongshen Shi (Qualcomm) on 06.01.2012.
25.331 REL-8/9/10/11 CRs are provided to RAN2 #77 in R2-120669/670/671/672, respectively.

[76#31] - Joint: EAB Information Update Procedure [Huawei]
- Details of the information update procedure for EAB.
- Can try to discuss impact of a new SIB or an existing SIB.

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Jeff Gao (Huawei) on 14.12.2011.
Email discussion report is provided to RAN2 #77 in R2-120518.

[76#32] - Joint: EAB Running stage-3 CRs [Huawei]
- Attempt to capture agreements in running stage-3 CR.

=> Intended outcome: Initial running stage-3 CRs
conclusion: Email discussion was kicked off by Jeff Gao (Huawei) on 29.12.2011.
25.304/25.331/36.304/36.331 REL-11 CRs are provided to RAN2 #77 in R2-120514/515/516/517, respecitively.

[76#33] – Joint: MDT Scheduled IP-Throughput measurements [MediaTek]

IPR2025-00720, OnePlus Ex. 1004
Page 226 of 700

- Discuss “scheduled IP-Throughput” measurement If and how it need to be modified to be used for MDT, e.g. elaborating on the usage of the measurements and what conclusions that can be drawn from measurement results.
- In continuation of the agreement made in this meeting

=> Intended outcome: Email discussion report

conclusion: Email discussion was kicked off by Johan Johansson (MediaTek) on 14.12.2011.
Email discussion report is provided to RAN2 #77 in R2-120625.

[76#34] – Joint: MDT location information enhancements [MediaTek]

- Continue discussion the two main tracks, i.e., requesting MDT for terminals having location information available anyway as well as possibility to request UE to obtain location information for the purpose of MDT

=> Intended outcome: Email discussion report

conclusion: Email discussion was kicked off by Johan Johansson (MediaTek) on 08.12.2011.
Email discussion report is provided to RAN2 #77 in R2-120634.

[76#35] - LTE: UE category in presence of MCH reception [QC]

- Related to CR in R2-115923

=> Intended outcome: Updated CR to next meeting if considered needed

conclusion: Email discussion was kicked off by Masato Kitazoe (Qualcomm) on 30.11.2011.
Email discussion report is provided to RAN2 #77 in R2-120132.

[76#36] - LTE: Handling of FDD/TDD capabilities [QC]

- Discuss how to realize handling of FDD/TDD capabilities.
- This email discussion will only be kicked-off after the RAN-54 if RAN agrees that a solution is needed.
- See LS to RAN in R2-116557.
- Note that solutions other than those listed in the LS may be discussed

=> Intended outcome: Email discussion report and CRs if considered needed

conclusion: Email discussion was kicked off by Aziz Gholmieh (Qualcomm) on 22.12.2011.
Email discussion report is provided to RAN2 #77 in R2-120293.

[76#37] - LTE: EDDA discussion on RRC Signalling and DRX efficiency [RIM]

- Will have an email discussion until next meeting to try to agree on which evaluations on RRC Signalling and DRX to include in the TR.

=> Intended outcome: Agreed update of the TR

conclusion: Email discussion was kicked off by Nicolas Anderson (RIM) on 06.01.2012.
TP to TR 36.822 is provided to RAN2 #77 in R2-120805.

[76#38] - LTE: MBMS Assistant Information [Huawei]

- Discuss how to use the SAI (what to include in SIB and for which purpose…)

=> Intended outcome: Email discussion report

conclusion: Email discussion was kicked off by David Lecompte (Huawei) on 01.01.2012.
Email discussion report is provided to RAN2 #77 in R2-120513.

[76#39] - LTE: MBMS Congestion Handling [Nokia]

- Discuss congestion handling for MBMS service continuity. Focus on the two approaches outlined in this meeting

=> Intended outcome: Email discussion report

conclusion: Email discussion was kicked off by Jarkko Koskela (Nokia) on 15.12.2011.
Email discussion report is provided to RAN2 #77 in R2-120109.

[76#40] - LTE: IDC Trigger [MediaTek]

- How can the UE evaluate the IDC interference level from and to ISM (measurement and/or internal assessment)?
- When does the UE trigger an IDC indication?
- Does the network need to know/control the threshold? Or can the network trust the assessment of the UE?
- Should the UE indicate the level (share of affected subframes and/or interference level) of interference problem or just that there is a problem?

- Email discussion should attempt to align terminology (usable/unusable frequency,…).

=> Intended outcome: Email discussion report

conclusion: Email discussion was kicked off by I-Kang Fu (MediaTek) on 16.12.2011. Email discussion report is provided to RAN2 #77 in R2-120226.

CRs from other WGs to be agreed/reviewed by RAN2 before RAN #54:

The following 13 RAN3 CRs to RAN2 TS 36.300 were provided by MCC (on 24.11.2011) for review until Fri 25.11.2011 2pm CET:

- R2-116528 Correction on RN security RAN3 CR 36.300 0411 - F contact: Huawei REL-10 LTE_Relay-Core, TEI10 R3-112726
  CR is agreed
- R2-116529 Correction of Emergency call RAN3 CR 36.300 0412 - F contact: Alcatel-LucentREL-9TEI9 R3-112729
  no REL-10 cat.A CR needed as already fixed there;
  CR is agreed
- R2-116530 HeNB Architecture Clarification RAN3 CR 36.300 0413 - F contact: Ericsson REL-10 TEI10, EHNB-RAN3 R3-112730
  CR is agreed
- R2-116531 Correction of Support for RACH optimization RAN3 CR 36.300 0414 - F contact: Qualcomm Incorporated REL-10 SONenh_LTE-Core R3-112731
  CR is not agreed as based on wrong version of the specification.
  (note: Finally company contribution RP-111604 was approved at RAN #54).
- R2-116532 Correction of inbound mobility RAN3 CR 36.300 0415 - F contact: Alcatel-LucentREL-10 TEI10, EHNB-RAN3 R3-112748
  CR is agreed
- R2-116533 Correction of MBMS Resumption Function RAN3 CR 36.300 0416 - F contact: Alcatel-Lucent REL-10 MBMS_LTE_enh-Core R3-112749
  CR is agreed
- R2-116534 MME behavior in case of broken SCTP connection RAN3 CR 36.300 0417 - F contact: Vodafone REL-11 TEI11 R3-112760
  CR is not agreed as based on wrong version of the specification.
  (note: Finally company contribution RP-111644 was approved at RAN #54).
- R2-116535 Routing of MME Direct Information Transfer message RAN3 CR 36.300 0418 - F contact: NEC REL-10 TEI10, EHNB-RAN3 R3-113086
  CR is agreed
- R2-116536 Correction of support for Mobility Robustness Optimisation RAN3 CR 36.300 0419 - F contact: CMCC REL-10 SONenh_LTE-Core R3-113090
  CR is agreed
- R2-116537 Clarification of MRO Unnecessary Handover RAN3 CR 36.300 0420 - F contact: Alcatel-Lucent REL-10 SONenh_LTE-Core R3-113107
  MRO = Mobility Robustness Optimization
  CR is agreed
- R2-116538 Correction of the MRO stage-2 description RAN3 CR 36.300 0421 - F contact: NSN REL-10 TEI10, LTE-L23R3-113113
  Mobility Robustness Optimization
  CR is agreed
- R2-116539 Addition of M3 Setup RAN3 CR 36.300 0422 - C contact: Alcatel-Lucent REL-11 TEI11, MBMS_LTE R3-113120
  CR is agreed
- R2-116540 Correction of MCCH Update Synchronization mechanism RAN3 CR 36.300 0423 - C contact: Alcatel-Lucent REL-11 TEI11 R3-113121
  CR is agreed

Preparation of status reports for SIs and WIs under RAN2 leadership for RAN #53:

Rapporteurs were asked to make draft status reports available for review on the RAN2 reflector (without Tdoc number) asap after RAN2 #76, below the results of RAN #54 are summarized (including new WIs/SIs):
Note: Below percentage complete/target completion date/status report are listed.

IPR2025-00720, OnePlus Ex. 1004

- REL-11 WI Core part: Network-Based Positioning Support for LTE, rapporteur: Terri Brooks (TruePosition)
  acronym: LCS_LTE-NBPS, WID: RP-090354 revised in RP-100135 at RAN #47 and revised in RP-101446 at RAN #50
  history: RAN #43: New: 0%/Dec. 09 (RAN #46)/- WI started in REL-9
  RAN #44: 5%/Dec. 09/RP-090402
  RAN #45: 25%/Dec. 09/RP-090700
  RAN #46: 30%/March 10/RP-091043 exception request sheet: RP-091391
  RAN #47: 30%/Dec. 10/RP-100032 WI moved to REL-10
  RAN #48: 30%/Dec. 10/RP-100459
  RAN #49: 30%/March 11/RP-100769
  RAN #50: 50%/Dec. 11/RP-101102 WI moved to REL-11
  RAN #51: 50%/Dec. 11/RP-110092
  RAN #52: 55%/Dec.11/RP-110563
  RAN #53: 70%/March 12/RP-111009
  now: RAN #54: 75%/March 12/RP-111481

- REL-11 WI Core part: Service continuity for MBMS for LTE, rapporteur: Derek Richards (Huawei)
  acronym: MBMS_LTE_SC-Core, WID: RP-100690 revised in RP-110452 at RAN #51 and revised in RP-111374 at RAN #53
  history: RAN #48: New: 0%/June 11 (RAN #52)/- WI started in REL-10 (WI on hold until Dec.10)
  RAN #49: 0%/June 11/RP-100792 (WI on hold until Dec.10)
  RAN #50: 0%/June 11/RP-101123 (WI on hold until March 11)
  RAN #51: 0%/March 12/RP-110084 WI moved to REL-11
  RAN #52: 5%/March 12/RP-110769
  RAN #53: 20%/March 12/RP-111011
  now: RAN #54: 50%/March 12/RP-111483

- REL-11 WI Core part: LTE RAN Enhancements for Diverse Data Applications, rapporteur: Gordon Young (RIM)
  acronym: LTE_eDDA-Core, WID: RP-110454 revised in RP-111372 at RAN #53
  RAN #51: New: 0%/June 12 (RAN #56)/-
  RAN #52: 5%/June 12/RP-110590
  RAN #53: 10%/Sep. 12/RP-111016
  now: RAN #54: 20%/Sep. 12/RP-111488

- REL-11 WI Core part: Further Enhancements to CELL_FACH, rapporteur: Ravi Agarwal (Qualcomm)
  acronym: Cell_FACH_enh-Core, WID: RP-110436 revised in RP-110913 at RAN #52 and revised in RP-111321 at RAN #53
  RAN #51: New: 0%/June 12 (RAN #56)/-
  RAN #52: 2%/June 12/RP-110774
  RAN #53: 13%/June 12/RP-111007
  now: RAN #54: 34%/June 12/RP-111467

- REL-11 SI Study on HetNet mobility enhancements for LTE, rapporteur: Sudeep Palat (Alcatel-Lucent)
  acronym: FS_HetNet_eMOB_LTE, SID: RP-110438 revised in RP-110709 at RAN #52
  RAN #51: New: 0%/June 12 (RAN #56)/-
  RAN #52: 10%/Dec.11/RP-110604
  RAN #53: 20%/Dec.11/RP-111059
  now: RAN #54: 40%/Sep. 12/RP-111548

- REL-11 WI Core part: HSDPA Multiflow Data Transmission, rapporteur: Alexander Sayenko (NSN)
  acronym: HSDPA_MFTX-Core, WID: RP-111375
  RAN #53: New: 0%/Sep.12 (RAN #57)/-
  now: RAN #54: 10%/Sep.12/RP-111471

- REL-11 WI Core part: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN, rapporteur: Johan Johansson (MediaTek)
  acronym: eMDT_UMTSLTE-Core, WID: RP-111361
  RAN #53: New: 0%/Sep.12 (RAN #57)/-
  now: RAN #54: 10%/Sep.12/RP-111476

IPR2025-00720, OnePlus Ex. 1004
Page 229 of 700

- REL-11 WI Core part: RAN overload control for Machine-Type Communications, rapporteur: Jeff Gao (Huawei)
  acronym: SIMTC-RAN_OC-Core, WID: RP-111373
  RAN #53: New: 0%/March 12 (RAN #55)/-
  now: RAN #54: 50%/March 12/RP-111477

- REL-11 WI Core part: Signalling and procedure for interference avoidance for in-device coexistence, rapporteur: Zhenping Hu (CMCC)
  acronym: SPIA_IDC_LTE-Core, WID: RP-111355
  RAN #53: New: 0%/June 12 (RAN #56)/-
  now: RAN #54: 10%/June 12/RP-111492

IPR2025-00720, OnePlus Ex. 1004
Page 230 of 700

Annex G:
Joint WG ad hocs

G.1 Joint WG ad hoc on on Extended Wait Timer, SRVCC capability and vSRVCC

This joint WG meeting of SA2, RAN2, CT1, RAN3 (part time) was held on Tue 19:00-21:00 in the main RAN2 room.

R2-116548 Notes on the SA WG2, RAN WG2, RAN WG3, CT WG1 Joint Meeting on Extended Wait, SRVCC capability and vSRVCC ETSI MCC Report
provided for information by SA2
noted

G.2 Joint WG ad hoc on EAB requirements

This joint WG meeting of RAN2, SA2, CT1, SA1 was held on Wed 8:00 - 9:00 in the main RAN2 room.

R2-116549 Minutes of joint RAN2/SA1/SA2/CT1 ad hoc on EAB requirements ETSI MCC Report
provided for information
noted

IPR2025-00720, OnePlus Ex. 1004
Page 231 of 700

Annex H:
History

Document history		
Date	**TSG RAN WG2 Tdoc**	**Subject**
08.11.2011	-	Skeleton report for RAN WG2 #76 provided before the meeting.
09.11.2011	-	Updated skeleton report for RAN WG2 #76 provided before the meeting.
13.11.2011	-	Update 2 of skeleton report for RAN WG2 #76 provided before the meeting.
25.11.2011	-	Draft report of RAN2 #76 (v0.1) provided after RAN WG2 #76
04.12.2011	-	Draft report of RAN2 #76 (v1.0) with revision marks relative to v0.1
23.12.2011	-	Draft report of RAN2 #76 (v2.0) with revision marks relative to v1.0
05.02.2012	R2-120002	Draft report of RAN2 #76 (v3.0) with revision marks relative to v2.0 submitted as input to RAN2 #77
17.02.2012	R2-120915	Report of RAN2 #76 as agreed at RAN2 #77 (actually agreed by email [77#00])

Contact: **Dr. Joern Krause (3GPP TSG RAN WG2 MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33-492-94 4261
email: Joern.Krause@etsi.org

Appendix D

Uploaded	status	Late	Tdoc	Title	Source
Yes, No	withdrawn, not treated, noted, revised, endorsed, agreed, postponed	Late: submitted after 08.11.11 10:00am CET	R2-11xxxx	-	-
Yes	agreed		R2-115660	Proposed agenda for RAN2 #76, San Francisco, USA, 14.11.-18.11.2011	Ericsson (RAN2 chairman)
Yes	revised	Late	R2-115661	Draft report of RAN2 #75bis, Zhuhai, China, 10.10.-14.10.2011	ETSI MCC
Yes	noted		R2-115662	LS Reply to S3-110836 = R2-113735 on the length of security information in PWS (C1-114450; contact: Ericsson)	CT1
Yes	noted		R2-115663	Reply LS To R2-114804 on EAB Requirements (C1-114451; contact: NSN)	CT1
Yes	noted		R2-115664	Reply LS to R2-114802 on Applicability of ePLMN to MDT (C1-114463; contact: Huawei)	CT1
Yes	noted		R2-115665	LS on outstanding issues for video SRVCC (C1-114474; contact: Samsung)	CT1
Yes	noted		R2-115666	LS on additional carrier types for carrier aggregation enhancement (R1-113551; contact: Alcatel-Lucent)	RAN1
Yes	noted		R2-115667	Reply LS to S4-110800 = R2-113746 on Radio metrics with respect to QoE (R1-113605; contact: Qualcomm)	RAN1
Yes	noted		R2-115668	LS on RAN1 agreements on uplink Closed Loop Transmit Diversity for HSPA (R1-113613; contact: Huawei)	RAN1
Yes	noted		R2-115669	LS on RAN1 agreements on Further Enhancements for Cell_FACH (R1-113614; contact: Qualcomm)	RAN1

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-115670	LS on "per band OLTD capability" signalling (R4-114989; contact: Huawei)	RAN4
Yes	noted		R2-115671	LS reply to R1-112867 = R2-114860 on TDD inter-band CA with different UL-DL configurations on different bands (R4-115437; contact: CATT)	RAN4
Yes	noted		R2-115672	Reply to LS to C1-113759 = R2-114852 on the scope of extended wait time on AS layer (S2-114498; contact: HTC)	SA2
Yes	noted		R2-115673	Reply to LS to R2-114804 on EAB Requirements (S2-114698; contact: Vodafone)	SA2
Yes	noted		R2-115674	Reply LS to R2-114808 on SRVCC capability bit setting mismatch in AS and NAS (S2-114702; contact: Ericsson)	SA2
Yes	noted		R2-115675	Reply LS to R2-114807 on MDT and RAN sharing (S5-113214; contact: NSN)	SA5
Yes	noted		R2-115676	LS on MDT positioning (S5-113283; contact: Ericsson)	SA5
Yes	noted		R2-115677	Reply LS to R2-114814, C1-114450 = R2-115662, GP-111304 = R2-114854 on length of security in PWS (S3-111225; contact: RIM)	SA3
Yes	noted		R2-115678	LS on MBMS FEC Evaluation Framework (S4-111114; contact: Qualcomm)	SA4
Yes	noted		R2-115679	Reply LS to R2-115647 on MBMS assistance information for service continuity (S4-111124; contact: Qualcomm)	SA4
Yes	noted		R2-115680	LS on CSFB awareness in UMTS (R3-113052; contact: Vodafone)	RAN3
Yes	revised		R2-115681	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-115682	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation
Yes	revised		R2-115683	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation
Yes	revised		R2-115684	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation
Yes	agreed		R2-115685	Correction on Multi-frequency HS-DSCH Transport Block Sizes for 1.28 Mcps TDD	TD Tech
Yes	agreed		R2-115686	MC-HSUPA related HARQ operation in UE for LCR TDD	TD Tech
Yes	agreed		R2-115687	Correction on the measurement configuration validation for SFN reading	Huawei, HiSilicon
Yes	agreed		R2-115688	Correction on the measurement configuration validation for SFN reading	Huawei, HiSilicon
Yes	agreed		R2-115689	Correction on the measurement configuration validation for SFN reading	Huawei, HiSilicon
Yes	revised		R2-115690	Correction to UE handling of delay tolerant wait timer in RRC Connection Release	Renesas Mobile Europe Ltd.
Yes	agreed		R2-115691	Corrections of PS keys handling upon PS ISHO	Renesas Mobile Europe Ltd.
Yes	agreed		R2-115692	Corrections of PS keys handling upon PS ISHO	Renesas Mobile Europe Ltd.
Yes	agreed		R2-115693	Corrections of PS keys handling upon PS ISHO	Renesas Mobile Europe Ltd.
Yes	agreed		R2-115694	Delete E-HICH, E-RGCH, E-AGCH information when E_DCH is stopped	Ericsson, ST-Ericsson, Broadcom Corporation, Research In Motion UK Ltd, Alcatel-Lucent, Renesas Mobile Europe Ltd, Nokia Siemens Networks
Yes	revised		R2-115695	36.300 CR introducing LTE Carrier Aggregation Enhancements (status after RAN2 #75bis)	Nokia Corporation
No	withdrawn	Late	R2-115696	36.300 CR introducing Service continuity improvements for MBMS for LTE (status after RAN2 #75bis)	Huawei

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-115697	36.300 CR introducing Signalling and procedure for interference avoidance for in-device coexistence (status after RAN2 #75bis)	CMCC
Yes	agreed		R2-115698	Corrections to channel model	Huawei, HiSilicon
Yes	revised		R2-115699	Corrections to enhancedDualLayerTDD	CATT
Yes	agreed		R2-115700	Optionality of SR Masking	Qualcomm Incorporated, Nokia Siemens Networks, Nokia Corporation
Yes	agreed		R2-115701	Optionality of SR Masking	Qualcomm Incorporated, Nokia Siemens Networks, Nokia Corporation
Yes	revised		R2-115702	Optionality of UE Rx-Tx time difference report	Panasonic
Yes	revised		R2-115703	Optionality of UE Rx-Tx time difference report	Panasonic
Yes	agreed		R2-115704	CSI/SRS reporting at DRX state transitions	Panasonic
Yes	withdrawn		R2-115705	CSI/SRS reporting at DRX state transitions	Panasonic
Yes	revised		R2-115706	UE soft buffer handling in MAC	Ericsson
Yes	revised		R2-115707	Clarification of PCI range for CSG cells	Qualcomm Incorporated
Yes	agreed		R2-115708	Clarifications to Default Radio Configurations	Potevio
Yes	revised		R2-115709	Corrections to enhancedDualLayerTDD	CATT
Yes	agreed		R2-115710	Miscellaneous small corrections	Samsung

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-115711	Clarification of packed encoding rules of LPP	Qualcomm Incorporated
Yes	agreed		R2-115712	Clarification of packed encoding rules of LPP	Qualcomm Incorporated
Yes	agreed		R2-115713	CR to 36.816 on DRX based TDM solution	CMCC, CATT
Yes	agreed		R2-115714	CR to 37.320 on Immediate MDT handling at handover	Nokia Siemens Networks
Yes	not treated		R2-115715	Response LS to R2-115646 on physical-layer measurement for network-based positioning (R1-114454; contact: Ericsson)	RAN1
Yes	not treated		R2-115716	Reply LS to R2-115649 on Physical Layer Measurement for network positioning (R1-114456; contact: Alcatel-Lucent)	RAN1
Yes	not treated		R2-115717	LS response to R2-115646 on Physical Layer measurement for network-based positioning (R4-116300; contact: Ericsson)	RAN4
No	withdrawn		R2-115718	Void	-
Yes	revised		R2-115719	Revised draft report of RAN2 #75bis, Zhuhai, China, 10.10.-14.10.2011	ETSI MCC
Yes	noted		R2-115720	Network caused incorrect measurement report let call drop fix	Acer
Yes	not treated		R2-115721	Network caused incorrect measurement report let call drop fix 25.331 Rel-10 CR	Acer
Yes	rejected		R2-115722	Event 1c Race Condition Avoidance 25.331 Rel-10 CR	Acer
Yes	not treated		R2-115723	Requirements for mobility procedure from UMTS to LTE in Cell_FACH	ZTE Corporation
Yes	not treated		R2-115724	Interaction between 2nd DRX for Cell_FACH and other features	ZTE Corporation
Yes	not treated		R2-115725	Consideration on L1 order (de)activation between various MPT-HSDPA modes	ZTE Corporation
Yes	noted		R2-115726	Considerations on the traffic trace input for eDDA simulation	China Unicom
Yes	revised		R2-115727	Preliminary PDCCH evaluation	China Unicom
Yes	noted		R2-115728	Cell Reselection rules for Ues active in MBMS	Nokia Corporation, Nokia Siemens Networks
Yes	not treated		R2-115729	UE capability and MBMS	Nokia Corporation, Nokia Siemens Networks

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115730	Discussion on HetNet mobility	Nokia Corporation, Nokia Siemens Networks
Yes	noted		R2-115731	HetNet mobility and DRX	Nokia Corporation, Nokia Siemens Networks
Yes	not treated		R2-115732	Re-establishment issues in HetNet scenarios	Nokia Corporation, Nokia Siemens Networks
Yes	noted		R2-115733	CS/PS Mode 1 enhancement to improve CSFB voice services	KT
Yes	revised		R2-115734	Correction of capability table	ZTE Corporation
Yes	noted		R2-115735	Analysis on IM traces	China Unicom
Yes	not treated		R2-115736	Consideration on QoS verification for MDT	China Unicom
Yes	not treated		R2-115737	Consideration on UE in CONNECTED state for MDT	China Unicom
Yes	not treated		R2-115738	Considerations on TA group (re)configuration	New Postcom
Yes	not treated		R2-115739	Timing reference cell selection for TA group	New Postcom
Yes	noted		R2-115740	Considerations on SCell-only TAG and corresponding TAT	New Postcom
Yes	not treated		R2-115741	Results of large area system simulations for HetNet	New Postcom
Yes	noted		R2-115742	Wayfoward for adding up Rel-7 missing optional capabilities	ZTE Corporation
Yes	not treated		R2-115743	Random Access Response on an SCell	Ericsson, ST-Ericsson
Yes	revised		R2-115744	CSI and SRS reporting at unexpected DRX state change	Ericsson, ST-Ericsson
Yes	noted		R2-115745	Inter-frequency Pico cell measurements for Hetnet deployments	NTT DOCOMO, INC.
Yes	not treated		R2-115746	Analysis of RRC functions for supporting equivalent bands	NTT DOCOMO, INC.
Yes	not treated		R2-115747	MAC Downlink Signalling for Multiple TA	Nokia Siemens Networks, Nokia Corporation
No	withdrawn	Late	R2-115748	UEs in RRC Connected and MBMS Service Continuity	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-115749	Triggers for IDC	Nokia Siemens Networks, Nokia Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115750	Measurements for IDC	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115751	TDM Solutions for IDC	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115752	IDC Signalling to Target eNB	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115753	Suggest WorkGroup worksplit for video-SRVCC (vSRVCC)	Samsung
Yes	not treated		R2-115754	MSG2 Position for MTA RA	ZTE Corporation
Yes	not treated		R2-115755	Discussion on Scell RACH collide with other UL transmission	ZTE Corporation
Yes	not treated		R2-115756	TA group reconfiguration	ZTE Corporation
Yes	not treated		R2-115757	TAT management	ZTE Corporation
Yes	not treated		R2-115758	Pathloss and DL timing reference for MTA	ZTE Corporation
Yes	revised		R2-115759	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7	Anritsu, CATT
Yes	revised		R2-115760	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7	Anritsu, CATT
Yes	revised		R2-115761	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT
Yes	revised		R2-115762	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT
Yes	revised		R2-115763	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT
Yes	revised		R2-115764	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT
Yes	not treated		R2-115765	SCell Measurement Restriction	ZTE Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-115766	Correction to Default Radio Configurations for TDD: number of TFCI coding bits	Anritsu, CATT
Yes	not treated		R2-115767	Discussion on General signalling and procedure for IDC	ZTE Corporation
Yes	not treated		R2-115768	Discussion on the DRX based solution for IDC	ZTE Corporation
Yes	not treated		R2-115769	Discussion on enhancement of small cell discovery	ZTE Corporation
Yes	not treated		R2-115770	Discussion on enhancement of mobility state estimation	ZTE Corporation
Yes	not treated		R2-115771	Shared networks support for EAB	ZTE Corporation
Yes	not treated		R2-115772	Uniform access delay solution for EAB	ZTE Corporation
Yes	not treated		R2-115773	Impacts of independent configurations for EAB and for 'delay tolerant	ZTE Corporation
Yes	revised		R2-115774	Correction on notation of SRS transmission comb	ZTE Corporation
Yes	not treated		R2-115775	Avoidance of MBMS frequency congestion	ZTE Corporation, Potevio
Yes	not treated		R2-115776	More Consideration on MDT QoS verification	ZTE Corporation
Yes	rejected		R2-115777	Clarifications of reception of the Paging message in RRC_CONNECTED	NTT DOCOMO, INC.
Yes	rejected		R2-115778	Clarification on â€¯handover to E-UTRAâ€™	ZTE Corporation
Yes	rejected		R2-115779	Clarifications of reception of the Paging message in RRC_CONNECTED	NTT DOCOMO, INC.
Yes	rejected		R2-115780	Clarifications of reception of the Paging message in RRC_CONNECTED	NTT DOCOMO, INC.
Yes	revised		R2-115781	Addition of the missing value ranges for 1.28Mbps TDD capabilities	CATT
Yes	not treated		R2-115782	RACH procedure on SCell	Renesas Mobile Europe Ltd.
Yes	not treated		R2-115783	Discussion on TAT and TAG handling	Renesas Mobile Europe Ltd.
Yes	noted		R2-115784	UE soft buffer handling in TDD	CATT
Yes	rejected		R2-115785	UE soft buffer handling in TDD	CATT
Yes	not treated		R2-115786	Discussion on SPS	CATT
Yes	not treated		R2-115787	Clarification on SPS	CATT

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115788	Timing and pathloss reference in sTAG	CATT
Yes	not treated		R2-115789	CBRA on SCell	CATT
Yes	not treated		R2-115790	SCell TAT expiry	CATT
Yes	not treated		R2-115791	Signaling for TAG configuration	CATT
Yes	not treated		R2-115792	TAC MAC CE	CATT
Yes	not treated		R2-115793	SCell RA failure	CATT
Yes	not treated		R2-115794	Simulation results for background and IM	CATT
Yes	not treated		R2-115795	MBMS UE capability	CATT
Yes	not treated		R2-115796	MBMS service continuity in RRC-Connected mode	CATT
Yes	not treated		R2-115797	Supporting Procedure for Uplink Positioning	Andrew Corp.
Yes	not treated		R2-115798	Consideration on EAB content for UMTS	CATT
Yes	noted		R2-115799	Consideration on EAB content for LTE	CATT, CATR
Yes	not treated		R2-115800	Considerations on EAB Transmission Mechanism	CATT
Yes	not treated		R2-115801	Application of EAB	CATT
Yes	not treated		R2-115802	Considerations for EAB information update	CATR
Yes	noted		R2-115803	Timing and Pathloss reference	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115804	RA procedure on SCell	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-115805	TA group signalling	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115806	SRS configuraiton upon TAT expiry	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115807	PHR triggers and reporting in the context of multiple TA	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115808	Accuracy of detailed location information	NEC
Yes	not treated		R2-115809	Inter-RAT aspects of Logged MDT	NEC
Yes	not treated		R2-115810	TA command in Rel-11	Potevio
Yes	not treated		R2-115811	On absolute priorities cell reselection and UTRAN measures	TeliaSonera

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115812	Signalling for TA group configuration	Potevio
Yes	not treated		R2-115813	SRS configuration and TAT handling for sTAG	Potevio
Yes	not treated		R2-115814	36.304 Correction to absolute priority cell reselection	TeliaSonera
Yes	not treated		R2-115815	Timing reference for sTAG	Potevio
Yes	not treated		R2-115816	36.331 Correction to absolute priority cell reselection	TeliaSonera
Yes	not treated		R2-115817	Considerations on CBRA on SCell and Msg2 for SCell RA	Potevio
Yes	not treated		R2-115818	25.304 Correction to absolute priority cell reselection	TeliaSonera
Yes	not treated		R2-115819	Enhancement for high speed UEs in HetNet	Potevio
Yes	not treated		R2-115820	25.331 Correction to absolute priority cell reselection	TeliaSonera
Yes	not treated		R2-115821	Consideration on small cell discovery in HetNet	Potevio
Yes	not treated		R2-115822	Consideration on connection re-establishment in HetNet	Potevio
Yes	not treated		R2-115823	DRX operation with different TDD UL/DL configurations	ASUSTeK, Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-115824	On PSC/PCI range for CSG	TeliaSonera
Yes	not treated		R2-115825	Alternative to Clarification of PCI range for CSG cells	TeliaSonera
Yes	not treated		R2-115826	Alternative to Clarification of PCS range for CSG cells	TeliaSonera
Yes	noted		R2-115827	Signalling for the TA Group Management	Huawei, HiSilicon
Yes	not treated		R2-115828	Further consideration on EAB content for LTE	Huawei, HiSilicon
Yes	not treated		R2-115829	Further consideration on EAB content for UMTS	Huawei, HiSilicon
Yes	not treated		R2-115830	EAB parameters in shared network	Huawei, HiSilicon
Yes	revised		R2-115831	E-AGCH ECSN for Multi-carrier HSUPA for LCR TDD	TD Tech
Yes	not treated		R2-115832	EAB applicability	Huawei, HiSilicon
Yes	not treated		R2-115833	EAB and ACB, which one first?	Huawei, HiSilicon
Yes	noted	Late	R2-115834	Summary of Email Discussion [75b#31] - Joint: SIB update mechanism for EAB	Huawei, HiSilicon
Yes	not treated		R2-115835	Solutions for Corss-Scheduled Msg2	Huawei, HiSilicon
Yes	revised		R2-115836	DPA related corrections in TS 25.308 for LCR TDD	TD Tech
Yes	revised		R2-115837	UPA related corrections in TS 25.319 for LCR TDD	TD Tech

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-115838	Update for PUCCH Evaluation	Huawei, HiSilicon
Yes	noted		R2-115839	On the procedure of interference avoidance for IDC	CMCC
Yes	not treated		R2-115840	Timing Reference for SCell-only TA group	Huawei, HiSilicon
Yes	noted		R2-115841	The Solutions of UE Battery Life Improvement and Signaling Reduction	Huawei, HiSilicon
Yes	not treated		R2-115842	Pathloss Reference for SCell-only TA group	Huawei, HiSilicon
Yes	not treated		R2-115843	Release type-0 SRS configuration upon SCell-TAT expiry	Huawei, HiSilicon
Yes	postponed		R2-115844	Clarification of RNTIs handling in CELL_PCH (Rel-8)	Huawei, HiSilicon
Yes	not treated		R2-115845	Clarification of RNTIs handling in CELL_PCH (Rel-9)	Huawei, HiSilicon
Yes	noted		R2-115846	Further considerations on IDC indication	Huawei, HiSilicon
Yes	not treated		R2-115847	Assistance information handling concerning the FDM and TDM	Huawei, HiSilicon
Yes	not treated		R2-115848	Clarification of RNTIs handling in CELL_PCH (Rel-10)	Huawei, HiSilicon
Yes	noted		R2-115849	Discussion on H-RNTI handling in Cell Update procedure	Huawei, HiSilicon
Yes	noted		R2-115850	Some considerations on the concurrent deployment of 2ms and 10ms TTI in a cell	Huawei, HiSilicon
Yes	withdrawn		R2-115851	Analysis on the TTI indication for the stand-alone HS-DPCCH transmission	Huawei, HiSilicon
Yes	revised		R2-115852	36.331 CR SPS reconfiguration	Huawei, HiSilicon
Yes	not treated		R2-115853	Discussions on Solution of Fallback to R99 PRACH	Huawei, HiSilicon
No	withdrawn		R2-115854	36.321 CR SPS Occasions Calculation	Huawei, HiSilicon
Yes	noted		R2-115855	Trace statistics for instant message traffic	CMCC
Yes	not treated		R2-115856	Blocking and Collision Probability Analysis for Common E-DCH Random Access	Huawei, HiSilicon
Yes	noted		R2-115857	Discussion on CELL_FACH mobility enhancement to LTE	Huawei, HiSilicon
Yes	not treated		R2-115858	On the benefits of DC-HSDPA operation in CELL_FACH state	Huawei, HiSilicon
Yes	not treated		R2-115859	Signature partition and sub-feature dependency in FE-FACH	Huawei, HiSilicon
Yes	not treated	Late	R2-115860	Discussion on per-HARQ-TDM scheduling process grants for CELL_FACH UEs	Huawei, HiSilicon
Yes	not treated		R2-115861	CSG cell measurement for inter-frequency detected set	Huawei, HiSilicon
Yes	noted		R2-115862	UM RLC Ciphering Error Detection for VOIP	Huawei, HiSilicon

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115863	Introduction of CSG ANR	Huawei, HiSilicon
Yes	postponed		R2-115864	Clarifications on the measurement reprort for DC-HSUPA (Rel-8)	Huawei, HiSilicon
Yes	rejected		R2-115865	Clarifications on the UE E-DCH category report	Huawei, HiSilicon
Yes	noted		R2-115866	Node B TTI indication for 2/10 ms TTI concurrent operations in CELL_FACH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-115867	Discussion on PRACH fallback for enhanced CELL_FACH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-115868	Layer 1 indication of UE capability and preference for Enhanced CELL_FACH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-115869	Mobility in inter-NB multi-flow transmission	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-115870	Discussion on packet skew in inter-NB multi-flow transmission	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-115871	On HS-SCCH order for cell activation/deactivation in multi-flow transmission	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	revised		R2-115872	Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-115873	Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-115874	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-115875	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-115876	Clarification of PSC range for CSG cells	Nokia Corporation
Yes	revised		R2-115877	Alignment of the text description for SIB 18 for UEs in idle mode and connected mode	Broadcom Corporation
Yes	not treated		R2-115878	Details on IDC indication	Nokia Corporation
Yes	not treated		R2-115879	The DL Timing reference cell for SCell TA group	Panasonic
Yes	not treated		R2-115880	Message 2 reception indicated by C-RNTI	Panasonic
Yes	not treated		R2-115881	SCell configuration for HeNB with carrier aggregation	Panasonic, NTT DOCOMO, INC.

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115882	Parallel PRACH and PUSCH/PUCCH transmission	Panasonic
Yes	not treated		R2-115883	type-0 SRS resources after Scell TA timer expiry	Panasonic
Yes	not treated		R2-115884	Position enhancement for IMM MDT	Huawei, HiSilicon
Yes	not treated		R2-115885	Consideration on coverage optimization	Huawei, HiSilicon
Yes	not treated		R2-115886	Impact of mobility in MDT QoS verification	Huawei, HiSilicon
Yes	not treated		R2-115887	The applicability of EPLMN to MDT and RLF report	Huawei, HiSilicon
Yes	revised		R2-115888	CSI/SRS reporting at DRX state transitions	Panasonic
Yes	revised		R2-115889	Introduction of 8C-HSDPA in 25.302	Ericsson, ST-Ericsson
Yes	not treated		R2-115890	Initiating RA procedure on SCell	HT mMobile Inc.
Yes	noted		R2-115891	Details on SPS reconfiguration	Panasonic
Yes	revised		R2-115892	Introduction of 8C-HSDPA in 25.306	Ericsson, ST-Ericsson
Yes	not treated		R2-115893	Discussion on open issues related to SCell-TAT	HT mMobile Inc.
Yes	revised		R2-115894	Introduction of 8C-HSDPA in 25.308	Ericsson, ST-Ericsson
Yes	not treated		R2-115895	Timing reference for sTAG	HT mMobile Inc.
Yes	revised		R2-115896	Introduction of 8C-HSDPA in 25.319	Ericsson, ST-Ericsson
Yes	revised		R2-115897	Introduction of 8C-HSDPA in 25.321	Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd, InterDigital, Alcatel-Lucent, Qualcomm Incorporated, Nokia Siemens Networks
Yes	revised		R2-115898	Introduction of 8C-HSDPA in 25.331	Ericsson, ST-Ericsson
Yes	not treated		R2-115899	Draft Reply LS on MDT positioning	Huawei, HiSilicon
Yes	noted		R2-115900	Total RLC AM buffer size	Ericsson, ST-Ericsson
Yes	not treated		R2-115901	Additional value for Total RLC AM Buffer Size	Ericsson, ST-Ericsson
Yes	not treated		R2-115902	Additional value for Total RLC AM Buffer Size value range	Ericsson, ST-Ericsson
Yes	noted		R2-115903	General considerations on Multiflow HSDPA operations	Ericsson, ST-Ericsson
Yes	noted		R2-115904	Multiflow HSDPA data split options	Ericsson, ST-Ericsson

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-115905	Multiflow HSDPA multiple transmissions of RLC PDUs	Ericsson, ST-Ericsson
Yes	revised		R2-115906	Corrections to UE test loop mode 4	Ericsson, ST-Ericsson, Telecom Italia, Orange, Deutsche Telekom
Yes	not treated		R2-115907	on mobility issues for HNB RAN sharing	Huawei, HiSilicon
Yes	not treated		R2-115908	on CELL_FACH mobility for CSG cells	Huawei, HiSilicon
Yes	noted		R2-115909	MDT Requirements for QoS Improvements	Vodafone, Deutsche Telekom, NTT DoCoMo, Orange, Teliasonera, Telecom Italia, MediaTek
Yes	revised		R2-115910	Improved Deferred Measurement Control Reading	Ericsson, ST-Ericsson, Nvidia
Yes	not treated		R2-115911	Multiple frequency band indicators per cell	Ericsson, ST-Ericsson
Yes	not treated		R2-115912	EAB issues	Vodafone
Yes	noted		R2-115913	Fallback to R99 RACH	Ericsson, ST-Ericsson
Yes	revised		R2-115914	Preparation of REL-11 ASN.1 critical extensions	Ericsson, ST-Ericsson
Yes	revised		R2-115915	25.331 trivial corrections	Ericsson
Yes	not treated		R2-115916	Simulation results and observations of large area HetNet mobility	Huawei, HiSilicon
Yes	noted		R2-115917	Cell detection delay in HetNet	Huawei, HiSilicon
Yes	noted		R2-115918	MDT Throughput Measurement	Vodafone, Mediatek, Telecom Italia, NTT DoCoMo
Yes	noted		R2-115919	Need of mobility state estimation enhancement in HetNet	Huawei, HiSilicon
No	withdrawn	Late	R2-115920	RRC connection re-establishment during SMC procedure	Qualcomm Incorporated
Yes	postponed		R2-115921	Clarification on physical layer parameter values requirement	Qualcomm Incorporated
Yes	noted		R2-115922	UE category in the presence of MCH reception	Qualcomm Incorporated
Yes	rejected		R2-115923	UE category in the presence of MCH reception	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115924	Proposed LS on UE category in the presence of MCH reception	Qualcomm Incorporated
Yes	not treated		R2-115925	Impact of small cells in mobility performance	Qualcomm Incorporated
No	withdrawn	Late	R2-115926	Further analysis on pico-macro handovers	Qualcomm Incorporated
Yes	not treated		R2-115927	RLF reporting across PLMNs	Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera
Yes	not treated		R2-115928	Logged MDT continuity across PLMNs	Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera
Yes	not treated		R2-115929	Text Proposal for TR 36.822: RRC Connection Setup Analysis	Research In Motion UK Limited
Yes	not treated		R2-115930	Text Proposal for TR 36.822: RRC Connection Frequency Analysis	Research In Motion UK Limited
Yes	noted		R2-115931	Power consumption and signalling load for background traffic	Nokia Corporation, Nokia Siemens Networks
Yes	not treated		R2-115932	Parallel Transmission of Preamble and UL Data	Ericsson, ST-Ericsson
Yes	noted		R2-115933	On the applicability of autonomous denials and DRX for BT connection-setup scenarios	Qualcomm Incorporated, Broadcom Corporation, MediaTek Inc.
Yes	noted		R2-115934	DRX based short-term gap pattern search between LTE and BT	Qualcomm Incorporated
No	withdrawn		R2-115935	Clarification to absolute priority based criteria	Research In Motion UK Limited
Yes	not treated		R2-115936	Protection of essential LTE DL signaling with short-term TDM between LTE and BT	Qualcomm Incorporated
Yes	revised		R2-115937	Clarification to absolute priority based criteria	Research In Motion UK Limited
Yes	revised		R2-115938	Clarification to absolute priority based criteria	Research In Motion UK Limited
Yes	noted		R2-115939	Signaling for Autonomous Denial of ISM and LTE Transmissions	Sharp

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115940	UE RRC mobility states mismatch between UTRAN and E-UTRAN	Research In Motion UK Limited
Yes	not treated		R2-115941	SRVCC Capability and FGI setting in NAS and AS	Nokia Siemens Networks
Yes	not treated		R2-115942	vSR-VCC and UE behaviour	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115943	EAB Related Issues for Joint Meeting	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115944	MTC Traffic Modeling	Nokia Siemens Networks, Nokia Corporation
Yes	withdrawn		R2-115945	Barring time for EAB	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115946	EAB Modelling between NAS to AS	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-115947	Handling of UE Capabilities supporting both TDD&FDD in the Network	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-115948	Problems related to DDA	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-115949	QoS measurement and location association for MDT	Kyocera
Yes	not treated		R2-115950	MDT logging stoppage based on battery threshold level	Kyocera
Yes	not treated		R2-115951	Selection/Reselection between MBMS capable cells and CSG cells	Kyocera
Yes	not treated		R2-115952	MBMS service continuity for inbound mobility to CSG cells	Kyocera
Yes	not treated		R2-115953	Timing reference and Pathloss reference	Sharp
Yes	not treated		R2-115954	On the merits of Fallback to R99	Qualcomm Incorporated
Yes	not treated		R2-115955	UE battery life improvements and signaling reduction via a 2nd DRX cycle in CELL_FACH	Qualcomm Incorporated
Yes	noted		R2-115956	On concurrent deployment of 2ms and 10ms TTI in a cell in CELL_FACH	Qualcomm Incorporated
Yes	not treated		R2-115957	On the merits of DC-HSDPA in CELL_FACH	Qualcomm Incorporated
Yes	not treated		R2-115958	E-DCH resource analysis	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004
Page 249 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-115959	On the complexity aspects of Fallback to R99	Qualcomm Incorporated
Yes	noted		R2-115960	Signaling design to Enable and Disable CLTD	Qualcomm Incorporated
Yes	postponed		R2-115961	Introduction of Further Enhancements to CELL_FACH in 25.308	Qualcomm Incorporated
Yes	postponed		R2-115962	IIntroduction of Further Enhancements to CELL_FACH in 25.319	Qualcomm Incorporated
Yes	not treated		R2-115963	Consideration on the details of EAB mechanism	New Postcom
Yes	not treated		R2-115964	Consideration on the remaining issues about EAB mechanism	New Postcom
Yes	not treated		R2-115965	EAB procedure	New Postcom
Yes	not treated		R2-115966	The interaction between AS and NAS	New Postcom
Yes	not treated		R2-115967	Pico cell discovery in a Heterogeneous Network	Research In Motion UK Limited
Yes	not treated		R2-115968	36.321_CRxxxx_SPS occasion clarification (Rel-10)	New Postcom
Yes	not treated		R2-115969	Random Access Response in multiple TA	Research In Motion UK Limited
Yes	not treated		R2-115970	Timing and Pathloss Reference for SCell	Research In Motion UK Limited
Yes	rejected		R2-115971	36.300 CRxxxx_Corrections of CA Bands (Rel-10)	New Postcom
Yes	not treated		R2-115972	Clarification and Identification for IDC interference avoidance	Research In Motion UK Limited
Yes	not treated		R2-115973	Discussion on Msg2 for SCell RA	New Postcom
No	withdrawn		R2-115974	Discussion on Msg2 for SCell RA	New Postcom
Yes	not treated		R2-115975	Reception of IDC indication response	Research In Motion UK Limited
Yes	not treated		R2-115976	Discussion on DRX resource management	Research In Motion UK Limited
Yes	not treated		R2-115977	PUCCH on SCell	New Postcom
Yes	noted		R2-115978	Monitoring paging in active time in HetNet scenario	Research In Motion UK Limited
Yes	noted		R2-115979	Alignment between SPS and Subframe pattern	Research In Motion UK Limited
Yes	noted		R2-115980	Alignment between paging occasions and subframe patterns	Research In Motion UK Limited
Yes	not treated		R2-115981	Number of TAGs and timing references	New Postcom

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-115982	Release of measSubframePatternConfigNeigh upon reestablishment	Research In Motion UK Limited
Yes	not treated		R2-115983	Enhancing MBMS Service Continuity	Research In Motion UK Limited
Yes	not treated		R2-115984	Log size reduction of MDT	New Postcom
Yes	noted		R2-115985	Multi-subframe scheduling for eDDA	New Postcom
Yes	postponed		R2-115986	Removal of IE RAB info to replace for SR-VCC handover from UTRAN HSPA to UTRAN/GERAN CS	Intel Corporation
Yes	not treated		R2-115987	Removal of IE RAB info to replace for SR-VCC handover from UTRAN HSPA to UTRAN/GERAN CS	Intel Corporation
Yes	not treated		R2-115988	Removal of IE RAB info to replace for SR-VCC handover from UTRAN HSPA to UTRAN/GERAN CS	Intel Corporation
Yes	not treated		R2-115989	Clarification to the handling of HS-DSCH TB size table	Intel Corporation
Yes	not treated		R2-115990	Clarification to the handling of HS-DSCH TB size table	Intel Corporation
Yes	not treated		R2-115991	Clarification to the handling of HS-DSCH TB size table	Intel Corporation
Yes	not treated		R2-115992	Clarification to the handling of HS-DSCH TB size table	Intel Corporation
Yes	rejected		R2-115993	Clarification to the applicability of CPC configuration in DC-HSUPA	Intel Corporation
Yes	not treated		R2-115994	Clarification to the applicability of CPC configuration in DC-HSUPA	Intel Corporation
Yes	noted		R2-115995	PS RAB unrecoverable error in the multi-RAB configuration	Nokia Siemens Networks, Broadcom Corporation, Panasonic
Yes	revised		R2-115996	Introduction of the frequency specific compressed mode	Nokia Siemens Networks
Yes	revised		R2-115997	Introduction of the frequency specific compressed mode	Nokia Siemens Networks
Yes	noted		R2-115998	Further considerations on the 2nd DRX cycle for CELL_FACH	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-115999	General considerations on the HSDPA Multiflow	Nokia Siemens Networks
Yes	noted		R2-116000	Skew handling for HSDPA Multiflow	Nokia Siemens Networks
Yes	not treated		R2-116001	DTX/DRX operation with HSDPA Multiflow	Nokia Siemens Networks
Yes	revised		R2-116002	Introduction of uplink CLTD in 25.302	Huawei, HiSilicon
Yes	revised		R2-116003	Introduction of uplink CLTD in 25.306	Huawei, HiSilicon
Yes	revised		R2-116004	Introduction of uplink CLTD in 25.331	Huawei, HiSilicon

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-116005	Update of uplink CLTD stage-2	Huawei, HiSilicon
Yes	revised		R2-116006	Introduction of uplink OLTD in 25.306	Huawei, HiSilicon
Yes	revised		R2-116007	Introduction of uplink OLTD in 25.331	Huawei, HiSilicon
Yes	revised		R2-116008	Support early implementation of uplink OLTD in Rel-10	Huawei, HiSilicon
Yes	revised		R2-116009	Update of uplink OLTD stage-2	Huawei, HiSilicon
Yes	noted		R2-116010	Early implementation of OLTD	Huawei, HiSilicon
Yes	noted		R2-116011	Discussion on the increased number of reordering SDUs per TTI	Huawei, HiSilicon
Yes	not treated		R2-116012	Some general considerations on multiflow	Huawei, HiSilicon
Yes	noted		R2-116013	Further considerations on RLC-based data split for multiflow	Huawei, HiSilicon
Yes	not treated		R2-116014	Discussion on mobility issues for multiflow transmission	Huawei, HiSilicon
Yes	noted		R2-116015	UE soft buffer handling for retransmission with different size	LG Electronics Inc., Nokia Siemens Networks, Huawei, HiSilicon, ZTE, Panasonic, Samsung
Yes	not treated		R2-116016	Configuration for Intra-NodeB multiflow transmission	Huawei, HiSilicon
Yes	revised		R2-116017	Small Corrections to 37.320	CATT
Yes	not treated		R2-116018	Dynamic control for multiflow transmission	Huawei, HiSilicon
No	withdrawn		R2-116019	Measurement Types for QoS Verification	CATT
Yes	not treated		R2-116020	Measurement Types for QoS Verification	CATT
Yes	not treated		R2-116021	Discussion on multiflow and CPC	Huawei, HiSilicon
Yes	not treated		R2-116022	Location Info Enhancements for Rel-11 MDT	CATT
Yes	not treated		R2-116023	MDT Continuity between Different PLMNs	CATT
Yes	not treated		R2-116024	TDD Inter-band Carrier Aggregation	CATT
Yes	not treated		R2-116025	Prevention of UE's Connection Establishment on Congested MBMS Freq	CATT
Yes	not treated		R2-116026	MBMS Continuity and the Relationship with CSG	CATT
Yes	not treated		R2-116027	Cases to consider for CSI/SRS <-> DRX	Samsung

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116028	UE capability handling for FDD/TDD UE	Samsung
Yes	not treated		R2-116029	UE capability handling for FDD/TDD UE	Samsung
Yes	not treated		R2-116030	Draft LS to CT1 on UE capability handling for FDD/TDD UE (to: CT1; cc: -; contact: Samsung)	Samsung
Yes	revised		R2-116031	Correction on determining SPS occasions	Samsung, Ericsson, LG Electronics Inc., Nokia Siemens Networks, Qualcomm
Yes	revised		R2-116032	Clarification on SPS intervals	Samsung, Ericsson, LG Electronics Inc., Nokia Siemens Networks, Qualcomm
Yes	revised		R2-116033	Clarification on SPS intervals	Samsung
Yes	revised		R2-116034	CSI and SRS reporting in relation to DRX	Samsung
Yes	not treated		R2-116035	UE capability handling for FDD/TDD UE	Samsung
Yes	noted		R2-116036	Signaling and mobility related connection calculation for background traffic	Qualcomm Incorporated
Yes	not treated		R2-116037	E-UTRA capability handling for dual mode UEs (FDD/TDD)	Clearwire
Yes	revised		R2-116038	Clarification of list sizes in measurement configuration stored by UE	Ericsson, ST-Ericsson
Yes	not treated		R2-116039	UE AS-NAS Model for EAB	Ericsson, ST-Ericsson
No	withdrawn		R2-116040	UE AS-NAS Model for EAB	Ericsson, ST-Ericsson
Yes	not treated		R2-116041	Consideration on counting only macro cells' cell changes	Pantech
Yes	not treated		R2-116042	Selective counting in HetNet MSE	Pantech
Yes	not treated		R2-116043	MBMS service continuity with CSG	Pantech
Yes	not treated		R2-116044	MDT enhancement	Pantech
Yes	not treated		R2-116045	Reference for Timing and Path loss with TAG management	Pantech
Yes	not treated		R2-116046	Confirmation of TA validity	Pantech
Yes	not treated		R2-116047	IDC trigger procedure	Pantech
Yes	not treated		R2-116048	Ping-pong HO issue in IDC	Pantech

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	rejected		R2-116049	Draft CR for 36.305 NBPS Support in LTE	TruePosition, Andrew Corporation
Yes	revised		R2-116050	Draft CR for 36.300 NBPS Support in LTE	TruePosition
Yes	noted		R2-116051	Support for NBPS in LTE	TruePosition
Yes	postponed		R2-116052	SRS Abort/Reset support for NBPS in LTE	TruePosition
Yes	not treated		R2-116053	Discussion on the UL transmission timing in a TAG	ITRI
Yes	not treated		R2-116054	UE Actions when the TAT associated with sTAG Expires	ITRI
Yes	not treated		R2-116055	Initial Timing Reference and Pathloss Reference for SCell UL	ITRI
Yes	not treated		R2-116056	Further discussion on EAB mechanism for MTC devices	ITRI
Yes	not treated		R2-116057	Discussion on Access Prioritization by EAB	ITRI
Yes	noted		R2-116058	Absolute Priority Cell reselection in cell_FACH	Qualcomm Incorporated
Yes	noted		R2-116059	On RLC split for inter-site multi-point transmission in HSDPA	Qualcomm Incorporated
Yes	noted		R2-116060	Flow of IM traffic	LG Electronics Inc.
Yes	not treated		R2-116061	UE behaviour in RRC Idle	LG Electronics Inc.
Yes	not treated		R2-116062	Discussion on Priority information	LG Electronics Inc.
Yes	not treated		R2-116063	EAB mechanisms for RAN overload control	Qualcomm Incorporated
Yes	not treated		R2-116064	Discussion on Coverage map	LG Electronics Inc.
No	withdrawn		R2-116065	EAB uniform access delay for RAN overload control	Qualcomm Incorporated
Yes	noted		R2-116066	Enhanced RRC Redirection to E-UTRAN	Qualcomm Incorporated
Yes	noted		R2-116067	Discussions on timing reference for SCell(s) in sTAG	Samsung
Yes	not treated		R2-116068	Discussions on Msg2 location for SCell RA	Samsung
Yes	noted		R2-116069	Discussions on TAT and TA Group handling	Samsung
Yes	noted		R2-116070	CoMP architecture and CoMP RRM measurement	Samsung
Yes	not treated		R2-116071	Camping for CA UE	LG Electronics Inc.
Yes	revised		R2-116072	Call Drop Analysis for RLC Unrecoverable Error	Research In Motion UK Limited, Renesas Mobile Europe Ltd
Yes	not treated		R2-116073	Distributed Access Delay for EAB	Renesas Mobile Europe Ltd
Yes	not treated		R2-116074	System Information Overhead Considerations for EAB	Renesas Mobile Europe Ltd

IPR2025-00720, OnePlus Ex. 1004
Page 254 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116075	Mobility to Neighbour Cells Supporting Multiple Bands	Renesas Mobile Europe Ltd
Yes	noted		R2-116076	Initial TTI selection for 2ms/10ms concurrent deployment in CELL_FACH	Renesas Mobile Europe Ltd
Yes	noted		R2-116077	Signalling for 2ms/10ms concurrent deployment in CELL_FACH	Renesas Mobile Europe Ltd
Yes	noted		R2-116078	TTI change during common E-DCH resource allocation	Renesas Mobile Europe Ltd
Yes	noted		R2-116079	E-DCH or PRACH resource selection and fallback	Renesas Mobile Europe Ltd
Yes	noted		R2-116080	UE Battery Life Improvements and Signalling Reduction	Renesas Mobile Europe Ltd, Nokia Siemens Networks
Yes	noted		R2-116081	Reselection Enhancements in CELL_FACH	Renesas Mobile Europe Ltd
Yes	noted		R2-116082	Support of multiple frequency bands in a cell	Ericsson, ST-Ericsson
Yes	not treated		R2-116083	Support of multiple frequency bands in a cell	Ericsson, ST-Ericsson
Yes	not treated		R2-116084	SCell TA timer handling	Ericsson, ST-Ericsson
Yes	noted		R2-116085	Timing reference for SCell time alignment	Ericsson, ST-Ericsson
Yes	noted		R2-116086	On Pathloss reference and RLF/RLM on SCells	Ericsson, ST-Ericsson
Yes	noted		R2-116087	TA grouping mechanism	Ericsson, ST-Ericsson
Yes	noted		R2-116088	Summary of e-mail discussion [75b#34] LTE: MBSFN and measurement resource restrictions	Ericsson
Yes	revised		R2-116089	Parallell reception of RRC messages during Re-establishment	Ericsson, ST-Ericsson
Yes	not treated		R2-116090	Discussion on specific pathloss/timing reference cell	MediaTek
Yes	not treated		R2-116091	Proposed LS to RAN4 for Trigger Indication	MediaTek, Motorola, ZTE, Pantech, New Postcom
Yes	not treated		R2-116092	Unusable Frequency	MediaTek
No	withdrawn	Late	R2-116093	Clarification on RLF reporting	MediaTek
Yes	not treated		R2-116094	Further details on EAB	MediaTek
Yes	not treated		R2-116095	UE requirement for Rel-11 MBMS	MediaTek
Yes	not treated		R2-116096	Mechanism for MBMS interest indication	MediaTek

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116097	Improvements to mobility state estimation	Renesas Mobile Europe Ltd.
Yes	not treated		R2-116098	CR for excluding handover from mobility state estimation	Renesas Mobile Europe Ltd.
Yes	not treated		R2-116099	CR for counting handovers in other RATs for mobility state estimation	Renesas Mobile Europe Ltd.
Yes	not treated		R2-116100	CR for reporting UE mobility state to the network	Renesas Mobile Europe Ltd.
Yes	not treated		R2-116101	Enhancement of proximity indication in heterogeneous networks	Renesas Mobile Europe Ltd.
Yes	not treated		R2-116102	Further simulation results for Hetnet mobility	Renesas Mobile Europe Ltd.
Yes	not treated		R2-116103	Way forward with Hetnet simulations	Renesas Mobile Europe Ltd.
No	withdrawn	Late	R2-116104	FGI bit handling for TDD/FDD dual mode UEs	Renesas Mobile Europe Ltd.
Yes	not treated		R2-116105	Pcmax Inclusion for Inter-band PHR	InterDigital Communications
Yes	not treated		R2-116106	Open issues for MBMSInterestIndication	Huawei, HiSilicon
Yes	not treated		R2-116107	Triggers and Timers for Inter-band and RRH PHR	InterDigital Communications
Yes	noted		R2-116108	Analysis and Discussion on Autonomous Denials	InterDigital Communications, Nokia Seimens Networks and Nokia Corporation
Yes	not treated		R2-116109	Downlink Timing Reference for SCells of a Secondary TA Group	InterDigital Communications
Yes	noted		R2-116110	Downlink Pathloss Reference and RLM for SCells of a Secondary TA Group	InterDigital Communications
Yes	not treated		R2-116111	MSG1 Transmission for RACH Procedure for SCells	InterDigital Communications
Yes	not treated		R2-116112	MSG2 Reception for RACH Procedure for SCells	InterDigital Communications
Yes	not treated		R2-116113	MAC Timing Advance Command Control Element for SCells	InterDigital Communications
Yes	noted		R2-116114	How does the UE determine whether to prioritise a frequency in order to receive an MBMS service?	Huawei, HiSilicon

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted	Late	R2-116115	Report of the email discussion on [75b#38] - Joint: Applicability of extended wait timer	Alcatel-Lucent (rapporteur)
Yes	not treated		R2-116116	Clarification of the Extended Wait Time usage	Alcatel-Lucent (rapporteur)
Yes	not treated		R2-116117	ePLMN handling for MDT and RLF in Rel-11	Alcatel-Lucent
Yes	noted		R2-116118	Report of the email discussion on [75b#33] - LTE: ANR FGI bit	Alcatel-Lucent (rapporteur)
Yes	not treated		R2-116119	Further consideration on EAB mechanism	ETRI
Yes	revised		R2-116120	Email discussion: [75b#37] - LTE: HetNet large scale calibration simulations	Alcatel-Lucent (Rapporteur)
Yes	not treated		R2-116121	Open Issues with Large Scale HetNet Mobility Simulations	Alcatel-Lucent
Yes	noted		R2-116122	Update: Email discussion: [75#36] – LTE: HetNet: Calibration results of hotspot case	Alcatel-Lucent
Yes	not treated		R2-116123	Discussion on Context Fetch for RRC Connection Re-establishment in LTE HetNets	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	revised		R2-116124	Clarification of the event B1 and ANR related FGI bits	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE
Yes	revised		R2-116125	Clarification of the event B1 and ANR related FGI bits	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE
Yes	revised		R2-116126	Clarification of the event B1 and ANR related FGI bits	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE
Yes	noted		R2-116127	Analysis of cause of frequent keep-alive messages	Samsung
Yes	not treated		R2-116128	Discussion on Synchronization Related Aspects in LTE HetNets	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-116129	Further analysis for traffic classification	Samsung
Yes	not treated		R2-116130	Unified signalling approach for in-device co-existence	Samsung

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116131	Some aspects of DRX solution for in-device co-existence	Samsung
Yes	not treated		R2-116132	Cell specific TDD configuration Inter-band Carrier Aggregation	Samsung
Yes	rejected		R2-116133	36.304_CR_xxxx Correction to IRAT cell re-selection procedure	Samsung
Yes	not treated		R2-116134	EAB mechanism	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-116135	Requirements, Priority and Solution for MDT Location Information Enhancement	NTT DOCOMO, INC., MediaTek, Vodafone
Yes	noted		R2-116136	Cell update Confirm using dedicated or common H-RNTI	Alcatel-Lucent
Yes	not treated		R2-116137	Release of common E-DCH resources	Alcatel-Lucent
No	withdrawn	Late	R2-116138	Location Information for QoS measurements	NTT DOCOMO, INC.
Yes	not treated		R2-116139	RAN2 input for TR37.803 on Enhanced HNB mobility in CELL_FACH	Alcatel-Lucent
Yes	noted		R2-116140	SRB1 Mapping Info in CELL_FACH state	Alcatel-Lucent
Yes	not treated		R2-116141	Clarification of the Extended Wait Time usage	Alcatel-Lucent
Yes	noted		R2-116142	Triggering of In-device Coexistence Indication and Mobility	Motorola Mobility
Yes	not treated		R2-116143	Support for Remote Radio Head operation	Motorola Mobility
No	withdrawn	Late	R2-116144	Measurements for multi-band Carrier aggregation	Motorola Mobility
Yes	not treated		R2-116145	Signaling procedures for IDC avoidance	Ericsson, ST-Ericsson
No	withdrawn	Late	R2-116146	Minimizing unnecessary handovers in HetNet deployments	Motorola Mobility
No	withdrawn		R2-116147	Minimizing unnecessary handovers in HetNet deployments	Motorola Mobility
Yes	not treated		R2-116148	Accessibility measurements for MDT	Ericsson, ST-Ericsson
Yes	revised		R2-116149	HetNet large area simulation results	Nokia Siemens Networks, Nokia Corporation
Yes	agreed		R2-116150	Clarifications to HetNet Technical Report	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-116151	Small cell detection in HetNet environment	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-116152	UE mobility state estimation and HetNet	Nokia Siemens Networks, Nokia Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-116153	Seamless transition from CELL_FACH state to CELL_DCH state	Ericsson, ST-Ericsson
Yes	not treated		R2-116154	SI pre-emption upon RRC reconfiguration message	Ericsson, ST-Ericsson
Yes	not treated		R2-116155	SI pre-emption upon RRC reconfiguration message	Ericsson, ST-Ericsson
Yes	not treated		R2-116156	SI pre-emption upon RRC reconfiguration message	Ericsson, ST-Ericsson
Yes	noted		R2-116157	Re-direction to E-UTRA issues	Ericsson, ST-Ericsson, AT&T, NTT Docomo, TeliaSonera
Yes	not treated		R2-116158	Reduction of time in Idle mode after Release with re-direct to E-UTRA	Ericsson, ST-Ericsson
Yes	not treated		R2-116159	Reduction of time in Idle mode after Release with re-direct to E-UTRA	Ericsson, ST-Ericsson
Yes	not treated		R2-116160	Establishment Cause and Extended Wait Timer	Ericsson, ST-Ericsson
Yes	not treated		R2-116161	Open issues for CLTD	Ericsson, ST-Ericsson
Yes	noted		R2-116162	Fast Redirect to LTE	Ericsson, ST-Ericsson
Yes	revised		R2-116163	CR to 36.331 on cdma2000 references	Nokia Siemens Networks
Yes	revised		R2-116164	CR to 36.331 on cdma2000 references	Nokia Siemens Networks
Yes	not treated		R2-116165	On the support for per-HARQ-process activation in CELL_FACH and TTI alignment between CELL_FACH and CELL_DCH UEs	Ericsson, ST-Ericsson, Orange, Softbank Mobile, AT&T
Yes	not treated		R2-116166	Continuation of MDT upon PLMN change	Samsung
Yes	not treated		R2-116167	Signalling overhead of diverse data applications	Huawei, HiSilicon
Yes	not treated		R2-116168	DRX efficiency for diverse data applications	Huawei, HiSilicon
Yes	not treated		R2-116169	Inbound mobility to shared CSG cell	Samsung
Yes	not treated		R2-116170	Introducing support for multi-bands cells	Samsung
Yes	noted		R2-116171	Trace data analysis for eDDA	Renesas Mobile Europe Ltd.
Yes	noted		R2-116172	Parallel message transmission upon connection re-establishment	Samsung
Yes	not treated		R2-116173	Enhanced solution for beacon handling	Renesas Mobile Europe Ltd.
Yes	revised		R2-116174	Clarification on parallel message transmission upon connection re-establishment	Samsung
Yes	not treated		R2-116175	Measurement schemes and report triggers for IDC	Renesas Mobile Europe Ltd.

IPR2025-00720, OnePlus Ex. 1004
Page 259 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	rejected		R2-116176	Clarification on setting of dedicated NS value for CA by E-UTRAN	Samsung
Yes	not treated		R2-116177	MBMS enhancements for REL-11, Idle	Samsung
Yes	revised		R2-116178	Clarification on MBSFN and measurement resource restrictions	Ericsson, ST-Ericsson
Yes	not treated		R2-116179	Timing reference for SCell TA group	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-116180	Pathloss reference for SCell TA group	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-116181	TA group management	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-116182	TAT expiry of SCell TA group and TAT maintenance	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
No	withdrawn		R2-116183	MBMS enhancements for REL-11, Idle	Samsung
Yes	noted		R2-116184	Simultaneous transmissions of RACH and PUCCH/PUSCH/SRS	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
No	withdrawn	Late	R2-116185	Background traffic in LTE	Ericsson, ST-Ericsson
Yes	noted		R2-116186	Signalling and procedures for In-device coexistence	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-116187	MBMS UE capability extensions	Ericsson, ST-Ericsson
Yes	not treated		R2-116188	IDC Information forwarding	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-116189	Cell update-less RLC/PDCP unrecoverable error reporting and recovery	Renesas Mobile Europe Ltd, Research In Motion UK Limited
Yes	not treated		R2-116190	MBMSInterestIndication for connected UEs	Ericsson, ST-Ericsson
Yes	not treated		R2-116191	Introduction of cell update-less RLC/PDCP unrecoverable error reporting	Renesas Mobile Europe Ltd, Alcatel-Lucent, Huawei, HiSilicon, Research In Motion UK Limited

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116192	Introduction of cell update-less RLC/PDCP unrecoverable error recovery	Renesas Mobile Europe Ltd, Alcatel-Lucent, Huawei, HiSilicon, Research In Motion UK Limited
Yes	not treated		R2-116193	Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery	Renesas Mobile Europe Ltd, Alcatel-Lucent, Huawei, HiSilicon, Research In Motion UK Limited
Yes	not treated		R2-116194	MBMS autonomous frequency prioritization in idle mode	Ericsson, ST-Ericsson
Yes	noted		R2-116195	Enh CELL_FACH - Support concurrent deployment of 2ms and 10ms TTI in a cell	Ericsson, ST-Ericsson
Yes	not treated		R2-116196	Reducing power consumption during UL scheduling	Ericsson, ST-Ericsson
Yes	revised		R2-116197	Discussion on the removal of the stored IE HARQ Info	Renesas Mobile Europe Ltd
Yes	not treated		R2-116198	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd
Yes	not treated		R2-116199	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd
Yes	not treated		R2-116200	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd
Yes	not treated		R2-116201	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd
Yes	revised		R2-116202	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116203	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116204	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116205	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	noted		R2-116206	Considerations for HSDPA multiflow skew problem	Renesas Mobile Europe Ltd
Yes	not treated		R2-116207	Positioning enhancements for MDT	Ericsson, ST-Ericsson
Yes	withdrawn		R2-116208	Measurement events for NC-4C-HSDPA	Renesas Mobile Europe Ltd
Yes	noted		R2-116209	U-plane optimisation for 8C-HSDPA	Renesas Mobile Europe Ltd
Yes	noted		R2-116210	Considerations for HSDPA multiflow mobility aspect	Renesas Mobile Europe Ltd

IPR2025-00720, OnePlus Ex. 1004
Page 261 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	withdrawn		R2-116211	LS on RLF reporting and user privacy	Nokia Siemens Networks
Yes	noted		R2-116212	Report of the email discussion on [75b#36]-LTE: Admission and Congestion control for MBMS service continuity	Alcatel-Lucent (Rapporteur)
Yes	not treated		R2-116213	Prevention of UE establishing a connection in a congested MBMS carrier	Alcatel-Lucent
Yes	not treated		R2-116214	Requirement on MBMSInterestIndication message transmission instance	Alcatel-Lucent
Yes	not treated		R2-116215	Remaining issues on idle mode frequency prioritisation for cell reselection	Alcatel-Lucent
Yes	not treated		R2-116216	Connected mode paging enhancement	Alcatel-Lucent
Yes	not treated		R2-116217	Measurements for QoS verification	Interdigital
Yes	not treated		R2-116218	Timing and Pathloss References for SCell	ETRI
Yes	not treated		R2-116219	Contention based RA procedure in Multi-TA	Sharp
Yes	revised		R2-116220	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	revised		R2-116221	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	not treated		R2-116222	Timing and pathloss reference in Scell TA group	LG Electronics Inc.
Yes	postponed		R2-116223	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
No	withdrawn		R2-116224	Signaling for TA group (re-)configuration	LG Electronics Inc.
Yes	not treated		R2-116225	Scell RACH trigger	LG Electronics Inc.
Yes	not treated		R2-116226	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	not treated		R2-116227	PHR and TAT	LG Electronics Inc.
Yes	not treated		R2-116228	RACH applicability and TA group	LG Electronics Inc.

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116229	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	noted		R2-116230	CSI/SRS reporting at DRX changes	LG Electronics Inc.
Yes	not treated		R2-116231	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	not treated		R2-116232	CSI/SRS reporting at DRX changes	LG Electronics Inc.
Yes	revised		R2-116233	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	noted		R2-116234	Clarification on HS-DSCH TB size table for non-64QAM	Panasonic, Nokia Siemens Networks
Yes	revised		R2-116235	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	revised		R2-116236	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	revised		R2-116237	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	noted		R2-116238	Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs	Qualcomm Incorporated
Yes	revised		R2-116239	Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs	Qualcomm Incorporated
Yes	rejected		R2-116240	Clarification of F-DPCH transmission with STTD	Qualcomm Incorporated
Yes	not treated		R2-116241	Access restriction for LTE EAB	Samsung
Yes	not treated		R2-116242	Clarification of F-DPCH transmission with STTD	Qualcomm Incorporated
Yes	not treated		R2-116243	Clarification of F-DPCH transmission with STTD	Qualcomm Incorporated
Yes	not treated		R2-116244	EAB update mechanism	Samsung
Yes	not treated		R2-116245	Extend the carrier capability for two-carrier HSDPA for 1.28Mcps TDD	Qualcomm Incorporated
Yes	not treated		R2-116246	Rel-11 MDT enhancement on location information	Samsung
Yes	not treated		R2-116247	Throughput and loss rate measurements for MDT QoS verification	LG Electronics Inc.
Yes	not treated		R2-116248	Consideration on radio link failure handling on SCell	Huawei, HiSilicon

IPR2025-00720, OnePlus Ex. 1004
Page 263 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-116249	Correction to the number of soft channel bits	Nokia Siemens Networks, Nokia Corporation, NTT DOCOMO, LG Electronics Inc., Samsung, Fujitsu
No	withdrawn		R2-116250	On EAB SIB update	Qualcomm Incorporated
Yes	not treated		R2-116251	Handling of deactivation timer for multiple TA	ASUSTeK
Yes	not treated		R2-116252	Limitation of MBMS interest transmission	ASUSTeK
Yes	not treated		R2-116253	MBMS service continuity for connection re-establishment	ASUSTeK
Yes	noted	Late	R2-116254	Analysis on data splitting options for inter-Node multiflow transmissions	InterDigital Communications
No	withdrawn	Late	R2-116255	Mobility considerations for multiflow operation	InterDigital Communications
No	withdrawn		R2-116256	Disabling of default radio configurations in CELL_FACH in Rel-8	Nokia Siemens Networks, Nokia Corporation
No	withdrawn		R2-116257	Disabling of default radio configurations in CELL_FACH in Rel-8	Nokia Siemens Networks, Nokia Corporation
Yes	revised		R2-116258	Disabling of default radio configurations in CELL_FACH in Rel-8	Nokia Siemens Networks, Nokia Corporation
Yes	revised		R2-116259	Stage 2 agreements on service continuity and location information for MBMS for LTE	Huawei
Yes	not treated		R2-116260	Improvement for small cell discovery and identification	ITRI, Acer
Yes	revised		R2-116261	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks, Nokia Corpporation
Yes	noted	Late	R2-116262	Discussion on R99 RACH fallback mechanisms	InterDigital Communications
Yes	not treated		R2-116263	Load control for idle mode UEs	Huawei, HiSilicon
Yes	revised		R2-116264	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-116265	The details of trigger for the IDC Problems	New Postcom
Yes	noted		R2-116266	Additional evaluation metrics for eDDA	NTT DOCOMO, INC.

IPR2025-00720, OnePlus Ex. 1004
Page 264 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-116267	UE behaviour regarding TTI bundling and SCell release	HTC
Yes	noted		R2-116268	Background traffic from Android OS	NTT DOCOMO, INC.
Yes	not treated		R2-116269	Considerations on CA Signaling Improvement	Intel Corporation
Yes	not treated		R2-116270	TAT handling upon the removal of the last SCell in sTAG	LG Electronics Inc.
Yes	not treated		R2-116271	Timing and pathloss reference for SCell to support MTA and inter-band CA	Intel Corporation
Yes	noted		R2-116272	Network Controlled CELL_FACH mobility	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-116273	Issues related to UE mobility state estimation in Hetnet	Samsung
Yes	not treated		R2-116274	Overall procedure and trigger indication for in-device coexistence	Intel Corporation
Yes	noted		R2-116275	Limitations of DRX solution for LTE+BT voice usage scenario	Intel Corporation
No	withdrawn	Late	R2-116276	Mobility performance in HetNet deployment	Intel Corporation
Yes	not treated		R2-116277	Congestion Control and Priority Handling for MBMS Services	Intel Corporation
Yes	not treated		R2-116278	Clarifications on Use of MBMSInterestIndication	Intel Corporation
Yes	not treated		R2-116279	Signalling Overhead For Background Traffic	Intel Corporation
Yes	not treated		R2-116280	PUCCH Utilization for Background Traffic	Intel Corporation
Yes	not treated		R2-116281	Further discussion on EAB for RAN overload handling	Intel Corporation
Yes	not treated		R2-116282	Performance comparison of different EAB information update mechanisms	Intel Corporation
Yes	not treated		R2-116283	Positioning Enhancements for MDT	Intel Corporation
Yes	noted		R2-116284	Report of [75b#00] PSC range for CSG cells	LG Electronics Inc.
Yes	noted		R2-116285	Discussion on PSC range for CSG cells	LG Electronics Inc.
Yes	rejected		R2-116286	CR to 25.331 PSC range for CSG cells	LG Electronics Inc.
Yes	not treated		R2-116287	Further Discussion on EAB	LG Electronics Inc.
Yes	not treated		R2-116288	CR to 36.331 PCI range for CSG cells	LG Electronics Inc.

IPR2025-00720, OnePlus Ex. 1004
Page 265 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116289	MBMS Assistance Information	LG Electronics Inc.
No	withdrawn		R2-116290	Enhancement of Detailed Location Information	LG Electronics Inc.
No	withdrawn		R2-116291	PDSCH in MBSFN subframes	Samsung
Yes	not treated		R2-116292	Further discussion on MBMS interest indication	LG Electronics Inc.
Yes	not treated		R2-116293	Enhancement of Detailed Location Information	LG Electronics Inc.
Yes	not treated		R2-116294	MDT performance at early LTE deployment scenario	LG Electronics Inc.
Yes	not treated		R2-116295	Mobility between MBMS and CSG	LG Electronics Inc.
Yes	not treated		R2-116296	Mobility State Estimate Enhancement	LG Electronics Inc.
No	withdrawn		R2-116297	CBRA on SCell	Samsung
Yes	not treated		R2-116298	Continuity of MDT across multiple PLMNs	LG Electronics Inc.
Yes	not treated		R2-116299	CBRA on SCell	Samsung
Yes	not treated		R2-116300	Pathloss reference for SCell	Samsung
Yes	not treated		R2-116301	Providing neighboring MBSFN information on MCCH	ITRI
Yes	not treated		R2-116302	An issue of power calculation	Samsung
Yes	not treated		R2-116303	Discussions on PHR for SCell in Rel-11	Fujitsu
Yes	not treated		R2-116304	Draft LS on Tx architecture	Samsung
Yes	not treated		R2-116305	DRX based solution for LTE+WiFi offload (power saving mode)	Fujitsu
No	withdrawn		R2-116306	Failure of RACH on SCell	Samsung
Yes	not treated		R2-116307	Discussion on the scenario for UE mobility state estimation	Fujitsu
Yes	not treated		R2-116308	Failure of RACH on SCell	Samsung
Yes	not treated		R2-116309	Trigger of RA procedure on SCell(s)	Fujitsu
Yes	not treated		R2-116310	Remaining issues on SCell RA procedure	Fujitsu
Yes	not treated		R2-116311	Collision between PUCCH and SCell PRACH	Fujitsu
Yes	not treated		R2-116312	Type-0 SRS and TAT configurations handling issues	HTC
Yes	not treated		R2-116313	Handling SCellDeactivationTimer during RACH on SCell	HTC
Yes	not treated		R2-116314	draft LS on Pathloss Reference for SCell-only TAG	Huawei
Yes	not treated		R2-116315	Fallback to R99 RACH	Nokia Siemens Networks, Nokia Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-116316	Considerations on Fast EAB Information Update	Institute for Information Industry (III), Coiler Corporation
Yes	not treated	Late	R2-116317	Simulation results of large scale HetNet mobility	MediaTek
Yes	noted	Late	R2-116318	Report of [75b#35] - LTE: FGI bit handling for FDD/TDD dual mode UE	Qualcomm Incorporated
Yes	not treated		R2-116319	Necessary procedure for avoiding ping-pong to problematic frequency	LG Electronics Inc.
Yes	not treated		R2-116320	New measurement for detecting IDC interference	LG Electronics Inc.
Yes	not treated		R2-116321	Assistant information for autonomous denial	LG Electronics Inc.
Yes	not treated	Late	R2-116322	Further discussion on FDD/TDD dual mode UEs	Qualcomm Incorporated
Yes	not treated		R2-116323	DRX procedure for avoiding IDC interference	LG Electronics Inc.
Yes	noted		R2-116324	SRVCC handover when more than one PS voice bearer exists	HTC
Yes	noted		R2-116325	Way forward on UE battery life improvement and signalling reduction	Ericsson, ST-Ericsson, Alcatel-Lucent, Qualcomm Incorporated
Yes	not treated		R2-116326	Further Enhanced UE DRX	Ericsson, ST-Ericsson
Yes	revised		R2-116327	Clarification of first bit in BIT STRING definitions	Qualcomm Incorporated
Yes	noted		R2-116328	DRX solution for IDC interference avoidance	Ericsson, ST-Ericsson, Huawei
Yes	revised		R2-116329	Clarification of first bit in BIT STRING definitions	Qualcomm Incorporated
Yes	noted		R2-116330	Handling of BT and WiFi control signaling in an IDC interference scenario	Ericsson, ST-Ericsson
Yes	not treated		R2-116331	Support for Multiple Serving Cells in LPP	Qualcomm Incorporated
Yes	revised		R2-116332	Draft LS on Default Radio Configurations for TDD	Anritsu
Yes	not treated		R2-116333	UE behavior about measurements for eICIC with MBSFN subframes	Qualcomm Incorporated
Yes	not treated		R2-116334	Discussion on Some Aspects of Signalling for CoMP Operation	Fujitsu
Yes	noted		R2-116335	PUCCH Improvement	Fujitsu
No	withdrawn	Late	R2-116336	Congestion and admission control for idle and connected UEs	Huawei, HiSilicon
No	withdrawn	Late	R2-116337	Considerations on EAB mechanism	Ericsson, ST-Ericsson

IPR2025-00720, OnePlus Ex. 1004
Page 267 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-116338	Correction about the presence of Security Revert Status Indicator in CELL UPDATE Message	Nokia Siemens Networks
No	withdrawn		R2-116339	Reconfigure TA grouping	HTC
Yes	not treated		R2-116340	TA group configuration and reconfiguration	HTC
Yes	not treated		R2-116341	Priorities for MDT coverage optimization	MediaTek
Yes	postponed	Late	R2-116342	Extend the carrier capability for two-carrier HSDPA for 1.28Mcps TDD	Qualcomm Incorporated, TD Tech, ZTE, CATT
Yes	noted		R2-116343	Preliminary PDCCH evaluation	China Unicom
Yes	postponed	Late	R2-116344	Modification of the security context storage on the UICC	Nokia Siemens Networks, Nokia Corporation, Renesas Mobile Europe Ltd.
Yes	agreed		R2-116345	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation
Yes	agreed		R2-116346	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation
Yes	agreed		R2-116347	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation
Yes	agreed		R2-116348	Cleanup corrections for enhanced uplink operation with MAC-i	ZTE Corporation
Yes	noted		R2-116349	Email discussion: [75b#37] - LTE: HetNet large scale calibration simulations	Alcatel-Lucent (Rapporteur)
Yes	noted	Late	R2-116350	Soft Buffer Handling in MAC	Ericsson, ST-Ericsson
Yes	noted	Late	R2-116351	Summary of email discussion [75b#32] CSI and SRS reporting at unexpected DRX state change	Ericsson
Yes	noted		R2-116352	Discussion on the removal of the stored IE HARQ Info	Renesas Mobile Europe Ltd
Yes	not treated		R2-116353	CSI and SRS reporting in relation to DRX	Samsung, Panasonic
Yes	rejected		R2-116354	Parallell reception of RRC messages during Re-establishment	Ericsson, ST-Ericsson, Alcatel-Lucent
Yes	noted		R2-116355	Report of ad hoc on LTE HetNet mobility simulations	Alcatel-Lucent

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-116356	Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-116357	Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-116358	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-116359	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
No	withdrawn		R2-116360	CSI and SRS reporting at unexpected DRX state change	Ericsson, ST-Ericsson
Yes	revised		R2-116361	Draft reply LS to S3-111225= R2-115677 on on length of security in PWS (to: SA3; cc: -; contact: RIM)	RIM
No	withdrawn		R2-116362	Draft reply LS to S5-113214 = R2-115675 on MDT and RAN sharing (to: SA5; cc: -; contact: NSN)	NSN
Yes	revised		R2-116363	Draft reply LS to S4-111114 = R2-115678 on MBMS FEC Evaluation Framework (to: SA4; cc: -; contact: Qualcomm)	Qualcomm
Yes	agreed		R2-116364	Clarification of PSC range for CSG cells	Nokia Corporation, Nokia Siemens Networks, Renesas Mobile Europe Ltd, Deutsche Telekom, ST-Ericsson, Ericsson, Qualcomm
Yes	revised		R2-116365	Draft LS on network behaviour for Extended Wait Timer (to: CT1; cc: -; contact: Alcatel-Lucent)	Alcatel-Lucent
Yes	noted	Late	R2-116366	On alignment between the RAN1 and RAN2 work on NBPS	Ericsson

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116367	Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	agreed		R2-116368	Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	agreed		R2-116369	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	agreed		R2-116370	CR to 25.304 on Clarification of inter-RAT cell reselection enhancements	NTT DOCOMO, INC.
Yes	revised		R2-116371	Draft LS on (to: GERAN2; cc: -; contact: NTT DOCOMO)	NTT DOCOMO, INC.
Yes	revised		R2-116372	Draft LS on SRVCC handover (to: SA2; cc: -; contact: HTC)	HTC
Yes	agreed		R2-116373	Small Corrections to 37.320	CATT
Yes	agreed		R2-116374	UE soft buffer handling in MAC	Ericsson
Yes	agreed		R2-116375	LS response to C1-113759 = R2-114852 on the scope of extended wait time on AS layer (to: CT1; cc: SA2; contact: Alcatel-Lucent)	RAN2
Yes	revised		R2-116376	Clarification on MBSFN and measurement resource restrictions	Ericsson, ST-Ericsson
Yes	revised		R2-116377	Draft LS on clarification on MBSFN and measurement resource restrictions (to: RAN4; cc: -; contact: Ericsson)	Ericsson
Yes	agreed		R2-116378	CSI/SRS reporting at DRX state transitions	Panasonic
Yes	agreed		R2-116379	Corrections to enhancedDualLayerTDD	CATT
Yes	agreed		R2-116380	Corrections to enhancedDualLayerTDD	CATT
Yes	agreed		R2-116381	Optionality of UE Rx-Tx time difference report	Panasonic

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116382	Optionality of UE Rx-Tx time difference report	Panasonic
Yes	agreed		R2-116383	CSI/SRS reporting at DRX state transitions	Panasonic
Yes	agreed		R2-116384	Clarification of the event B1 and ANR related FGI bits	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE
Yes	agreed		R2-116385	Clarification of the event B1 and ANR related FGI bits	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE
Yes	agreed		R2-116386	Clarification of the event B1 and ANR related FGI bits	Alcatel-Lucent, Huawei, HiSilicon, Nokia Corporation, Nokia Siemens Networks, NTT DoCoMo, ZTE
Yes	revised		R2-116387	Draft LS on Handling of UE Capabilities supporting both TDD&FDD in the Network (to: RAN; cc: -; contact: Qualcomm)	Qualcomm
Yes	agreed		R2-116388	Correction on determining SPS occasions	Samsung, Ericsson, LG Electronics Inc., Nokia Siemens Networks, Qualcomm
Yes	agreed		R2-116389	Clarification on SPS intervals	Samsung, Ericsson, Huawei, HiSilicon, LG Electronics Inc., Nokia Siemens Networks, Qualcomm, ST-Ericsson, ZTE

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116390	Clarification on SPS intervals	Samsung, Ericsson, Huawei, HiSilicon, LG Electronics Inc., Nokia Siemens Networks, Qualcomm, ST-Ericsson, ZTE
Yes	revised		R2-116391	36.331 CR SPS reconfiguration	Huawei, HiSilicon
Yes	agreed		R2-116392	36.331 CR SPS reconfiguration	Huawei, HiSilicon
Yes	agreed		R2-116393	36.331 CR SPS reconfiguration	Huawei, HiSilicon
Yes	not treated		R2-116394	HetNet large area simulation results	Nokia Siemens Networks, Nokia Corporation
Yes	agreed		R2-116395	Clarification on parallel message transmission upon connection re-establishment	Samsung
Yes	revised		R2-116396	Correction on notation of SRS transmission comb	ZTE Corporation
Yes	revised		R2-116397	Clarification of list sizes in measurement configuration stored by UE	Ericsson, ST-Ericsson
Yes	agreed		R2-116398	Correction to the number of soft channel bits	Nokia Siemens Networks, Nokia Corporation, NTT DOCOMO, LG Electronics Inc., Samsung, Fujitsu
Yes	agreed		R2-116399	Clarification of first bit in BIT STRING definitions	Qualcomm Incorporated
Yes	revised		R2-116400	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	revised		R2-116401	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	revised		R2-116402	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	revised		R2-116403	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	noted		R2-116404	Call Drop Analysis for RLC Unrecoverable Error	Research In Motion UK Limited, Renesas Mobile Europe Ltd

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-116405	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	revised		R2-116406	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	rejected		R2-116407	Disabling of default radio configurations in CELL_FACH in Rel-8	Nokia Siemens Networks, Nokia Corporation
Yes	rejected		R2-116408	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks, Nokia Corpporation
Yes	rejected		R2-116409	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks, Nokia Corporation
Yes	agreed		R2-116410	Clarification to absolute priority based criteria	Research In Motion UK Limited
Yes	agreed		R2-116411	Clarification to absolute priority based criteria	Research In Motion UK Limited
Yes	revised		R2-116412	Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs	Qualcomm Incorporated
Yes	revised		R2-116413	Improved Deferred Measurement Control Reading	Ericsson, ST-Ericsson, Nvidia
Yes	revised		R2-116414	DPA related corrections in TS 25.308 for LCR TDD	TD Tech
Yes	agreed		R2-116415	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7	Anritsu, CATT
Yes	agreed		R2-116416	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7	Anritsu, CATT
Yes	agreed		R2-116417	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT
Yes	agreed		R2-116418	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT
Yes	agreed		R2-116419	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116420	Correction to Default Radio Configurations for TDD: invalidation of identities 0, 1, 5, 6, 7, 22	Anritsu, CATT
Yes	agreed		R2-116421	Correction to Default Radio Configurations for TDD: number of TFCI coding bits	Anritsu, CATT
Yes	agreed		R2-116422	LS on Default Radio Configurations for TDD (to: RAN5, GERAN3; cc: -; contact: Anritsu)	RAN2
Yes	agreed		R2-116423	E-AGCH ECSN for Multi-carrier HSUPA for LCR TDD	TD Tech
Yes	revised		R2-116424	Draft reply LS to R3-113052 = R2-115680 on CSFB awareness in UMTS (to: RAN3; cc: SA2; contact: Vodafone)	Vodafone
Yes	revised		R2-116425	Correction about the presence of Security Revert Status Indicator in CELL UPDATE Message	Nokia Siemens Networks
Yes	agreed		R2-116426	Alignment of the text description for SIB 18 for UEs in idle mode and connected mode	Broadcom Corporation
Yes	agreed		R2-116427	Correction of capability table	ZTE Corporation, Panasonic
Yes	agreed		R2-116428	25.331 trivial corrections	Ericsson
Yes	agreed		R2-116429	Reply LS to R3-113052 = R2-115680 on CSFB awareness in UMTS (to: RAN3; cc: SA2; contact: Vodafone)	RAN2
Yes	revised		R2-116430	Introduction of uplink CLTD in 25.302	Huawei, HiSilicon
Yes	not treated	Late	R2-116431	Identification of the issues for CELL_FACH mobility to/from HNB cells	Alcatel-Lucent
Yes	agreed		R2-116432	Corrections to UE test loop mode 4	Ericsson, ST-Ericsson, Telecom Italia, Orange, Deutsche Telekom
Yes	revised		R2-116433	UPA related corrections in TS 25.319 for LCR TDD	TD Tech
Yes	agreed		R2-116434	Downlink related corrections in TS 25.308 for LCR TDD	TD Tech
Yes	revised	Late	R2-116435	UPA related corrections in TS 25.319 for LCR TDD	TD Tech
Yes	revised		R2-116436	Addition of the missing value ranges for 1.28Mbps TDD capabilities	CATT

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116437	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	agreed		R2-116438	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	agreed		R2-116439	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	agreed		R2-116440	Correction of BCCH mapping on HS-DSCH	Qualcomm Incorporated
Yes	agreed		R2-116441	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	agreed		R2-116442	Clarify the total number of soft channel bits of HSDSCH physical layer category 19 and 20	Qualcomm Incorporated, Renesas Mobile Europe Ltd.
Yes	agreed		R2-116443	Introduction of the frequency specific compressed mode	Nokia Siemens Networks
Yes	agreed		R2-116444	Introduction of the frequency specific compressed mode	Nokia Siemens Networks
Yes	revised		R2-116445	Addition of the missing value ranges for 1.28Mbps TDD capabilities	CATT
Yes	agreed		R2-116446	Uplink related corrections in TS 25.319 for LCR TDD	TD Tech
Yes	agreed		R2-116447	Uplink related corrections in TS 25.319 for LCR TDD	TD Tech
Yes	revised		R2-116448	Update of uplink OLTD stage-2	Huawei, HiSilicon
Yes	agreed		R2-116449	Introduction of uplink OLTD in 25.306	Huawei, HiSilicon
Yes	revised		R2-116450	Support early implementation of uplink OLTD in Rel-10	Huawei, HiSilicon
Yes	revised		R2-116451	Introduction of uplink OLTD in 25.331	Huawei, HiSilicon
Yes	agreed		R2-116452	Update of uplink CLTD stage-2	Huawei, HiSilicon
Yes	agreed		R2-116453	Introduction of uplink CLTD in 25.306	Huawei, HiSilicon
Yes	revised		R2-116454	Introduction of uplink CLTD in 25.331	Huawei, HiSilicon
Yes	agreed		R2-116455	Introduction of 8C-HSDPA in 25.306	Ericsson, ST-Ericsson
Yes	agreed		R2-116456	Introduction of 8C-HSDPA in 25.308	Ericsson, ST-Ericsson
Yes	agreed		R2-116457	Introduction of 8C-HSDPA in 25.319	Ericsson, ST-Ericsson

IPR2025-00720, OnePlus Ex. 1004
Page 275 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-116458	Introduction of 8C-HSDPA in 25.321	Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd, InterDigital, Alcatel-Lucent, Qualcomm Incorporated, Nokia Siemens Networks
Yes	revised		R2-116459	Introduction of 8C-HSDPA in 25.331	Ericsson, ST-Ericsson
Yes	revised		R2-116460	Draft LS on peak rate limitations in CT1 specifications for 8C HSDPA	Ericsson
Yes	revised		R2-116461	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116462	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116463	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116464	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
No	withdrawn		R2-116465	Void	-
Yes	revised		R2-116466	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116467	Draft LS on peak rate limitations in CT1 specifications for 8C HSDPA	Ericsson
Yes	agreed		R2-116468	Correction about the presence of Security Revert Status Indicator in CELL UPDATE Message	Nokia Siemens Networks
Yes	agreed		R2-116469	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	agreed		R2-116470	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	agreed		R2-116471	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	revised		R2-116472	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	agreed		R2-116473	Introduction of 8C-HSDPA in 25.302	Ericsson, ST-Ericsson

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116474	Introduction of uplink CLTD in 25.302	Huawei, HiSilicon
Yes	agreed		R2-116475	Introduction of 8C-HSDPA in 25.321	Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd, InterDigital, Alcatel-Lucent, Qualcomm Incorporated, Nokia Siemens Networks
Yes	agreed		R2-116476	LS on peak rate limitations in CT1 specifications for 8C-HSDPA (to: CT1; cc: CT4, RAN3; contact: Ericsson)	RAN2
Yes	agreed		R2-116477	Clarification to the handling of HS-DSCH TB size table	Renesas Mobile Europe Ltd
Yes	technically endorsed		R2-116478	Preparation of REL-11 ASN.1 critical extensions	Ericsson, ST-Ericsson
Yes	revised		R2-116479	Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs	Qualcomm Incorporated
Yes	agreed		R2-116480	Addressing the issue of inconsistent HARQ memory partitioning for high-peak-rate UEs	Qualcomm Incorporated
Yes	agreed		R2-116481	Improved Deferred Measurement Control Reading	Ericsson, ST-Ericsson, Nvidia
Yes	agreed		R2-116482	Addition of the missing value ranges for 1.28Mbps TDD capabilities	CATT
Yes	agreed		R2-116483	Clarification of PCI range for CSG cells	Qualcomm Incorporated
No	withdrawn		R2-116484	Void	-
No	withdrawn		R2-116485	Void	-
No	withdrawn		R2-116486	Void	-
No	withdrawn		R2-116487	Void	-
No	withdrawn		R2-116488	Void	-
No	withdrawn		R2-116489	Void	-
No	withdrawn		R2-116490	Void	-
No	withdrawn		R2-116491	Void	-

IPR2025-00720, OnePlus Ex. 1004
Page 277 of 700

Uploaded	status	Late	Tdoc	Title	Source
No	withdrawn		R2-116492	Void	-
No	withdrawn		R2-116493	Void	-
No	withdrawn		R2-116494	Void	-
No	withdrawn		R2-116495	Void	-
No	withdrawn		R2-116496	Void	-
No	withdrawn		R2-116497	Void	-
No	withdrawn		R2-116498	Void	-
No	withdrawn		R2-116499	Void	-
Yes	agreed		R2-116500	Clarification of first bit in BIT STRING definitions	Qualcomm Incorporated
Yes	revised		R2-116501	Draft LS on Parallel transmission of RACH and PUCCH/PUSCH/SRS for CA enhancement (to: RAN1; cc: -; contact: Alcatel-Lucent)	Alcatel-Lucent
Yes	revised		R2-116502	Draft Minutes of joint RAN2/SA1/SA2/CT1 ad hoc on EAB requirements	ETSI MCC
Yes	endorsed		R2-116503	36.300 CR introducing LTE Carrier Aggregation Enhancements	Nokia Corporation
Yes	revised		R2-116504	TR36.822 v0.1.1 LTE RAN Enhancements for Diverse Data Applications	Research In Motion UK Limited
Yes	revised		R2-116505	Draft reply LS to S4-111124 = R2-115679 on (to: SA4; cc: -; contact: Qualcomm)	Qualcomm
No	withdrawn		R2-116506	CR to 36.331 on cdma2000 references	Nokia Siemens Networks
No	withdrawn		R2-116507	CR to 36.331 on cdma2000 references	Nokia Siemens Networks
Yes	endorsed		R2-116508	Stage 2 agreements on service continuity and location information for MBMS for LTE	Huawei
Yes	noted		R2-116509	On EAB applicability in AS	ZTE Corporation
Yes	endorsed		R2-116510	36.300 CR introducing Signalling and procedure for interference avoidance for in-device coexistence (status after RAN2 #76)	CMCC
Yes	agreed		R2-116511	Clarification on MBSFN and measurement resource restrictions	Ericsson, ST-Ericsson
Yes	agreed		R2-116512	Reply LS to R4-114853 = R2-114873 on UE measurements with blank MBSFN subframes for eICIC (to: RAN4; cc: -; contact: Ericsson)	RAN2

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116513	Correction on notation of SRS transmission comb	ZTE Corporation
Yes	revised		R2-116514	Draft CR for 36.300 NBPS Support in LTE	TruePosition
Yes	agreed		R2-116515	Reply LS to S4-111114 = R2-115678 on MBMS FEC Evaluation Framework (to: SA4; cc: RAN1; contact: Qualcomm)	RAN2
Yes	revised		R2-116516	Clarification of list sizes in measurement configuration stored by UE	Ericsson, ST-Ericsson
Yes	revised		R2-116517	TR 36.839 v0.3.1 on HetNet mobility enhancements	Alcatel-Lucent
Yes	revised		R2-116518	CR to 37.320 on agreements about REL-11 enhanced MDT agreements of RAN2 #76	MediaTek
Yes	noted		R2-116519	Way forward on EAB info update mechanism for LTE	Huawei
No	withdrawn		R2-116520	Correction to UE handling of delay tolerant wait timer in RRC Connection Release	Renesas Mobile Europe Ltd.
Yes	agreed		R2-116521	Clarification of list sizes in measurement configuration stored by UE	Ericsson, ST-Ericsson
Yes	revised		R2-116522	Draft LS (to: CT1; cc: SA2, RAN3; contact: ZTE)	ZTE Corporation
Yes	agreed		R2-116523	36.331 CR SPS reconfiguration	Huawei, HiSilicon
Yes	agreed		R2-116524	LS on Clarification of inter-RAT Cell reselection enhancements (to: GERAN2; cc: -; contact: NTT DOCOMO)	RAN2
Yes	agreed		R2-116525	LS on NAS->AS indication for access requests subject to EAB (to: CT1; cc: SA2; contact: ZTE)	RAN2
Yes	agreed		R2-116526	Reply LS to S4-111124 = R2-115679 on MBMS assistance information for service continuity (to: SA4; cc: -; contact: Qualcomm)	RAN2

IPR2025-00720, OnePlus Ex. 1004
Page 279 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116527	Report of RAN2 #75bis, Zhuhai, China, 10.10.-14.10.2011	ETSI MCC
Yes	agreed		R2-116528	Correction on RN security	RAN3
Yes	agreed		R2-116529	Correction of Emergency call	RAN3
Yes	agreed		R2-116530	HeNB Architecture Clarification	RAN3
Yes	rejected		R2-116531	Correction of Support for RACH optimization	RAN3
Yes	agreed		R2-116532	Correction of inbound mobility	RAN3
Yes	agreed		R2-116533	Correction of MBMS Resumption Function	RAN3
Yes	rejected		R2-116534	MME behavior in case of broken SCTP connection	RAN3
Yes	agreed		R2-116535	Routing of MME Direct Information Transfer message	RAN3
Yes	agreed		R2-116536	Correction of support for Mobility Robustness Optimisation	RAN3
Yes	agreed		R2-116537	Clarification of MRO Unnecessary Handover	RAN3
Yes	agreed		R2-116538	Correction of the MRO stage-2 description	RAN3
Yes	agreed		R2-116539	Addition of M3 Setup	RAN3
Yes	agreed		R2-116540	Correction of MCCH Update Synchronization mechanism	RAN3
Yes	agreed		R2-116541	Update of uplink OLTD stage-2	Huawei, HiSilicon
Yes	agreed		R2-116542	Support early implementation of uplink OLTD in Rel-10	Huawei, HiSilicon
Yes	agreed		R2-116543	Introduction of uplink OLTD in 25.331	Huawei, HiSilicon
Yes	agreed		R2-116544	Introduction of uplink CLTD in 25.331	Huawei, HiSilicon
Yes	agreed		R2-116545	TR 36.839 v0.4.0 on HetNet mobility enhancements	Alcatel-Lucent

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-116546	Introduction of 8C-HSDPA in 25.331	Ericsson, ST-Ericsson
Yes	endorsed		R2-116547	Introduction of MDT enhancements	MediaTek
Yes	noted		R2-116548	Notes on the SA WG2, RAN WG2, RAN WG3, CT WG1 Joint Meeting on Extended Wait, SRVCC capability and vSRVCC	ETSI MCC
Yes	noted		R2-116549	Minutes of joint RAN2/SA1/SA2/CT1 ad hoc on EAB requirements	ETSI MCC
Yes	agreed		R2-116550	Clarification on parallel message transmission upon connection re-establishment	Samsung
Yes	agreed		R2-116551	Clarification on parallel message transmission upon connection re-establishment	Samsung
Yes	agreed		R2-116552	LS on Parallel transmissions of PRACH and PUSCH/PUCCH/SRS (to: RAN1; cc: RAN4; contact: Alcatel-Lucent)	RAN2
Yes	agreed		R2-116553	LS on Limitation on PS voice RAB for Intra UMTS SRVCC (to: SA2; cc: -; contact: HTC)	RAN2
Yes	revised		R2-116554	Draft reply LS to S3-111225= R2-115677 on on length of security in PWS (to: SA3; cc: -; contact: RIM)	RIM
Yes	revised		R2-116555	Draft LS on Handling of UE Capabilities supporting both TDD&FDD in the Network (to: RAN; cc: -; contact: Qualcomm)	Qualcomm
Yes	endorsed		R2-116556	Draft CR for 36.300 NBPS Support in LTE	TruePosition
Yes	agreed		R2-116557	LS on Capability handling of LTE TDD and FDD modes (to: RAN; cc: -; contact: Qualcomm)	RAN2
Yes	agreed		R2-116558	Reply LS to S3-111225 = R2-115677 on length of security in PWS (to: SA3; cc: CT1, SA1, SA2, GERAN2; contact: RIM)	RAN2
Yes	agreed		R2-116559	TR36.822 v0.2.0 LTE RAN Enhancements for Diverse Data Applications	Research In Motion UK Limited

IPR2025-00720, OnePlus Ex. 1004
Page 281 of 700

Appendix E

TSG-RAN Working Group 2 meeting #77bis **R2-121973**
Jeju, Korea, March 26 - 30, 2012

Agenda Item: 2.2

Source: ETSI MCC

Title: Report of 3GPP TSG RAN WG2 meeting #77,
Dresden, Germany, February 6 – 10, 2012

Document for: Approval

Report of 3GPP TSG RAN WG2 meeting #77

held in Dresden, Germany
February 6 – 10, 2012



IPR2025-00720, OnePlus Ex. 1004
Page 283 of 700

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

http://www.3gpp.org

© 2012, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TTA, TTC).
All rights reserved.

IPR2025-00720, OnePlus Ex. 1004
Page 284 of 700

Contents

Organisation of the meeting 6
Statistics/Executive Summary 6
1 Opening of the meeting 8
1.1 Call for IPR 8
2 General 8
2.1 Proposed Agenda 8
2.2 Approval of the report of the previous meeting 9
2.3 Reporting from other meetings 9
2.4 Other 10
2.4.1 Rapporteur changes 10
2.4.2 Planning 10
3 Incoming liaisons 11
3.1 Joint UMTS/LTE relevance 11
3.2 LTE relevance 13
3.3 UMTS relevance 15
4 UMTS/LTE joint: Rel-10 and earlier releases 16
5 UMTS/LTE joint: Rel-11 19
5.1 WI: RAN overload control for Machine-Type Communications (RP-111373) 19
5.1.1 EAB information update procedure 19
5.1.2 SIB design for EAB 21
5.1.3 Other Stage-3 details 22
5.2 WI: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN (RP-111361) 23
5.2.1 QoS Verification 23
5.2.2 Availability of location information 27
5.2.3 Multi-PLMN support 28
5.2.4 Coverage Optimization 29
5.2.5 Other 29
5.3 WI: TEI11 30
5.4 WI: Other Work/Study Items 31
6 LTE: Release 10 and earlier releases 33
6.1 WI: Carrier aggregation (RP-100661), UL-MIMO, eDL-MIMO 33
6.2 WI: Relays (RP-110911) 35
6.3 WI: MBMS enhancements (RP-101244) 36
6.4 WI: Minimisation of Drive Test (RP-100360) 38
6.5 WI: eICIC (RP-100383) 38
6.6 WI: TEI10 and earlier releases 38
6.7 WI: Other LTE Rel-10 WIs 56
7 LTE Release 11 56
7.1 WI: Carrier Aggregation Enhancements (RP-111749) 56
7.1.1 General 56
7.1.2 Multiple timing advance 56
7.1.2.1 RACH procedure 56
7.1.2.2 Timing- and Pathloss Reference 60
7.1.2.3 Other stage-2 aspects 62
7.1.2.4 Stage-3 UP details 63
7.1.3 Other 63
7.2 WI: Enhancements for diverse data applications (RP-111372) 64
7.2.1 RRC Connection Handling and DRX 64
7.2.2 L1 control channels 67
7.2.3 Other 67

IPR2025-00720, OnePlus Ex. 1004
Page 285 of 700

7.3 WI: Service continuity improvements for MBMS for LTE (RP-111374) 67
7.3.1 General 67
7.3.2 Assistance Information 67
7.3.3 Congestion and Admission Control 69
7.3.4 Other 69
7.4 WI: Network-Based positioning Support for LTE (RP-101446) 70
7.5 WI: Further Enhanced Non CA-based ICIC for LTE (RP-111369) 72
7.6 WI: Signalling and procedure for interference avoidance for in-device coexistence (RP-111355) 74
7.6.1 General 74
7.6.2 FDM/DRX Solution 76
7.6.2.1 Triggering and Measurements 76
7.6.2.2 IDC Signalling Procedure 77
7.6.3 Autonomous denial 77
7.6.4 Other 77
7.7 WI: RAN overload control for Machine-Type Communications 78
7.8 WI: TEI11 78
7.9 WI: Other Rel-11 WIs 80
7.10 SI: Hetnet mobility enhancements (RP-110709) 80
7.10.1 General 80
7.10.2 Calibration Simulations 80
7.10.3 Cell detection performance 82
7.10.4 Mobility state estimation performance 84
7.10.5 Other 85
7.11 SI: Other Rel-11 SIs 86

8 UTRA Release 9 and earlier releases 86

9 UTRA Release 10 99
9.1 WI: LCR TDD MC-HSUPA (RP-090990) 99
9.2 WI: 4C-HSDPA (RP-100991) 99
9.3 WI: RF pattern matching in UMTS (RP-091427) 100
9.4 WI: Minimisation of Drive Test (RP-100360) 100
9.5 WI: ANR for UTRA (RP-100688) 100
9.6 WI: Interfrequency detected set measurements (RP-101015) 100
9.7 WI: TEI10 101
9.8 Other UTRA Rel-10 WIs/SIs 107

10 UTRA Release 11 107
10.1 WI: Further enhancements to CELL_FACH (RP-111321) 107
10.1.1 Stand-alone HS-DPCCH 107
10.1.2 DC-HSDPA Operation in CELL_FACH 108
10.1.3 2/10 ms TTI concurrent deployment 109
10.1.4 Fall-back to R99 PRACH 113
10.1.5 Per-HARQ process grants 115
10.1.6 Signalling based Interference control 116
10.1.7 UE battery life improvement and signalling reduction 116
10.1.8 Mobility from CELL_FACH to EUTRA 117
10.1.9 CRs 122
10.1.10 Others 122
10.2 WI: 8C-HSDPA (RP-101419) 123
10.3 WI: RAN overload control for Machine-Type Communications (RP-111373) 123
10.4 WI: HSDPA Multiflow Data Transmission (RP-111375) 123
10.4.1 General considerations/issues 123
10.4.2 Interaction and compatibility with other features 125
10.4.3 Mobility aspects 126
10.4.4 Intra Node B aggregation 128
10.4.5 Inter Node B aggregation 128
10.4.6 CRs 131
10.4.7 Others 132
10.5 WI: Other Rel-11 WIs 132
10.5.1 ULTD – CL (RP-110374) 132
10.5.2 ULTD – OL (RP-110374) 132
10.5.3 Extending 850 MHz Upper Band (RP-111396) 132

IPR2025-00720, OnePlus Ex. 1004
Page 286 of 700

10.5.4 Others 133
10.6 SI: Other Rel-11 SIs 134
10.7 WI: TEI11 135

11 Outgoing LSs and email discussions from UTRA session 136
11.1 Agreed outgoing LSs from UTRA session 136
11.2 Email discussions from UTRA 136

12 Left-overs and Comebacks 136
12.1 LTE adhoc session 136
12.2 UMTS 137
12.3 Main session 137
12.4 Email Discussions from main session 137

13 Outgoing LS and output to other groups from LTE/joint 138

14 Any other business 139

15 Closing of the meeting 140

Annex A: List of participants 141

Annex B: List of Tdocs 141

Annex C: Incoming liaison statements for TSG RAN WG2 #77 141

Annex D: Outgoing liaison statements of TSG RAN WG2 #77 145

Annex E: List of agreed CRs for RAN #55 146

Annex F: RAN WG2 meeting #77 post processing 156
Email discussions/approvals 156
CRs from other WGs to be agreed/reviewed by RAN2 before RAN #55: 160
Preparation of status reports for SIs and WIs under RAN2 leadership for RAN #55: 160

Annex G: Report of LTE User Plane ad hoc on Carrier Aggregation enhancements 163
7.1.2.4 Stage-3 UP details 163

Annex H: History 169

IPR2025-00720, OnePlus Ex. 1004

Organisation of the meeting

Meeting:	3GPP TSG RAN WG2 #77	
Meeting location:	Dresden, Germany	
Duration:	Monday 06.02.2012 - Friday 10.02.2012	
Host:	European Friends of 3GPP (EF3)	
TSG RAN WG2 Chairman:	Henning Wiemann (Ericsson)	email: henning.wiemann@ericsson.com
TSG RAN WG2 Vice chairman:	Simone Provvedi (Huawei)	email: simone.provvedi@huawei.com
TSG RAN WG2 Vice chairman:	SeungJune Yi (LG Electronics)	email: seungjune.yi@lge.com
TSG RAN WG2 MCC Support:	Joern Krause (ETSI MCC)	email: joern.krause@etsi.org
Email reflector:	3GPP_TSG_RAN_WG2@LIST.ETSI.ORG	
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_77/Docs	
Parallel RAN2 ad hocs:	- UTRA (see AIs 8-11, Tue morn.- Fri noon): chaired by Simone Provvedi - LTE UP CA Enhancements (see AI 7.1.2.4, Thu morn.): chaired by SeungJune Yi	
Joint ad hocs with other WGs:	A joint RAN1-RAN2 UTRA session was held on Tue evening (started 18:30) on 2/10 ms TTI concurrent deployment (AI 10.1.3) for Further enhancements to CELL_FACH	
next meetings:	TSG RAN #55	28.02. - 02.03.2012 Xiamen, China
	TSG RAN WG2 #77bis,	26.03. - 30.03.2012 Jeju, Korea
	TSG RAN WG2 #78	21.05. - 25.05.2012 Prague, Czech Republic
	TSG RAN #56	13.06. - 15.06.2012 Ljubljana, Slovenia

Statistics/Executive Summary

TSG RAN WG2 #77 was held in Dresden, Germany hosted by the European Friends of 3GPP (EF3), co-located with RAN1, RAN3, RAN4, RAN5, 2 weeks before TSG RAN #55. The RAN WG2 meeting was split in a UTRA part (see agenda items AI 8-11; Tue morn.- Fri until noon) and a parallel LTE/LTE-Advanced part, with common UMTS/LTE/LTE-Advanced parts on Monday, Tuesday morning and Friday afternoon.
In addition on Thu morning an LTE User Plane (UP) ad hoc on Carrier Aggregation enhancements (see AI 7.1.2.4 and Annex G, R2-121010) was carried out as parallel session to the main LTE session. And the UTRA session had a joint ad hoc with RAN1 delegates on Tue evening about 2/10 ms TTI concurrent deployment (see AI 10.1.3) for the REL-11 WI Further enhancements to CELL_FACH.

- 203 participants (registered just before the meeting: 264)
- 1055 Tdocs allocated with actually 922 available contributions
- 44 incoming liaison statements (7 for UTRA, 17 for LTE, 20 for joint aspects): all LSs were treated
- 11 outgoing liaison statements (2 for UTRA, 6 for LTE, 3 for joint aspects), 2 agreed by email
- 26 email discussions scheduled after RAN2 #77 (plus email discussions of RAN2 WI/SI status reports and 7 CRs from RAN3 to RAN2 specifications)
- REL-11 WI Core part: LTE Carrier Aggregation Enhancements (AI 7.1): Agreements are captured in "running/working" 36.300 REL-11 CR R2-120928 (endorsed by email [77#04]) and "running/working" 36.321 REL-11 CR R2-121053 (endorsed by email [77#05]). Both not submitted to RAN #55. Also an LS about the status of this WI was sent to RAN1 in R2-120930 (agreed by email [77#04]). In addition an email discussion [77#26] was scheduled until RAN2 #77bis on timing reference for SCells in an SCell only TA group.
- REL-11 WI Core part: LTE RAN Enhancements for Diverse Data Applications (see AI 7.2): TR 36.822 v0.3.0 R2-121016 was agreed covering agreements of RAN2 #77. In addition an email discussion [77#27] was planned until RAN2 #77bis to provide a text proposal to TR 36.822 on power consumption and DRX.
- REL-11 WI Core part: Service continuity improvements for MBMS for LTE (see AI 7.3): Agreements are captured in "running/working" 36.300 REL-11 CR R2-120927 which was endorsed by email [77#06] but not provided to RAN #55. Three further email discussions were scheduled on MBMS frequency information in USD (user service description) [77#28], on MBMS congestion handling [77#29] and on MBMS interest indication [77#30], all until RAN2 #77.

IPR2025-00720, OnePlus Ex. 1004
Page 288 of 700

- REL-11 WI Core Part: Network-Based Positioning Support for LTE (see AI 7.4):
  3 incoming LSs on this WI were treated with replies from RAN1 and RAN4 (R2-120003, R2-120004, R2-120005). Finally a stage 2 CR to 36.305 was endorsed and sent by LS R2-121029 to RAN1, RAN3 and RAN4.
- REL-11 RAN1 WI Core part: Further Enhanced Non CA-based ICIC for LTE (see AI 7.5): Only a few Tdocs were discussed.
- REL-11 WI Core part: Signaling and procedure for interference avoidance for in-device coexistence (see AI 7.6): Agreements are captured in "running/working" 36.300 REL-11 CR R2-120929 which was endorsed by email [77#07] but not provided to RAN #55.
- REL-11 WI Core part: Further Enhancements to CELL_FACH (see AI 10.1): Email discussion [77#34] until RAN2 #77bis to capture stage 2 agreements in "running/working" 25.308 & 25.319 REL-11 CRs
- REL-11 RAN1 WI Core Part: Eight carrier HSDPA (see AI 10.2): No contributions (RAN1/RAN2/RAN3 CR sets were approved at RAN #54).
- REL-11 WI Core part: RAN overload control for Machine-Type Communications (AI 5.1, 7.7, 10.3): Topic was only treated in joint UTRA/LTE session, i.e. AI 5.1. A new SIB will be defined to accommodate the EAB info in UMTS and LTE. However EAB info update mechanism needs to be discussed further. 2 email discussions were planned until RAN2 #77bis: [77#20] on "special access class (AC11-15): what happens when these special access classes are barred?" and [77#21] on "SIB design for RAN sharing solutions".
- REL-11 WI Core part: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN (AI 5.2): Topic was only treated in joint UTRA/LTE session. Agreements are captured in "running/working" 37.320 REL-11 CR R2-111032 which was endorsed by email [77#01] but not provided to RAN #55. Also a reply LS was sent to SA5 in R2-121047 on "Usage of speed criterion for MDT data collection".
- REL-11 SI Study on HetNet mobility enhancements for LTE (see AI 7.10): An informal offline ad hoc was held on Wed afternoon chaired by Alcatel-Lucent on LTE HetNet simulations, see report R2-120825. TR 36.839 v0.5.0 R2-121054 was agreed by email [77#08]. Additional email discussions [77#31] on inter-frequency small cell detection, [77#32] on impact of DRX on mobility performance and [77#33] mobility state estimation enhancements were planned until RAN2 #77bis.
- Among 377 change requests (CRs) in total: 64 agreed (34 for UTRA 25.xxx/34.xxx specs, 30 for LTE 36.xxx specs) and 7 technically endorsed CR that will not be provided to RAN #55.

Note: The sequence in which the different topics appear in this report is related to the agenda of the meeting. However, the Tdocs do not necessarily appear in the sequence as they were treated in the meeting.

IPR2025-00720, OnePlus Ex. 1004

1 Opening of the meeting

TSG RAN WG2 chairman Henning Wiemann (Ericsson) opened the meeting RAN WG2 #77 on Monday morning 06.02.2012 at 09:00am.

On behalf of the host, the European Friends of 3GPP (EF3), Axel Klatt (Deutsche Telekom) welcomed the delegates to Dresden and explained organisational issues.

RAN WG2 meeting rooms:
Main RAN2 room: Saal 4 (level 1), planned for 230 seats (+20), Mon-Fri
UTRA ad hoc room: Konferenz 1 (Konferenz level), planned for 50 seats, Tue-Fri noon
LTE UP ad hoc room: Konferenz 2+3 (Konferenz level): planned for 80 seats, available Wed-Thu

Other WGs: RAN1, RAN3, RAN4 and RAN5 had their meetings in same hotel.

1.1 Call for IPR

Henning Wiemann (TSG RAN WG2 chairman) made the following call for IPRs and reminded the delegates of their obligations with respect to IPRs:

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 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 (http://webapp.etsi.org/Ipr/).

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN2 chairmen.

2 General

2.1 Proposed Agenda

RAN2 chairman: **THANK YOU** to companies that submit contributions early before deadline (really appreciated). Will start to refrain from treating late documents.

R2-120001 Proposed agenda for RAN2 #77, Dresden, Germany, 06.02.-10.02.2012; Ericsson (RAN2 chairman); Agenda;
=> Agreed

Time-schedule is only indicative (i.e. topics might move forward/backward!):

Schedule	Main room	LTE UP room	UMTS room
Mon 09:00 ->	[2],[3],[4], EAB [5.1], MDT [5.2]		

IPR2025-00720, OnePlus Ex. 1004

Tue 08:30 -> 10:30	Joint TEI11 [5.3] Joint Other WIs [5.4]		
Tue 11:00 ->	LTE Rel-8/9/10 [6]		Rel-7/8/9 [8] 4C [9.2] MDT [9.4] ARN [9.5] Interf Det Set Meas [9.6] 18:30: Joint RAN1-RAN2 session on FE FACH 2/10 ms TTI [10.1.3]
Wed 9:00 ->	CA [7.1] EDDA [7.2] NBP [7.4]		TEI10 [9.7] FE FACH [10.1, excl. 10.1.3]
Thu 8:30 -> 12:30	feICIC [7.5] HetNet Mob [7.10]	CA UP stage-3 [7.1.2.4]	Morning: Comebacks FE FACH [10.1, excl. 10.1.3] (continuation) [10.4] Mflow
Thu 14:00 ->	Combacks EAB LTE stage-3 [7.7] IDC [7.6]		Comebacks [10.4] Mflow (continuation) [10.5] Other Rel-11 WI [10.6] Other Rel11 SI [10.7] TEI11
Fri 8:30 ->	LTE TEI11 [7.8] Other [7.9] MBMS [7.3]		Comebacks and leftovers
Fri: lunch -> until 5PM	Left-overs, Comebacks, [12][13][14]		

An informal adhoc on LTE HetNet simulations is planned on Wednesday afternoon (chaired by Jialin Zou (Alcatel-Lucent)) with the intention to discuss remaining calibration simulation related issues but potentially also other HetNet Mobility simulation related aspects.

2.2 Approval of the report of the previous meeting

R2-120002 Draft report of RAN2 #76, San Francisco, USA, 14.11.-18.11.2011; ETSI MCC; Report;
CBF: Approval of report from previous meeting (MCC)
As we did not have time to come back to the draft report on Friday, it was treated in email discussion [77#00]

2.3 Reporting from other meetings

RAN#54 (Berlin)
Work- and Study-Items:
No new RAN2-led Work- or Study Items were approved.
The completion date of the "Study on HetNet mobility enhancements for LTE" was moved to RAN-57 (September 2012).
A new RAN1 WI "Enhanced downlink control channel(s) for LTE" (WID RP-111776) has been approved and is supposed to be completed by RAN-57. RAN2 will have to provide signalling (ASN.1) for configuring the new control channel(s).
A new RAN1 WI "MIMO with 64QAM for HSUPA" (WID RP-111642) has been approved and will be treated on a best-effort basis. RAN2 will have to provide signalling support but also changes in MAC will be needed.
At RAN-55 no new core WIs/SIs are supposed to be submitted or agreed.

Rel-12 Workshop
A workshop on possible technical solutions for the Rel-12/(13) timeframe will be held on June 11-12, 2012 in Ljubljana directly before RAN-56.

IPR2025-00720, OnePlus Ex. 1004

FGIs and UE capabilities
A number of FGI- and UE-capability related issues were discussed:
RAN decided that RAN2 should develop a solution for handling **dual mode LTE FDD/TDD UEs with different capabilities/FGIs in FDD and TDD**. Furthermore, RAN2 and RAN1 are requested to provide subset of UE capabilities and FGIs that could be allowed to be different for dual duplex mode UEs. 3GPP RAN#55 will take the final decision on this subset (see LS in RP-111770).
Triggered by company contribution in RP-111656 an LS RP-111772 was sent to RAN2 asking to investigate, and if possible specify signalling of successful IoT (FGIs) for **inter-RAT ANR** separately for the different RATs.
It has been suggested that Rel-9 UEs should set **FGI bit 27** (SR-VCC to UTRAN) if certain prerequisites are met. However, RAN-54 had concerns that this may have an impact on the ongoing discussion about AS/NAS capability mismatch for SR-VCC. RAN therefore tasked RAN2 in LS RP-111769 to investigate this issue further.

SA-54 (Berlin) (from RAN chairman's report)

LSs from RAN to SA
The RAN **LS on FGI bit 27** was presented to SA in SP-110842, and noted by SA without any questions or comments.
The RAN **LS on Capability handling of LTE FDD/TDD** modes was presented to SA in SP-110843, and noted by SA without any questions or comments.

Rel-11 planning
Stage 1 was frozen in September 2011 without exceptions
Stage 2 freezing target is March 2012. Approved Stage 2 exceptions will automatically lead to a 3 months slip of the Stage 3 freezing date (extension requests will be looked at very carefully and will require extension sheets with a lot of status details). TSG-RAN shall not expect the 3 months slip of the Stage 3 freezing for our RAN Works at lease until March!
De-prioritised SA2 WIs are not part of Rel-11 any longer.
SA2 was requested to inform RAN immediately about any progress and any changes in scope of the SIMTC work.

Rel-12 planning
Rel-12 Stage 1 planning will be discussed at the next plenary in March.

SA Work- and Study Items affecting RAN2
SA approved an updated SA4 Rel-11 WID (SP-110878) on EMM, which covers the functionality requested by RAN2 for realizing service continuity for MBMS (provisioning of e.g. frequency and service area).

SA approved an Rel-12 SI on User plane congestion management (UPCON) in SP-110819 that may require some coordination between SA1, SA4 and RAN2 as it is related to handling RAN congestion also.

SA approved a Rel-12 SI on **RAN Sharing Enhancements** in SP-110820 which may affect RAN2 at some point.

2.4 Other

2.4.1 Rapporteur changes

Spec	**former rapporteur**	**proposed new rapporteur**	
25.331	Paulson Angelo Vijay Silveris (Ericsson)	Mark Curran (Ericsson)	=> Approved

2.4.2 Planning

For information: Main open Rel-11 WIs/SIs with RAN2 responsible for certain output to a certain RAN meeting are shown in the following table.

Main RAN2 related WI/SIs	*RAN Tdoc*	*Lead WG*	*WI or SI*	*RAN2 Agenda*	*Expected delivery to RAN*	*Remarks*
UMTS + LTE						
RAN overload control for Machine-Type Communications	*RP-111373*	*2*	*WI*	*5.1/ 7.7/10.3*	*Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#55*	*WI approved at RAN#53*
Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN	*RP-111361*	*2*	*WI*	*5.2*	*Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#57*	*WI approved at RAN#53*
UMTS						
Further Enhancements to CELL_FACH	*RP-111321*	*2*	*WI*	*10.1*	*Stage-2 CRs: RAN#55 Stage-3 CRs: RAN#56*	*WID updated at RAN#53*

IPR2025-00720, OnePlus Ex. 1004

HSDPA multi-point transmission	*RP-111375*	*2*	*WI*	*10.4*	*Stage-2 CRs: RAN#55* *Stage-3 CRs: RAN#56*	*WI approved at RAN#53*
LTE						
CA enhancements	*RP-111749*	*1*	*WI*	*7.1*	*Stage-2 CRs: RAN#55* *Stage-3 CRs: RAN#57*	
Enhancements for diverse data applications	*RP-111372*	*2*	*WI*	*7.2*	*TR36.822 at RAN#55* *Stage-2 CRs: RAN#55* *Stage-3 CRs: RAN#57*	
Service continuity improvements for MBMS for LTE	*RP-111374*	*2*	*WI*	*7.3*	*Stage-2 CRs: RAN#54* *Stage-3 CRs: RAN#55*	*WID updated at RAN#53 (no location information)*
Network-Based positioning Support for LTE	*RP-101446*	*2*	*WI*	*7.4*	*Stage-2 CRs: RAN#55* *Stage-3 CRs: RAN#55*	
Further Enhanced Non CA-based ICIC for LTE	*RP-111369*	*1*	*WI*	*7.5*	*All CRs: RAN#56*	*WID updated at RAN#53 (second priority aspects postponed to March)*
Signalling and procedure for interference avoidance for in-device coexistence	*RP-111355*	*2*	*WI*	*7.6*	*Stage-2 CRs: RAN#55* *Stage-3 CRs: RAN#56*	*WI approved at RAN#53*
Study on HetNet mobility improvements enhancements for LTE	*RP-110709*	*2*	*SI*	*7.10*	*TR 36.839 to RAN for approval RAN#57*	*Extended to Sep. 2012*

3 Incoming liaisons

3.1 Joint UMTS/LTE relevance

EAB

R2-120027 Reply LS R2-114804, S2-114698 = R2-115673 and C1-114451 = R2-115663 on EAB Requirements (S1-113383; contact: Huawei); SA1; LSin; LS04; to: RAN2; REL-11; SIMTC-RAN_OC-Core;
=> Noted

R2-120028 Reply LS to R2-115644 on EAB Requirement for RAN Sharing (S1-113385; contact: ZTE); SA1; LSin; LS04; to: RAN2; REL-11; SIMTC-RAN_OC-Core;
=> Noted

R2-120031 Reply LS to R2-115644 "EAB Requirement for RAN Sharing" (S2-115475; contact: Vodafone); SA2; LSin; LS04; to: RAN2; REL-11; SIMTC-RAN_OC-Core;
=> Noted

MDT

R2-120033 Response LS to R3-112292 = R2-114864 on error scenarios and signalling impacts (S5-113886; contact: Huawei); SA5; LSin; cc: RAN2; REL-10; OAM-PM-UE, MDT_UMTSLTE-Core;
=> Noted

R2-120034 LS on Usage of speed criterion for MDT data collection (S5-113887; contact: NEC); SA5; LSin; LS08; to: RAN2;; draft LS reply in R2-120157; REL-11; OAM-ePM-UE, eMDT_UMTSLTE-Core;
- NEC provided draft in R2-120157
- MediaTek agrees that we should reply but would like to say more whether we think a threshold is needed or not. NEC thinks that SA5 only want to know what is in our spec. MTK thinks they are asking us for advice and whether speed dependent filtering is good. MTK wonders whether the UE should not report or that the eNB filters. Samsung agrees that RAN2 previously discussed such enhancements and we should do the same here before responding. NSN thinks the reponse does not really answer what SA5 is considering. Ericsson agrees with Samsung and NSN that the need for filtering should first be discussed in RAN2.

=> CBF: Will send an LS on “speed criterion for MDT” informing SA5 that we are considering enhancements but have not reached conclusion now. Indicate that we will inform them once RAN2 has made a decisions. Draft LS can be provided in R2-120806 (NEC)

IPR2025-00720, OnePlus Ex. 1004

PWS

R2-120007 Reply LS to S3-111225 = R2-115677 on length of security in PWS (C1-115323; contact: RIM); CT1; LSin; LS02; cc: RAN2; PWS-RAN was a REL-9 LTE only WI;; note: RAN2 answered S3-111225 in R2-116558 at RAN2 #76; REL-11; PWS_Sec;
[Moved Here from 3.2]
=> Noted

R2-120008 Reply LS to S3-111225 = R2-115677 on length of security in PWS (GP-111882; contact: RIM); GERAN2; LSin; LS02; cc: RAN2; PWS-RAN was a REL-9 LTE only WI;; note: RAN2 answered S3-111225 in R2-116558 at RAN2 #76; REL-11; PWS_Sec;
[Moved Here from 3.2]
=> Noted

R2-120030 Reply LS to S3-111225 = R2-115677 on length of security in PWS (S1-113459; contact: RIM); SA1; LSin; LS02; to: RAN2; PWS-RAN was a REL-9 LTE only WI;; note: RAN2 answered S3-111225 in R2-116558 at RAN2 #76; REL-11; PWS_Sec;
[Moved Here from 3.2]
=> Noted

=> We will inform other groups of RAN2's progress related to PWS.

CSG

R2-120009 LS on issues on inbound CSG mobility failure (GP-111889; contact: Huawei); GERAN2; LSin; cc: RAN2; REL-9; EHNB-GERAN;
- Samsung clarifies that UMTS CS and GERAN might not always be aware of the latest PLMN list. Samsung thinks the problem could also appear in UMTS. If so, do we want to harmonize or can we accept different solutions. Huawei thinks the current solutions on the table are different between GERAN and what we discuss in RAN2.

=> Can discuss further offline and decide whether to respond.
=> Noted

R2-120022 LS on CSG proximity indicator testing (R5-115775; contact: NTT DOCOMO); RAN5; LSin; note: This LS was treated at RAN #54 in RP-111417 and RAN requested to provide this RAN5 LS also to RAN2 #77; REL-9; EHNB-LTE_UEConTest, EHNB-UTRA_FDD_UEConTest;
=> Noted

R2-120035 LS on H(e)NB air interface activation (C6-110601; contact: Gemalto); CT6; LSin; to: RAN2;; pCR=pseudo CR, 31.104 is not yet under CR control; REL-11; HPM_UICC;
- Huawei thinks that this is not related to RAN2. Huawei thinks that SA3 already specified this and it is also captured in SA1 specifications.

=> CBF: Will send a response to "LS on H(e)NB air interface activation" indicating that this is not in the scope of RAN2 work or specifications and that we think that SA3 should be consulted for this matter. Can include SA3 in the response LS. Draft response LS can on H(e)NB air interface activation can be provided in R2-120807 (Huawei)

MBMS

R2-120011 Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-114461; contact: ETRI); RAN1; LSin; LS03; cc: RAN2;; note: RAN2 answered S4-111114 in R2-116515 at RAN2 #76; REL-11; EMM-EFEC;
=> Noted

R2-120016 Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-114475; contact: Huawei); RAN1; LSin; LS03; cc: RAN2;; note: RAN2 answered S4-111114 in R2-116515 at RAN2 #76; REL-11; EMM-EFEC;
=> Noted

R2-120823 Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-120831; contact: Huawei) RAN1
=> Noted

R2-120040 Reply LS on MBMS assistance information for service continuity, MBMS_LTE_SC-Core (RAN2), to RAN2, Qualcomm

IPR2025-00720, OnePlus Ex. 1004

=> A draft response on “MBMS assistance information for service continuity” can be provided in R2-120809 (QC)

Study on OAM aspects of inter-RAT Energy Saving

R2-120026 Response LS to S5-112706 = R2-114870 on including Wi-Fi / LTE RAT combination for Inter-RAT (S1-113178; contact: Intel); SA1; LSin; LS05; cc: RAN2; REL-11; FS_OAM_ES_iRAT;
=> Noted

R2-120032 Reply LS to S5-112706 = R2-114870 on Wifi offload for energy saving purpose (S2-115477; contact: Huawei); SA2; LSin; LS05; cc: RAN2; REL-11; FS_OAM_ES_iRAT;
=> Noted

Other

R2-120006 Reply LS to R2-115643 on stage 3 for modification of security context storage rate on the UICC (C1-114945; contact: NSN); CT1; LSin; LS07; to: RAN2;; draft LS reply in R2-120342; REL-11; Sec11;
=> Noted

R2-120021 Reply LS to R2-114813 on signalling of additional frequency band indicators (R4-116291; contact: Ericsson); RAN4; LSin; to: RAN2; REL-11; FS_e850;
=> Noted

R2-120039 Preparation Work in 3GPP for ITU related to Final Submission to ITU-R towards Rev.11 of Rec. ITU-R M.1457 (RT-120017; contact: Telecom Italia); 3GPP ITU-R ad hoc ; LSin; to: RAN2; REL-10;
- TI identified some small inconsistencies and will list all such until end of this week so that RAN2 can respond.

=> CBF: Will send a response “related to Final Submission to ITU-R” including comments/corrections to the documents. A draft response can be provided in R2-120808 (Telecom Italia)

R2-121026 LS on VoHSPA capability indication, SA2, Release 9; TEI9
- NSN is concerned that we introduce AS capabilities that seem to refer to NAS features.
- Ericsson thinks we can further discuss whether we have to explicitly signal “Handover support from Voice over UTRA PS to Voice over E-UTRA” or whether it can be derived from other capabilities.
- NSN assumes we are discussing capabilities and not FGIs. Ericsson assumes that it could be up to us how we realize it. DT thinks we are here talking about optional features and should therefore introduce capabilities and not FGIs.
- QC wonders whether we have to distinguish UTRA FDD and UTRA TDD in “Handover support from Voice over UTRA PS to Voice over E-UTRA”.
- Samsung wonders whether this is urgent. QC and DT think we should agree for this plenary.
- NSN wonders whether it is really clear which capabilities are needed. Ericsson assumes that SA2 want to have a homogeneous solution in both directions. Ericsson also assumes that it is not as urgent for the UTRA part as for the E-UTRA part.
- NSN thinks that if we make it a capability (not an FGI) the issue is urgent.

=> We will realize this as new capability for LTE (not as FGI)
=> Need to discuss further whether it is required to split between FDD and TDD.
=> CBF: CRs on VoHSPA capability indication can be discussed on Friday.

- QC suggests that we postpone the CRs to the next meeting but that we agree now that a UE not providing these capabilities is not expected to support this functionality.

=> We will postpone the changes requested by SA2 to the next meeting. Assumption is that we will introduce new capabilities. A UE not setting these capabilities is not expected to support that functionality.

3.2 LTE relevance

UTDOA

IPR2025-00720, OnePlus Ex. 1004

R2-120004 Reply LS to R2-115649 on Physical Layer Measurement for network positioning (R1-114456; contact: Alcatel-Lucent); RAN1; LSin; LS01; LS was not treated at RAN2 #76 in R2-115716; to: RAN2; REL-11; LCS_LTE-NBPS-Core;
- NSN thinks that we actually already have a definition of a physical LMU node in the not-yet-endorsed stage-2 CR. ALU thinks this request is about the RAN3 specification listing RAN network nodes.

=> No comments from RAN2. No need for an LS to RAN1.

R2-120003 Response LS to R2-115646 on physical-layer measurement for network-based positioning (R1-114454; contact: Ericsson); RAN1; LSin; LS01; LS was not treated at RAN2 #76 in R2-115715; to: RAN2; REL-11; LCS_LTE-NBPS-Core;

=> Noted

R2-120005 LS response to R2-115646 on Physical Layer measurement for network-based positioning (R4-116300; contact: Ericsson); RAN4; LSin; LS01; LS was not treated at RAN2 #76 in R2-115717; to: RAN2; REL-11; LCS_LTE-NBPS-Core;

=> Noted

FGIs & Capabilities

R2-120023 LS on FGI 27 in LTE and Single Radio VCC (RP-111769; contact: Qualcomm); RAN; LSin; to: RAN2; REL-9; TEI9, LTE-L23;

MovedHere from 3.1

- Samsung wonders whether SA2 or RAN2 is supposed to take an action? QC thinks that SA2 first needs to discuss the general issue. NSN agrees that we should wait for SA2 as well as in CT1. Then, we will see whether we need to do anything.

=> Will wait for SA2 to take a decision on the general problem before deciding this in RAN2.

R2-120024 Reply LS to R2-116557 on Capability handling of LTE TDD and FDD modes (RP-111770; contact: Qualcomm); RAN; LSin; to: RAN2; REL-9; TEI9, LTE-L23;
- QC clarifies that the understanding in RAN plenary was that this possibility is only needed from Rel-9 onwards (as the LS says).

=> Will discuss this in AI6. Afterwards draft LS on “Capability handling of LTE TDD and FDD” can be provided in R2-120810 (QC)

R2-120025 LS on FGI handling for inter-RAT ANR (RP-111772; contact: TeliaSonera); RAN; LSin; to: RAN2; REL-9; TEI9, LTE-L23;

MovedHere from 3.1

- ALU is surprised about the release (why Rel-9). Can discuss offline before treating the related contributions.

=> Will discuss with related contributions.

R2-121048 Reply LS on Capability handling of LTE TDD and FDD modes

=> Noted. Will include the information when preparing our CR and our LS to RAN.

CA

R2-120010 LS reply to R2-115635 on RACH procedure on SCell (R1-114459; contact: Alcatel-Lucent); RAN1; LSin; to: RAN2; REL-11; LTE_CA_enh-Core;

=> Noted

feICIC

R2-120014 LS on feICIC (R1-114468; contact: NTT DOCOMO); RAN1; LSin; to: RAN2; REL-11; eICIC_enh_LTE-Core;
- CMCC wonders what the problems related to cell detection refers to. DOCOMO thinks that RAN1 is still discussing this and we should wait for their progress. CMCC wonders what sort of procedure and signalling RAN2 is supposed to provide. DOCOMO clarifies that this is not yet clear. So, we can also not yet decide what kind of signalling will be needed. CMCC suggests to ask for details in a reply LS. QC shares DOCOMO’s view and does not think we need a reply-LS now.

=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-120829 Reply LS to R2-116552 on parallel transmissions of PRACH and PUSCH/PUCCH/SRS (R1-120841; contact: Huawei) RAN1
[Late LS received during the meeting]
- LG wonders whether the LS indicates that parallel transmission within one TAG is not possible. Intel thinks that RAN1 intentionally excluded parallel transmission of PRACH and other UL signals within one TAG.

MBMS

R2-120029 Reply LS to R2-115636 on MBMS reception from non-RPLMN (S1-113454; contact: Huawei); SA1; LSin; to: RAN2; REL-11; MBMS_LTE_SC-Core;
- Huawei sees two interpretations:
1) there should be no restrictions in RAN2. It is only up to higher layers.
2) RAN2 should enforce what SA1 assumed
=> Noted

R2-120037 Reply LS to R2-115636 on MBMS reception from non-RPLMN (S2-120403; contact: NSN); SA2; LSin; to: RAN2; REL-10; MBMS_LTE_enh-Core;
- LG thinks that if the UE cannot decipher the content it should not reply to the counting request. But maybe there is no need to specify this.
=> Discuss further offline what to do in RAN2.
=> Noted

Other

R2-120015 LS on additional special subframe configuration for E-UTRA TDD in Rel-11 (R1-114469; contact: CMCC); RAN1; LSin; cc: RAN1;; note: RAN #54 agreed to consider a WI at RAN #55 (since topic was described as small issue); REL-11; TEI11, LTE-L23;
=> Noted

R2-120018 LS on MME/eNB behaviour in case of broken SCTP connection (R3-113152; contact: Vodafone); RAN3; LSin; LS06; cc: RAN2;; includes 36.300 CR from RAN3; SA2 reply LS in R2-110038; REL-11; TEI11, LTE-L23;
=> Noted

R2-120038 Reply LS to R3-113152 = R2-120018 on MME/eNB behaviour in case of broken SCTP connection (S2-120404; contact: Huawei); SA2; LSin; LS06; cc: RAN2; REL-11; TEI11, LTE-L23;
=> Noted

R2-120020 LS on DTX detection of PUCCH format 2 (R4-116249; contact: NTT DOCOMO); RAN4; LSin; LS09; to: RAN2;; draft LS answer provided by Samsung in R2-120287; REL-11; TEI11, LTE-L23;
- Related company contributions in AI 7.8
=> Will discuss “LS on DTX detection of PUCCH format 2” further. A draft response LS can be provided (after the discussion in AI7.8) in R2-120811 (DOCOMO).

3.3 UMTS relevance

CSG

R2-120017 LS on CELL_FACH mobility for 3G home access (R3-113129; contact: Alcatel-Lucent); RAN3; LSin; to: RAN2; REL-11; FS_EHNB_enh;
[Moved Here from 3.1
=> Topics will be treated in the UMTS session and an LS will be sent from there

ULTD

R2-120012 LS on RAN1 agreements on uplink Closed Loop Transmit Diversity for HSPA (R1-114463; contact: Huawei); RAN1; LSin; to: RAN2; REL-11; HSPA_UL_TxDiv-CL-Core;
=> Noted

CELL_FACH

R2-120013 LS on Summary of RAN1 agreements on Further Enhancements to CELL_FACH (R1-114464; contact: Qualcomm); RAN1; LSin; to: RAN2; REL-11; Cell_FACH_enh-Core;

IPR2025-00720, OnePlus Ex. 1004

=> Noted

Other

R2-120019 LS Reply to R2-115520 on time to continue attempting to search for a suitable E-UTRA cell (R4-116146; contact: Ericsson); RAN4; LSin; to: RAN2; REL-10; TEI10, LTE-L23;
[Moved Here from 3.1]
=> Noted

R2-120036 Reply LS to R2-116553 on Limitation on PS voice RAB for Intra UMTS SRVCC (S2-120402; contact: ZTE); SA2; LSin; to: RAN2; REL-8; RANimp-HSPAVoIP;
=> Noted

R2-121027 LS on CSFB awareness in UMTS and GERAN
- This was initially treated in the UTRAN session and the working assumption was that the UE provides the indication via RRC towards the UTRAN. All details are FFS.
- No response has been sent to RAN3 yet.

In the main room:
- Nokia wonders why signalling from the UE is needed and not already known in the RAN. Vodafone assumes that if there was a solution, they had not requested us to provide the signalling.
- Vodafone explains that the knowledge is required in the RNC and therefore the information cannot be requested by NAS.
- Samsung thinks that RAN3 did not consider a network signalling solution.

=> Will treat it in the LTE/UTRAN joint session in the next meeting
=> DT thinks that we should ensure that there is really no RAN3 network based solution.

4 UMTS/LTE joint: Rel-10 and earlier releases

Contributions submitted under this agenda item will be handled in a joint UMTS/LTE session. Documents should focus on Stage-2 aspects common for both UTRA and E-UTRA, but also common stage-3 aspects should be submitted here (e.g. 25/36.304).

VoIP continuity between LTE and UMTS

R2-120302 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; Disc; REL-9; TEI9, LTE-L23;
- Nokia agrees that this is a valid possible problem. On the other hand, there is the SR-VCC discussion ongoing. Maybe it is best to wait for progress on the latter in SA2 before deciding this in RAN2. Huawei shares Nokia's view. NSN has contributions in SA2 regarding this problem. NSN thinks this is not really an AS capability but rather related to NAS. And it should be indicated there. LG shares this view. Huawei agrees that this should be handled on NAS layer. DT suggests to discuss this in SA2 which will happen this week.
- Samsung wonders based on what condition the UE should set this capability. QC thinks that various things need to be done in order to successfully support VoIP. QC thinks it could be left for the UE implementation to set the bit. Samsung wonders how this could be tested. How can the network trust this indication?

=> We will wait for SA2 discussions and decide in a later meeting whether additional AS functionality is needed.

R2-120612 FGI for handover to VoHSPA; Ericsson, ST-Ericsson; CR; 36.331; (0885); F; REL-8; LTE-L23;
[Moved Here from 6.6]

R2-120303 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 36.331; (0870); F; REL-9; TEI9, LTE-L23;
R2-120304 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 36.331; A; REL-10; TEI9, LTE-L23;
R2-120305 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 36.331; A; see R2-120304 instead; REL-10; TEI9, LTE-L23;

R2-120334 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 36.306; (0081); F; REL-9; TEI9, LTE-L23;

IPR2025-00720, OnePlus Ex. 1004

R2-120335 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 36.306; A; REL-10; TEI9, LTE-L23;
R2-120337 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 36.306; A; see R2-120335 instead; REL-10; TEI9, LTE-L23;

R2-120688 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 25.331; (4941); F; REL-9; TEI9, LTE-L23;
R2-120689 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 25.331; (4942); A; REL-10; TEI9, LTE-L23;
R2-120690 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 25.331; (4943); A; REL-11; TEI9, LTE-L23;

R2-120691 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 25.306; (0353); F; REL-9; TEI9, LTE-L23;
R2-120692 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 25.306; (0354); A; REL-10; TEI9, LTE-L23;
R2-120693 VoIP continuity between LTE and UMTS; Qualcomm Incorporated; CR; 25.306; (0355); A; REL-11; TEI9, LTE-L23;

R2-120613 FGI for handover to VoHSPA; Ericsson, ST-Ericsson; CR; 36.331; (0886); A; REL-9; LTE-L23;
[Moved Here from 6.6]

R2-120614 FGI for handover to VoHSPA; Ericsson, ST-Ericsson; CR; 36.331; (0887); A; REL-10; LTE-L23;
[Moved Here from 6.6]

ETWS

R2-120459 ETWS with security in Release 8, 9 and 10; Ericsson, ST-Ericsson; Disc; REL-8; ETWS;
- Huawei wonders whether anything needs to be clarified. If it is not supported, it will not be used by the network. Ericsson clarifies that the main reason is that a Rel-8 UE may not implement the „ETWS PRIMARY NOTIFICATION WITH SECURITY“ message. Huawei thinnks there is no problem in LTE. Ericsson agrees that there is not a big problem in LTE. Samsung thinks that in the past we changed a field to a dummy in UMTS. We could do the same here. Ericsson thinks that in the UMTS case there is quite some procedure text how to treat the dedicated security methods. Therefore, Ericsson thinks that it would be beneficial to clarify that the UE has no longer to support this. Ericsson thinks we can further discuss how to realize it.
- Ericsson thinks that proposal 2 (for UMTS) is most important. In LTE the impact is less.
- QC thinks it would be a good clarification both for UMTS and LTE. Panasonic also supports clarification in LTE and UMTS. Panasonic also supports the proposal to make the field a dummy.
- ALU supports clarification for UMTS and LTE.
- ZTE supports the CRs.
- Huawei thinks that it is clear from CT specifications.

Agreements
1: Invalidate the ETWS with security feature in RRC specifications for Rel-8, Rel-9 and Rel-10.
2: The ETWS PRIMARY NOTIFICATION WITH SECURITY message on DCCH in CELL_DCH is used to convey the Primary Notification for ETWS for UEs in CELL_DCH

R2-120460 ETWS with security in Release 8, 9 and 10; Ericsson, ST-Ericsson; CR; 25.331; F; cat.A CRs missing; REL-8; ETWS;
- Ericsson would like to present the CRs for information and would invite companies to check these CRs and also the CRs when the functionality was introduced. Ericsson would be happy to receive further comments on the CRs and will provide further updates for the next meeting. The main purpose is now to have an agreement on the way forward.
- Mediatek wonders whether this is a functional modification or a correction.

=> CRs can be discussed offline. Ericsson can provide CRs to the next meeting

IPR2025-00720, OnePlus Ex. 1004

=> CR is postponed

R2-120462 ETWS with security in Release 8, 9 and 10; Ericsson, ST-Ericsson; CR; 36.331; F; cat.A CRs missing; REL-8; ETWS;
=> CRs can be discussed offline. Ericsson can provide CRs to the next meeting
=> CR is postponed

Extended Wait Time

R2-120738 The ACB parameters for delay tolerant access; CATT; Disc; REL-10; NIMTC-RAN_overload;
=> Document is withdrawn

R2-120739 clarification of the ACB parameters for delay tolerant access; CATT; CR; 36.331; (0893); F; REL-10; NIMTC-RAN_overload;
=> Document is withdrawn

Other

R2-120149 Discussion on the handling of RRC container during the inter-RAT handover; ZTE Corporation; Disc; REL-10; TEI10;
- Huawei thinks it should be forwarded transparently and should not be modified. ZTE thinks that the figure seems to hint that it needs to be modified. ZTE would like to clarify the figure.
- NSN in principle agrees to the modification. But wonders whether also a change in GERAN specifications (48.018) would be needed. ZTE agrees that it could be good if GERAN would agree a corresponding CR. But it might not be essential.
- Huawei agrees that the current figure is not correct but wonders whether the CR is essential since the exact messages are defined in stage-3. Samsung thinks the CR is correct and would suggest to send a one-sentence LS to GERAN asking them to clarify also 48.018. NSN also prefers to clarify and therefore supports the CR.

=> We will send an LS on „the handling of RRC container during the inter-RAT handover“ to GERAN asking them to clarify also 48.018 accodingly. A draft LS can be provided in R2-120815 (ZTE)

R2-120150 Correction to the handling of RRC container during the inter-RAT handover; ZTE Corporation; CR; 36.300; (0424); F; REL-10; TEI10;
=> CR is agreed in R2-120813, CR0424

R2-120151 Correction to the handling of RRC container during the inter-RAT handover; ZTE Corporation; CR; 36.300; (0425); A; REL-11; TEI10;
=> CR is agreed in R2-120814, CR0425

R2-120093 Correction to inter-RAT measurement reporting with reportQuantityUTRA-FDD set to EcNo and RSCP; Deutsche Telekom; CR; 36.331; (0854); F; REL-10; TEI10, LTE-L23;
- Samsung thinks we try to avoid the statement „UE behaviour not specified...“ in LTE. Samsung is not sure whether there is really much unclearity. Maybe the statement in the field description could be added. DT thinks it is really necessary to clarify this.
- Renesas is OK with a clarification but would like to work on the wording.

=> Agree that a clarification is beneficial. Can work offline on suitable CR text on inter-RAT measurement reporting with reportQuantityUTRA-FDD set to EcNo and RSCP. An updated CR can be provided R2-120816, CR0854 (DT).
=> After offline discussion RAN2 agrees to the intention of the CR but the matter is considered sufficiently clear. Therefore the CR is withdrawn.

R2-120816 Correction to inter-RAT measurement reporting with reportQuantityUTRA-FDD set to EcNo and RSCP; Deutsche Telekom; CR0854; 36.331; (0854); F; REL-10; TEI10, LTE-L23;

R2-120070 On PSC/PCI range for CSG in shared networks; TeliaSonera; Disc; REL-8; HNB-supp, LTE-L23 (HNB);
=> No support. Noted
- TeliaSonera indicates that PSC/PCI split is not fully supported in shared networks and would like this to be documented in some specification. Renesas wonders whether it is really not fully supported. Renesas considers it rather an optimization. TS thinks that the whole PSC/PCI functionality is an optimization but fact is that it is not supported in shared

IPR2025-00720, OnePlus Ex. 1004

networks. Renesas thinks that solution 2 is already possible. TS thinks that since it is optional and an implementation issue. DT agrees with Renesas that it can be made to work. If we indicate something we should ensure that we carefully specify which aspect is not supported.

=> Currently not much support for such a note.

R2-120796 Time to keep RLF Reporting logs; Qualcomm Incorporated; CR; 36.331; F; REL-10; SONenh_LTE-Core;

- Huawei thinks we discussed the issue related to MDT. QC thinks since we had agreement for MDT and the same logic should apply to RLF reporting. Ericsson agrees to this change as it aligns behaviour.
- Ericsson wonders about the “may”. QC would be fine with “shall”. NSN thinks for Logged MDT we agreed on shall due to user consent. NSN would suggest to make it consistent with the previous sentence. Samsung would suggest to extend the previous sentence.

=> Agree on the principle but should improve wording of the CR (see above). An updated CR can be provided in R2-120820, CR0894 (QC)

R2-120820 Time to keep RLF Reporting logs; Qualcomm Incorporated; CR0894; 36.331; F; REL-10; SONenh_LTE-Core;

=> CR is agreed

Late or withdrawn

R2-120169 AC barring for delay tolerant access; ITRI; CR; 36.331; (0858); C; REL-10; NIMTC-RAN_overload;

[Withdrawn]

5 UMTS/LTE joint: Rel-11

5.1 WI: RAN overload control for Machine-Type Communications (RP-111373)

(SIMTC-RAN_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, target: March 12, WID: RP-111373)
SI output: TR 37.868 v11.0.0 (as provided to RAN53 in RP-111238).

5.1.1 EAB information update procedure

Including output of email discussion [76#31] - Joint: EAB Information Update Procedure [Huawei]

R2-120518 Summary of Email Discussion 76#31 - Joint EAB Information Update Procedure; Huawei; Report; related to email discussion [76#31]; REL-11;

Proposed solutions:
a) Immediately acquire the EAB info upon the reception of EAB info update indication in paging (ETWS-like)
b) Always mandate acquiring the EAB info before access
c) Notification of EAB info update in paging (‘ETWS-like’) + re-acquisition of the EAB info before access only when one or more EAB info update indications have been received.

- NSN wonders whether MTC UEs could perform access quite frequency (e.g. per 5 minutes). ZTE agrees that this a key issue and that EAB is not only for MTC devices. Huawei agrees with ZTE that accesses could be more often. Ericsson thinks the solution should be flexible enough. Ericsson thinks the requirement is that devices are delay tolerant. ZTE thinks we should distinguish EAB and delay tolerant. We agreed that they could be different. We might have to support also cases with frequent information transfers.
- Samsung thinks that smart meters is a typical case and frequent accesses are unlikely. LG does not think that frequent accesses need to be supported. Vodafone thinks we have to consider EAB both as reactive and proactive mechanism.
- ALU thinks that compared to the actual transmission the power consumption for reading the SIB is negligible.
- Ericsson thinks that one issue with solution b) is that it causes more synchronous access when releasing the barring. Ericsson also assumes that the reading of SIB is not

IPR2025-00720, OnePlus Ex. 1004
Page 301 of 700

negligible. Huawei thinks that message transmission will be more frequent than network congestion. Therefore, solution a) (or c) would be better.
- NSN would be fine with a) or b). But NSN sees also some issues with b).
- ALU suggests to remove solution c) and to discuss between solution a) and b). DOCOMO prefers solution b).
- Samsung wonders whether companies considered the additional load on PDCCH due to frequent SIB updates and the required indication for SI change. Panasonic prefers solution b).
- Renesas agrees that such devices might access relatively frequently. Reading SIB before every access is significant power consumption. b) is not attractive since SIB reading is useless in almost all accesses. The paging would indicate that EAB is on and then the UE needs to do something special, i.e., reading SIB before every access.
- NSN would prefer b)
- Ericsson clarifies that the main concern about solution b) is that it concentrates accesses even if there is no barring activated. Vodafone agrees to this concern. Huawei shares the concern.

=> Noted

R2-120270 Further performance evaluation of EAB information update mechanism; Intel Corporation; Disc; REL-11;
- Renesas wonders whether the UE wakes up immediately when being paged. Intel indicates that they implemented what is described in the email discussion. Intel clarifies that the UE uses the SIB as stored and updates it only when it is paged. If the UE is barred, and received an indication it reads SIB and, if now unbarred, performs the access.
- Vodafone thinks we have to consider the NAS behaviour. Vdf assumes that AS would not immediately inform NAS layer. Intel thinks AS informs NAS when the UE is no longer barred. Samsung thinks that NAS would not retry continuously so that there would be no access concentration.

=> Noted

R2-120195 EAB information update procedure; ZTE Corporation; Disc; REL-11;

=> Noted

R2-120615 Comparison of EAB update solutions; Alcatel-Lucent; Disc; REL-11;

=> Noted

R2-120559 EAB information update procedure in LTE; Renesas Mobile Europe Ltd; Disc; REL-11;
- Proposal 1 indicates that even if we agree on solution a), the network could still decide to use the normal update mechanism.

… continuation of discussion above:
- LG thinks that if we cannot conclude on how to enhance SIB reading we just stick to existing mechanisms.

=> No conclusion reached on SIB update mechanism.

=> Can discuss offline during this week to try to progress on the EAB Update mechanism for LTE (Huawei)

- After offline discussion Huawei presents:

R2-121023 Way forward for the EAB info update mechanism for LTE, Huawei, Vodafone, Intel, CATT, Ericsson, ST-Ericsson, ZTE, ITRI, New Postcom, ASUSTeK, HT mMobile Inc., LG Electronics Inc., MediaTek, CMCC, Deutsche Telekom, Renesas Mobile Europe Ltd, HTC, CATR, HiSilicon
- ALU has not seen or heard of the document before presentation and is not ready to agree it. DOCOMO is also reluctant. DOCOMO thinks that every company has different understanding of the details. NEC has also not seen this earlier. ALU thinks that Huawei was asked to do offline discussions and this is not the way offline discussions should be led. QC does also not agree on the way forward.
- ALU, Nokia and ALU think we should be clear on what a solution actually is before we decide on it.

=> Will discuss at next meeting.

New SIB or existing SIB?

IPR2025-00720, OnePlus Ex. 1004

- LG supports a new SIB.
- ZTE also supports it for UMTS and LTE.

Agreements
1 We will define a new SIB to accommodate the EAB info in UMTS and LTE.

R2-120782 EAB update mechanism; Samsung; Disc; REL-11;
R2-120458 EAB SI considerations for LTE; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120746 Further analysis on EAB update mechanisms; CATT; Disc; REL-11;
R2-120713 UE models for acquiring and re-acquiring EAB update; LG Electronics Inc.; Disc; REL-11;
R2-120171 Further discussion on ETWS-like notification for fast EAB update mechanism; ITRI; Disc; REL-11;
R2-120184 MTC Traffic Modeling; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120789 Where to provide the EAB information; Samsung; Disc; REL-11;
[Moved here from 5.1.2]
All 7 Tdocs not treated

UMTS
R2-120461 EAB SI considerations for UMTS; Ericsson, ST-Ericsson; Disc; REL-11;
- Renesas thinks the wrap-around-problem is a corner case.
- ZTE supports all proposals.
- NSN does not see a need to change the agreements on EAB SIB update from last meeting.
- Huawei thinks this is not considered a problem for ACB, so why would it be a problem for EAB.
- QC agrees that the value tag is not efficient. QC would therefore support a common solution.
- NSN thinks we should avoid introducing specific SIB updates for each feature.

=> Noted

R2-120728 Impacts of baseline EAB; Qualcomm Incorporated; Disc; REL-11;
[Moved Here from 5.1.2]
- QC clarifies that even though the evaluation is for UMTS, the proposals apply also to LTE.
- Vdf does not see a need for the randomization. Vdf is happy with the classes as agreed before. ZTE agrees that the QC proposal would be good but does not expect other companies to be willing to this. Therefore, ZTE thinks we have to solve it by other means (SIB update)
- DT thinks that we should stick to the current agreement
- LG thinks that we could consider delayed acquiring of EAB SIB.

=> Noted

5.1.2 SIB design for EAB

Define new SIB or extend existing SIB? Details of the SIB for EAB?

General:
R2-120196 Triggers for EAB activation; ZTE Corporation; Disc; REL-11;
- Vodafone thinks that RAN2 should take the lead and inform RAN3 about our decision. NSN assumes that it is up to RAN3 to decide what additional information the RAN requires from the CN. NSN thinks there is not even need to inform RAN3. Ericsson also thinks we have already agreed on the 10-bit bitmap without asking RAN3. So, we can also decide on the SIB without waiting for RAN3.

=> Noted

SIB Format:
R2-120463 EAB information for RAN sharing; Ericsson, ST-Ericsson; Disc; REL-11;
- Solution 2: Samsung wonders whether Ericsson has considered the case where all PLMNs have the same EAB info. Ericsson clarifies that the calculation assumes that the parameters are different for all PLMNs. Samsung would consider this a worst-case result. Ericsson agrees. Ericsson thinks that solution 4 is efficient if there are many PLMNs with only few different parameter sets. Samsung would prefer solution 2.

=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-120519 EAB parameters in shared network; Huawei, HiSilicon; Disc; REL-11;
R2-120170 EAB SIB Optimization; ITRI; Disc; REL-11;
R2-120714 SIB design for EAB; LG Electronics Inc.; Disc; REL-11;
R2-120783 EAB parameter for RAN sharing; Samsung; Disc; REL-11;
All 4 Tdocs not treated

Discussion
- Samsung would prefer solution 2.
- LG sees no strong need to optimize the size of the new SIB since it will be broadcast rarely.
- Renesas prefers solution 2 but would prefer to make the elements in EAB-ConfigList-r11 optional.
- ZTE is fine with agreement 1 below but thinks that it will require the additional signalling suggested in their paper. Vodafone thinks there is always the option of OAM configuration and therefore the SIB signalling could also be useful if there is no change to Iu signalling.
- NSN thinks there is no need to optimize the signalling overhead.

Agreements
1 It will be possible to indicate individual EAB parameters per PLMN.
FFS whether it should also be possible to signal a single parameter set applicable to all PLMNs

Late or withdrawn

R2-120110 EAB information in SIB; Institute for Information Industry (III); Disc; REL-11;
R2-120121 Discussion on EAB SIB design; HT mMobile Inc.; Disc; REL-11;
Both withdrawn

5.1.3 Other Stage-3 details

Including output of email discussion [76#32] - Joint: EAB Running stage-3 CRs [Huawei]

R2-120521 EAB open issues; Huawei, HiSilicon; Disc; REL-11;
- CATT wonders where AS can get the information from. Huawei thinks it is coming from NAS but there is no impact on the interface, i.e., up to UE implementation.
- ZTE thinks that proposals 1 and 2 have already been agreed previously.
- DOCOMO thinks it should be an explicit indication.
- NSN would like to leave this discussion to CT1. Intel supports this view. Huawei thinks we can very well make decisions on how we would like interface to look.
- LG thinks that GERAN has already specified this and we should just follow that approach. NSN thinks that GERAN is substantially different. LG thinks this aspect is the same in GERAN. Samsung thinks that most contributions have proposed this and we should just go for it.
- Proposal 4: Ericsson understands that AC 11-15 should always ignore EAB and therefore thinks that interpretation 2 is correct. LG thinks that understanding 1 is not correct. ZTE thinks that if a UE is subject to AC 11-15, the 10-bit barring check agreed for EAB does not apply anyway, i.e., all such UEs will pass it. So, interpretation 2 would be correct.

Agreements
1 AS performs the EAB check based on roaming category. There is no explicitly defined NAS=>AS indication of the UE roaming category.
2 We reconfirm that NAS checks the call type (whether it is mobile terminating call or emergency call) to determine whether the call is subject to EAB

- Huawei suggests to send an LS to CT1 informing them about our agreements.

=> No need seen to send an LS.

R2-120608 Remaining issues of EAB; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; REL-11;
R2-120750 Further consideration on EAB NAS-AS modeling related issues; CATT; Disc; REL-11;
R2-120185 EAB/ACB interaction; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120788 EAB and ACB procedures; Samsung; Disc; REL-11;
[Moved here from 5.1.1]

IPR2025-00720, OnePlus Ex. 1004

R2-120787 EAB Interface between AS & NAS; Samsung; Disc; REL-11;
[Moved Here from 5.1.1]
All 5 Tdocs not treated

Draft Running stage-3 CR (related to email discussion [76#32])

Short reporting from email discussion (Huawei)?

25.3xx

R2-120514 [draft] Introduction of RAN overload control for MTC in 25.304; Huawei, HiSilicon; CR; 25.304; (0304); B; related to email discussion [76#32]; REL-11;
R2-120515 [draft] Introduction of RAN overload control for MTC in 25.331; Huawei, HiSilicon; CR; 25.331; (4923); B; related to email discussion [76#32]; REL-11;
Both not treated

36.3xx

R2-120516 [draft] Introduction of RAN overload control for MTC in 36.304; Huawei, HiSilicon; CR; 36.304; (0173); B; related to email discussion [76#32]; REL-11;
R2-120517 [draft] Introduction of RAN overload control for MTC in 36.331; Huawei, HiSilicon; CR; 36.331; (0882); B; related to email discussion [76#32]; REL-11;
R2-120431 Draft TP on Introduction of Extended Access Barring; Samsung; TP; 36.331; B; REL-11;
All 3 Tdocs not treated

Other

R2-120186 Necessity of ACB enhancements for EAB UEs; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120197 Additional considerations on EAB application; ZTE Corporation; Disc; REL-11;
Both not treated

Late or withdrawn

R2-120749 Further consideration on EAB NAS-AS modeling related issues; CATT; Disc; REL-11;
withdrawn

Continuation until next meeting

- ✉ **Joint UMTS/LTE – EAB: Email discussion [77#20] until next meeting on special access class (AC11-15) (what happens when these special access classes are barred?) (Huawei)**
- ✉ **Joint UMTS/LTE – EAB: Email discussion [77#21] until next meeting on SIB design for RAN sharing solutions (Huawei)**

5.2 WI: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN (RP-111361)

(eMDT_UMTSLTE-Core, leading WG: RAN2, REL-11, started: Sep.11, target: Sep.12, WID: RP-111361)
Agreements captured in technically endorsed running CR R2-116547 (after RAN2-76)

5.2.1 QoS Verification

Use cases and requirements? Which additional metrics are needed for which purpose? How to realize them?
Including output of email discussion [76#33] – Joint: MDT Scheduled IP-Throughput measurements [MediaTek]

Scheduled IP Throughput

R2-120625 76#33 MDT Scheduled IP throughput measurement; MediaTek; Report; related to email discussion [76#33]; REL-11;
- Noted. We will look at the way forward document and try to agree on proposals resulting from the email discussion.

R2-120627 Way Forward MDT throughput measurement; MediaTek, CMCC; Disc; REL-11;
Proposal 1: LG agrees that is one suitable measurement for the QoS evaluation of a UE. But for a QoS benchmarking map (how much data is generated in which location) this is not

IPR2025-00720, OnePlus Ex. 1004

suitable. Samsung thinks the definition is enough for MDT. Vdf thinks that the IP throughput measurement is suitable for best effort. For small data transmission it might not be suitable and we might something different there. That measurement could be used together with the scheduled IP throughput. MediaTek agrees that the purpose is the end-user QoS. It is also through that this does not work well for GBR traffic. But maybe we need something else for that anyway. And furthermore, we defined another use case called "traffic location" for which the Scheduled IP throughput is not sufficient. But we should treat those separately.

Proposal 4: ALU wonders what Rel-10 functionality we are referring to. MediaTek tried to avoid discussing the relation with Rel-11 positioning since that is work in progress. The idea is to use the Rel-10 immediate MDT mechanism (location information together with measurements) also here in Rel-11. Of course, further enhancements could also be used. DOCOMO wonders whether that means that in order to get location information for QoS we also need to configure coverage measurements (as a baseline). MediaTek agrees. Vodafone thinks that the periodicity for the two measurements could be quite different. MediaTek thinks that we have a fall-back location mechanisms (based on radio measurements) if no detailed LI is available. LG would not like to rush decisions. MediaTek sees a need to progress.

Proposal 6: NSN thinks this is not the conclusion from the email discussion and not the way-forward to take. MediaTek agrees that it was less clear for UMTS and that there might be no consensus. MediaTek wonders what the starting point should be for UMTS.

Agreements

1 Confirm that Scheduled IP throughput is a suitable for end-user QoS verification in LTE MDT.
FFS whether the scheduled IP throughput should be per UE or per RAB/QoS class, group of RABs/QoS classes.

2 As a working assumption, logging of LTE MDT scheduled IP throughput for UL and DL shall be done in the RAN. FFS whether UE assistance is needed.

3 The location information which might come with radio measurement in MDT Rel-10 can be correlated with LTE Scheduled IP throughput measurements (enhancements to obtaining location information are not precluded).

R2-120628 MDT Throughput measurement for WCDMA; MediaTek; Disc; REL-11;

- Vodafone would prefer to have aligned measurement between UMTS and LTE and would actually propose to adjust the measurement for LTE in order to make it comparable to a possible UMTS measurement. MediaTek wonders whether this is a strong requirement. Vdf wants to have a measurement for UMTS and thinks that it makes comparison much simpler if they are defined in the same way. NSN thinks that we spent a lot of time to find a suitable LTE measurement. And it would not seem reasonable to make the LTE measurement just to align it with UTRAN. MediaTek thinks the only way to make the measurements equivalent would be to do it in the UE for UMTS. This is because of the L2 overhead that the NodeB cannot easily subtract.
- TI thinks that we have the proposals from MediaTek as a baseline.

=> No conclusion whether it is feasible to realize throughput measurements according to the scheduled IP throughput measurements for LTE also for WCDMA. No common view on how it could be realized. For the next meeting companies should develop views.

Other Metrics

Traffic Location use case:

R2-120630 MDT traffic volume; MediaTek; Disc; REL-11;

Proposal 1:

- Vodafone would find it attractive to get these measurements for all UEs in a cell. But the location information may of course not be available.
- Renesas would agree to the statement even though there may be limitations in real life.
- LG thinks that operators will be interested in large uploads and downloads so that not all UEs need to be captured. But also no need to capture this in a specification.
- NSN agrees to the statement. Otherwise, the measurement might not be very useful.
- Ericsson shares the previous views and thinks that it would be beneficial for this use case to log all UEs.

Proposal 4:

IPR2025-00720, OnePlus Ex. 1004

- Vodafone thinks one might want to trace a certain UE generating a lot of data. MediaTek thinks that SA5 might start discussing how trace can be configured. It was an attempt to limit the options.

Proposal 7:
- Ericsson thinks that "RNC" should be FFS. MediaTek clarifies that this is different from the scheduled IP throughput measurement. It can be measured in the RNC.

Proposal 10:
- MediaTek thinks that for WCDMA it is not quite obvious where to capture it. For LTE we could use the L2 measurement specification and could capture it there.

Agreements
1 Clarify in the use case description that UL and DL shall be observed separately.
2 It is FFS if all traffic should be observed together or if some classes of traffic should be observed separately.
3 Measurement for the traffic location use case is only applicable to Immediate MDT
4 For LTE data volume shall be measured without L2 protocol overhead (same as for IP scheduled throughput). FFS for UMTS.
5 The measurement shall be done in the RAN, in the eNB for LTE (FFS whether it is in the RNC for UMTS).
6 Existing solutions such as location reporting for/with DL mobility measurements can be used (enhancements to obtaining location information are not precluded)

R2-120455 MDT data Volume Measurement; Vodafone; Disc; REL-11;
[Moved here from 5.2.2]

Proposal 2:
- LG thinks that since we want to measure at PDCP layer it is easily possible and straight forward to measure separately per Radio Bearer. All required information is already available in the network. Ericsson thinks it will be a different measurement than scheduled IP throughput. Therefore, we don't know yet how we will obtain it. Vodafone notes that for UL measurements it might be tricky to predict the amount of data that is left in the queue (see later proposal)

Proposal 7/8:
- Samsung considers this a stage-3 detail.
- MediaTek wonders whether they are both for LTE and UMTS. Vdf confirms.
- NSN wonders whether "connection dropped" refers to RLF? If so, it seems like a rare event and not important to detect traffic hot-spots. Vdf thinks it could also refer to UEs deciding to drop the connection. NSN thinks we have not discussed these measurements in case of congestion. This could impact the results.

=> Noted

Scheduled IP Throughput, Delay, Loss rate, …

R2-120234 Assessing User QoS Experience in different location; Samsung; Disc; REL-11;

Proposal 1:
- MediaTek wonders whether we have already agreed that we will have latency and loss rate measurements. Samsung thinks that these proposals should be applied if we agree on having such measurements.

=> Noted. Should discuss this after deciding whether we will have such measurements

R2-120506 Measurements for MDT QoS Verification; Ericsson, ST-Ericsson; Disc; REL-11;

Proposal 1:
- MediaTek wonders what is needed in addition to a data volume measurement. MDT is always per UE. So, nothing more than the previously agreed data volume measurements is needed. Ericsson thinks that the details of how to perform the measurements might be for further discussion.

Proposal 2:
- MediaTek thinks we should first discuss and decide whether we want to support such kind of traffic. Vdf thinks that GBR traffic is very delay sensitive and therefore the knowledge should be provided in MDT. It should be provided per QCI. DOCOMO agrees. MediaTek thinks it is premature to conclude this now without further discussion. Ericsson clarifies that they actually proposed it in their document for GBR since they consider that aspect essential. Samsung would like to study this more before agreeing it.

IPR2025-00720, OnePlus Ex. 1004

- LG wonders which delay is meant. Scheduling or transmission or processing delay. Ericsson clarifies that they were primarily considering scheduling delay.

=> Should be evaluated further

Proposal 3:

- LG thinks that for GBR bearers this might be more important than throughput.

Proposal 5:

- TI thinks that MDT is focusing on per-UE measurements. KPI is a quite different concept and does not need to be discussed here. Ericsson agrees but realized that other contributions were referring to KPI measurements.

Agreements

1 Uu loss rate measurements will not be supported for MDT

R2-120665 Throughput and loss rate measurements for MDT QoS verification; LG Electronics Inc.; Disc; REL-11;

Only Proposal 3:

- LG thinks there are several contributors to the uncertainty (e.g. when lower priority data arrives and no BSR is scheduled). MediaTek thinks that the error should be low since the scheduled IP throughput does not include the buffering time.

Agreements

1 The small inaccuracy in UL Scheduled IP throughput measurement due to UL timing uncertainty is considered acceptable.

R2-120454 MDT Throughput Measurement; Vodafone; Disc; REL-11;

[Moved here from 5.2.2]

not treated

Other Metrics:

R2-120152 Impact of mobility in MDT QoS verification; Huawei, HiSilicon; Disc; REL-11;

- NSN wonders whether this does not mix MRO with MDT. Assuming that MRO is already done the handover interruption should be quite small. MediaTek thinks that handovers can be very frequent in certain scenarios and therefore have some sympathy. However they don't consider it high priority. DOCOMO wonders whether the scheduled IP throughput shows such effects. MediaTek thinks that it could be included but it would require to maintain the measurement over the handover and take the HO interruption time into account. Huawei thinks that HO is not considered in the definition of the scheduled IP TP.

=> Noted. Can be considered further.

R2-120507 Accessibility measurements for MDT; Ericsson, ST-Ericsson; Disc; REL-11;

- MediaTek thinks that Ericsson is raising an interesting point. Since a user wanting to access the system, fails the access, this is usually not detected by the network. Therefore, it seems to be interesting. MTK does not consider additional measurements for RACH too interesting.
- Vodafone considers this also interesting as it is related to common channel reliability. Vodafone would consider it more a coverage enhancement.
- Huawei wonders which part should really be enhanced.
- MediaTek thinks that there is support for doing this in the WI but considers accessibility as the most important aspect. RACH measurements are available. What is missing it the failure of the entire access. LG thinks that there are many points in the scope of accessibility and if we start this discussion, the MDT WI will be more diverted and difficult to finalize the WI on time. LG would prefer to delay these discussions on accessibility measurements. Samsung thinks that existing measurements can be used to identify such situations. Vodafone would really like to see failed RRC Connection requests. TI also sees some value in this proposal. DOCOMO agrees

Agreements

1 We will further consider the use case of detecting and reporting failed RRC Connection Establishment attempts as part of MDT.

IPR2025-00720, OnePlus Ex. 1004

R2-120113 Consideration on MDT Throughput Measurement; CHINA UNICOM; Disc; REL-11;
not treated

QoS <=> Location Mapping

R2-120356 Location Information for QoS measurements; NTT DOCOMO, INC.; Disc; REL-11;
R2-120784 one to one mapping between QoS measurement and accurate location information; Samsung; Disc; REL-11;
R2-120453 Measurement Period for QoS Measurements; Vodafone; Disc; REL-11;
[Moved Here from 5.2.2]
R2-120647 QoS measurement and location association for MDT; Kyocera; Disc; REL-11;
All 4 Tdocs not treated

Late or withdrawn

R2-120772 Measurement Types for QoS Verification; CATT; Disc; REL-11;
not treated

5.2.2 Availability of location information

Including output of email discussion [76#34] – Joint: MDT location information enhancements [MediaTek]
General
Solution Outline
Network initiates MDT for UEs that have location information available?
a) The UE keeps the network up to date wrt positioning status?
b) The UE indicates positioning status to the network on immediate request?
MDT controlled on-demand positioning by UE shall be supported? For IDLE? For Connected?
1) for Immediate MDT only?
2) for Immediate and logged MDT?
a) for GNSS (stand-alone)
b) for ECID in MDT
c) for LCS
d) for LCS with eNB client
Location information supported for RLF?

R2-120634 76#34 MDT Location Information Enhancements; MediaTek; Report; related to email discussion [76#34]; REL-11;
- Noted

R2-120635 Way Forward MDT location information enhancements; MediaTek, CMCC; Disc; REL-11;
Proposals 1/2
- ZTE wonders how the MDT works when the UE disables location service. MediaTek clarifies that we discuss enhancements… the solution does not need to be perfect. MediaTek thinks this is the intended and expected behaviour. Samsung wonders whether this could not result in a lot of signalling when the UE indicates any change in availability. MediaTek thinks is an open issue. Samsung wonders if proposal 2b is not pretty much what we have today.
- NSN understands that Proposals 1 and 2 are primarily for logged MDT. One could wait for measurement reports and see whether they contain location information. The alternative would be to filter out measurements that do not have location information. MediaTek thinks the UE could also reject an MDT request if positioning is not ongoing. Samsung thinks that typically an application subscribes periodically to the location service in the phone. In between, the UE has no location service available. Ericsson thinks that the GPS typically switches off once the location information was provided to an application. Samsung and Nokia understand “availability of location information” as that some other application has requested location information so that it is available without any explicit measurements.
- Ericsson thinks this is anyway not sufficient e.g. for indoor.
- Renesas wonders whether this is different from what we have in Rel-10. Ericsson thinks the filtering could be easiest be done in the network side.

=> We might need to distinguish whether the use has allowed usage of the GPS device and availability of location information.

IPR2025-00720, OnePlus Ex. 1004

- MediaTek assumed that when the user enabled/allowed GPS in his phone the location information can be considered available (if there is GPS coverage)
- Samsung assumes that the location information is only considered available if some application (e.g. camera, …) explicitly has requested it. Then it is only available temporarily.

=> No agreement whether proposals 1 and 2 would give any noticeable benefit over the Rel-10 mechanism due to the potential frequent change of the availability of location information.

- Samsung thinks that we are discussing proposal 3 if we expect the MDT client in the UE to explicitly request GPS measurements.
- Renesas would suggest to discuss logged and immediate MDT separately.

R2-120346 Using enhanced location information in MDT; Renesas Mobile Europe Ltd.; Disc; REL-11;
R2-120743 Positioning Status reporting; LG Electronics Inc.; Disc; REL-11;
R2-120774 Using TA+AOA positioning method for MDT; CATT; Disc; REL-11;
R2-120637 System View MDT Enhanced Available Location; MediaTek; Disc; REL-11;
R2-120616 Positioning solutions for MDT; Alcatel-Lucent; Disc; REL-11;
R2-120640 UE selection for MDT with detailed location information; Kyocera; Disc; REL-11;
R2-120643 MDT configuration with detailed location information; Kyocera; Disc; REL-11;
R2-120742 On-demand positioning for MDT; LG Electronics Inc.; Disc; REL-11;
R2-120638 ECID location in MDT; MediaTek; Disc; REL-11;
R2-120785 Rel-11 MDT enhancement on location information in CONN; Samsung; Disc; REL-11;
R2-120786 Rel-11 MDT enhancement on location information in IDLE; Samsung; Disc; REL-11;
All 11 Tdocs not treated

Other

R2-120295 Accuracy of detailed location information; NEC; Disc; REL-11;
[Moved Here from 5.2.5]
R2-120501 Positioning uncertainty and confidence for MDT; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120773 MDT Positioning with/without LCS server; CATT; Disc; REL-11;
All 3 Tdocs not treated

LS to SA5

R2-120641 Draft LS on MDT location; MediaTek; LSout; draft reply LS to S5-113283 = R2-115676; note: RAN2 #76 postponed an LS answer; REL-11;
not treated

Late or withdrawn

R2-120446 Measurement Period for QoS Measurements; Vodafone; Disc; see R2-120453 instead; REL-11;
R2-120448 Measurement Period for QoS Measurements; Vodafone; Disc; see R2-120453 instead; REL-11;
Both withdrawn

5.2.3 Multi-PLMN support

Based on reply LS from CT1 on "Applicability of ePLMN to MDT" (R2-115664)
Need for MDT/RLF across PLMNs? Explicitly signal the applicable PLMNs or determine by rules?

1) MDT logging is performed…
a) in the RPLMN only?
b) in a configurable set of PLMNs?
c) in E(H)PLMNs of the same country? (rule)
2) MDT log retrieval is performed…
a) in the RPLMN only?
b) in a configurable set of PLMNs?
c) in E(H)PLMNs of the same country? (rule)
3) RLF reporting is performed…
a) in the RPLMN only?
b) in a configurable set of PLMNs?
c) in E(H)PLMNs of the same country? (rule)
If explicit configuration is preferred, do it on AS or NAS level?

IPR2025-00720, OnePlus Ex. 1004

R2-120159 Logged MDT continuity across PLMNs; Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera; Disc; REL-11;
R2-120414 Continuation of MDT upon PLMN change; Samsung; Disc; REL-11;
R2-120617 ePLMN handling for MDT and RLF in Rel-11; Alcatel-Lucent; Disc; REL-11;

R2-120158 RLF reporting across PLMNs; Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera; Disc; REL-11;
R2-120153 The applicability of mutiple PLMNs to MDT and RLF report; Huawei, HiSilicon; Disc; REL-11;
R2-120775 MDT Continuity between Different PLMNs; CATT; Disc; REL-11;
R2-120740 Inter-PLMN MDT; LG Electronics Inc.; Disc; REL-11;
All 7 Tdocs not treated

5.2.4 Coverage Optimization

Use cases and requirements? E.g. measurements for coverage optimization

Events for Immediate MDT
Additional measurement events to be supported? If so, which?
a) No additional measurements?
b) A2 Event triggered periodic?
c) A3/A5?
d) All existing measurement events?

R2-120160 Evaluation of A2 trigger for Immediate MDT; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120161 CR to 37.320 on event triggered periodic reporting for Immediate MDT; Nokia Siemens Networks, Nokia Corporation; CR; 37.320; (0041); C; REL-11;
R2-120100 Consideration on A3/A5 event as reporting triggers for Immediate MDT; CMCC, ZTE; Disc; REL-11;
R2-120357 Removing MDT restriction for event A2; NTT DOCOMO, INC.; Disc; REL-11;
All 4 Tdocs not treated

Other

R2-120645 MDT UL coverage RLF report; MediaTek; Disc; REL-11;
[Moved here from 5.2.3]
R2-120696 Reduction of logging and reporting; New Postcom; Disc; REL-11;
Both Tdocs not treated

Late or withdrawn

R2-120358 Broadcast channel coverage optimisation; NTT DOCOMO, INC.; Disc; REL-11;
withdrawn

5.2.5 Other

Inter-RAT MDT
R2-120294 Inter-RAT aspects of Logged MDT; NEC; Disc; REL-11;
R2-120741 Inter-RAT MDT; LG Electronics Inc.; Disc; REL-11;
Both not treated

Other
R2-120646 MDT logging stoppage based on battery threshold level; Kyocera; Disc; REL-11;
R2-120235 Discussion on traffic hot spot discovery; Samsung; Disc; REL-11;
R2-120233 Discussion on measurement of different service types; LG Electronics Inc.; Disc; REL-11;
All 3 Tdocs not treated

Late or withdrawn
R2-120744 Reduction of unnecessary log; LG Electronics INc.; Disc; REL-11;
withdrawn

Continuation until next meeting

IPR2025-00720, OnePlus Ex. 1004

- ✉ **LTE/UMTS – MDT: One week email discussion [77#01] to agree on updated running stage-2 CR (MediaTek) (R2-121032)**
- ✉ **LTE/UMTS – MDT: Email discussion [77#22] until next meeting on location information (when can location information be considered being available; also related to battery consumption) (LG)**
- ✉ **LTE/UMTS – MDT: Email discussion [77#23] until next meeting on Accessibility Measurements (failed RRC Connection Establishment?; details on why it failed?) (Ericsson)**
- ✉ **LTE/UMTS – MDT: Email discussion [77#24] until next meeting on Latency Measurements (use case?; packet delay?; packet delay budget?; GBR/Non-GBR?) (MediaTek)**

5.3 WI: TEI11

Cell reselection

R2-120071 On absolute priorities cell reselection and UTRAN measures; TeliaSonera; Disc; REL-11; TEI11;

- Nokia what data the figures represent. TS does not know exactly. Nokia thinks that packet data transmission is the problem where the variations would be much higher than for e.g. for Voice where the packet size is constant. When there are many packet data transmissions ongoing in the network and the metrics vary quickly, the proposed reselection rules can result in unnecessary and frequent reselections. TS clarifies that the intention is to cover cases where either the UL or the DL is bad and then do a cell reselection.
- DT thinks this is an interesting issue but DT has so far not identified any severe issues with the current mechanism. Therefore, DT would also like to see more evaluation.
- DOCOMO would like to understand why both metrics need to be considered. If UL link budget is well dimensioned there should be no problem with measuring RSCP.
- QC would like to support the idea of TS. QC has also observed that evaluation of one metric is difficult. QC thinks that the consequence could be that the UE looses connectivity. QC would like to discuss this further. MediaTek would also support the idea and did also observe the problem. RIM thinks it is useful to measure both metrics. Samsung refers to an old LS and discussion about LTE where it was finally decided that it was sufficient to evaluate one metric. Renesas thinks that UMTS is quite different from LTE in that respect. Vdf is would anyway support evaluating this further.

=> Noted. Some support. Not entirely clear whether it is really needed. More evaluations should be done. Should be discussed offline. Can come back

R2-120072 25.305 Correction to absolute priority cell reselection; TeliaSonera; CR; 25.304; (0303); F; REL-11; TEI11;

R2-120073 25.331 Correction to absolute priority cell reselection; TeliaSonera; CR; 25.331; (4888); F; REL-11; TEI11;

R2-120074 36.304 Correction to absolute priority cell reselection; TeliaSonera; CR; 36.304; (0170); F; REL-11; TEI11;

R2-120075 36.331 Correction to absolute priority cell reselection; TeliaSonera; CR; 36.331; (0849); F; REL-11; TEI11;

All 4 Tdocs not treated

R2-120748 UE autonomous priority handling versus Camping RAT priority; LG Electronics Inc.; Disc; REL-11; TEI11, LTE-L23;

- Vdf thinks that at least for CSG it was the design choice to override reselection priorities. Vdf thinks this is OK and no issue. NSN agrees that it was intentional and we have to live with that. QC recalls that there was a lot of rush when the CSG concepts were agreed. QC imagine that there are issues. QC could imagine to add a flag which overrides the possibility to prioritize CSG or MBMS. LG thinks that in many situations there is no problem with the existing mechanisms but could imagine problems in certain cases. Renesas thinks this is not really autonomous since the rules are well specified. Also Renesas would not consider it a problem when VoIP is supported in CSG.

=> Not considered to be a severe issue. Noted

Other

IPR2025-00720, OnePlus Ex. 1004

R2-120094 Enhanced RRM by taking terminals PLMN selection mode setting into account.; Deutsche Telekom; Disc; REL-11; TEI11;
- Renesas wonders whether this is not a NAS issue. DT agrees but the indications for RRM in connected mode needs to be done in the AS. DT points out that this addresses only connected mode. For IDLE mode this would need additional NAS signalling. ST-E thinks that this issue seems related to charging. DT thinks this is only one second order effect. There are other reasons why users want to restrict the inter-PLMN HO. RIM wonders whether there would be some information fundamentally being missing. If they think so they should consider bringing this to SA1 first. DT thinks that RAN2 is responsible for this and if the majority sees a need, we could do it in RAN2. Then, we could send LSs to other groups.
- Samsung thinks the RAN receives a handover restriction list from the CN. Therefore this could be solved via NAS and the RAN would become aware via the HO restriction list.

=> Noted. Not much support. Should discuss further offline. Should also discuss connection to NAS.

R2-120456 UE RRC mobility states mismatch between UTRAN and E-UTRAN; Research In Motion UK Limited; Disc; REL-11; TEI11, LTE-L23;

=> revised R2-120792

R2-120792 UE RRC mobility states mismatch between UTRAN and E-UTRAN; Research In Motion UK Limited; Disc; REL-11; TEI11, LTE-L23;
- DT thinks that MSE is a useful tool but DT has seen this proposal earlier and then it was considered not needed. Renesas has some sympathy for this but wonders whether this could not also made to work by just counting all HOs, i.e., without mapping rules.
- Samsung thinks that the first thing to be addressed is IDLE<->CONNECTED transitions which occur more often. MediaTek thinks it was decided to leave it up to implementation for IDLE-CONNECTED and would suggest the same for inter-RAT. Nokia also thinks that it was left up to UE implementation.
- Huawei wonders whether RIM made certain assumptions on cell size. DT agrees that this could be problematic when cells in UMTS and LTE have different size.

=> Not much support. Noted

R2-120776 Multi-carrier Handover between UTRAN and E-UTRAN; CATT; Disc; REL-11; TEI11, LTE-L23;
- Renesas thinks this might be technically possible but wonders what the actual use case would be. It seems more important to ensure a successful inter-RAT HO than to setup additional carriers right away.
- Huawei thinks it is an interesting use case in particular when LTE and UMTS networks are well dimensioned and deployed.
- NSN wonders whether this is for TDD and/or FDD. CATT wants it for both.
- Samsung thinks it is already supported today. CATT thinks it is not supported from LTE to UMTS. Samsung thinks it should work. Only blind addition of carriers could be a potential problem. NSN agrees with Samsung that the source RAT (LTE) has nothing to do with this. CATT thinks in the HO Command there is no signalling available for this. Renesas thinks it is not supported. Samsung now understands that the HO TO UTRAN is a separate message which does not support it. But it is not a limitation on the LTE side.
- NSN thinks there should be some real motivation before adding this functionality. DOCOMO does not see a need for this functionality. They would be happy to get UE support for normal handover.

=> Limited support. Noted

5.4 WI: Other Work/Study Items

For Rel-11 WI/SIs for which RAN2 is not prime responsible WG, e.g. …
(vSRVCC, leading WG: SA2, REL-11, started: Sep.10, target: March 12, WID: SP-100704)

H(e)NB Sharing (SON Enhancements)

(SONenh2_LTE_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, target: Sep.12, WID: RP-111629)
(FS_EHNB_enh, leading WG: RAN3, REL-11, started: March 11, target: March 12, WID: RP-111623)

How to support inbound mobility to shared CSG cells?
a) UE signals PLMN ID(s) passing membership check?

IPR2025-00720, OnePlus Ex. 1004

b) Network (eNB&MME) check membership for all possible PLMNs?
Need to adjust reselection to shared CSG cells?

R2-120415 Inbound mobility to shared CSG cell; Samsung; Disc; REL-11; SONenh2_LTE_UTRA-Core;
- noted

R2-120556 Discussion on HNB RAN sharing; Huawei, HiSilicon; Disc; REL-11; FS_EHNB_enh;
- noted

R2-120747 Support of HeNB RAN sharing; LG Electronics Inc.; Disc; REL-11; TEI11, LTE-L23;
[Moved Here from 5.3]
- noted

Discussion:
- Renesas wonders whether the NW-only solution works in all cases. Renesas thinks we would need something in the UE so that the NW knows the target PLMN. LG thinks the Rel-10 UE only includes the primary PLMN in the handover request. DT thinks that the NW could evaluate the membership for all combinations of PLMN IDs and CSG-IDs without additional signalling. ALU thinks the NW has to take the final decision. Additional information may or may not help the NW… depending on what RAN3 decides. ALU thinks we should wait what RAN3 designs and whether they ask us to add some signalling. Samsung thinks we have to support the uncoordinated case. ALU agrees that we may need to provide something (filtered or full list) but that should be decided once we know from RAN3. Samsung thinks we should agree whether we want to support the uncoordinated network case. ALU thinks it is a RAN3 SI. Vdf considers CSGs as uncoordinated. Samsung explains that the UE only reports the pPLMN of the CSG. If the NW does not know the other PLMN IDs being broadcast by that target CSG it cannot verify the membership. NEC suggests to wait for RAN3.
- LG agrees that we may need to work for RAN3. But we could discuss whether we need to support legacy UEs.
- NSN wonders whether this should also be brought to SA2.
- NSN wonders how a Rel-10 UE will deal with a Rel-11 NW broadcasting multiple PLMNs from a CSG.
- Nokia suggests to inform RAN3 that we could enable Rel-11 to provide one or more target PLMN IDs. ALU thinks RAN3 is already aware of this.

=> We will wait for RAN3 to discuss the use cases and to find a solution.

CRs:

R2-120416 Introduction of UE support for inbound mobility to a shared CSG cell; Samsung; CR; 36.331; (0873); B; REL-11; SONenh2_LTE_UTRA-Core;

Multiple Frequency Bands (e850_UB-Core)

(e850_UB-Core, leading WG: RAN4, REL-11, started: Dec.10, target: March 12, WID: RP-111396)

R2-120694 Support of multiple frequency bands; Ericsson, ST-Ericsson; Disc; REL-11; e850_UB-Core;
- noted

R2-120102 Multiple Band Indicator handling; Nokia Corporation, Nokia Siemens Networks; Disc; REL-11; TEI11;
[Moved Here from 5.3]
- noted

R2-120430 Introducing support for multi-bands cells; Samsung; Disc; REL-11; TEI11, LTE-L23;
[Moved Here from 7.8]
not treated

Discussion:
Ericsson Proposal 3:
- DOCOMO thinks it is too early to decide this. Operators might need this prioritization. We should wait for RAN4 before deciding this. AT&T agree with DOCOMO

Nokia Proposal 1:
- Samsung agrees that there could be two options. But currently the IE is useless since there is anyway only one duplex distance defined. Nokia agrees. But it might be needed in

IPR2025-00720, OnePlus Ex. 1004

the future. DOCOMO thinks that the UL carrier frequency can always be obtained from the existing mechanism. Huawei thinks the legacy band should be indicated in the legacy signalling.
- MediaTek wonders whether there will always be a common duplex distance.

Agreements
1 Signal a list of (up to 8) additional frequency band indicators in system information.
2 Introduce extensions in SIB2 (EUTRA) to signal the additionalSpectrumEmission corresponding to each of the additional frequency bands indicated in the extension of SIB1 (EUTRA).
3 No need is seen to provide UL carrier frequencies for additional bands. The "legacy" band should then be indicated in the legacy signalling so that UEs can deduce the UL carrier frequencies of the additional bands.

CRs:

R2-120695 Support of multiple frequency bands in a cell; Ericsson, ST-Ericsson; CR; 36.331; (0888); B; REL-11; e850_UB-Core;
- Renesas wonders whether we have received proper information from RAN4 that we can progress this. Nokia thinks we have not received any further information from RAN4. Since also the prioritization has not been sorted out it seems premature to agree on CRs now.

=> Postponed

R2-120179 Multiple frequency band indicators per cell; Ericsson, ST-Ericsson; CR; 25.331; (4893); B; REL-11; e850_UB-Core;
=> Postponed

PWS
(PWS_Sec, leading WG: SA3, REL-11, started: March 11, target: June 12, WID: SP-110223)

R2-120471 Security for PWS warning systems in Rel-11; Ericsson, ST-Ericsson; Disc; REL-11; PWS_Sec;
- ST-E clarifies that the length of the security keys has not been settled in SA3.
- ST-E suggests sending an LS to SA3 to ask for the security key length and whether a time stamp is needed. And also ask whether this is likely to happen in Rel-11.
- RIM agrees that it would be good to send an LS to SA3 and think it should be CCed to CT1. Huawei does not see a need to send an LS since they already know that we are affected and they will inform us.
- Regarding proposal 1 NSN is concerned that we have not gotten this confirmed from CT1. RIM thinks it would be good to send an LS to CT1.
- ST-E thinks we are not in a hurry and could wait

=> Noted. Will wait for input from SA3 and CT1

6 LTE: Release 10 and earlier releases

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: RP-080747)

6.1 WI: Carrier aggregation (RP-100661), UL-MIMO, eDL-MIMO

(LTE_CA-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-100661)
(LTE_UL_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: June 11, WID: RP-100959)
(LTE_eDL_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: March 11, WID: RP-100196)

Bandwidth Combinations

R2-120282 On channel bandwidth and Inter-band CA; Qualcomm Incorporated; Disc; REL-10; LTE_CA-Core;
- noted

R2-120599 Introduction of supported bandwidth combinations for CA; Ericsson, ST-Ericsson; Disc; REL-10; LTE_CA-Core;
- noted

IPR2025-00720, OnePlus Ex. 1004

R2-120283 Carrier Aggregation bandwidth combination; Qualcomm Incorporated; CR; 36.331; (0865); F; REL-10; LTE_CA-Core;
not treated

R2-120600 Introduction of supported bandwidth combinations for CA; Ericsson, ST-Ericsson; CR; 36.331; (0883); F; REL-10; LTE_CA-Core;
not treated

Discussion:
- DOCOMO is afraid that some UEs will not support bandwidth combinations that operators are interested in. Nokia thinks this is a valid problem. It would be a lot of testing for all possible bandwidth combinations. The idea is to limit UE support to actually existing bandwidth combinations. Operators should ensure that the bandwidth combinations they are interested in, are defined in RAN4. Without any solution there is a risk that we never see CA UEs due to absent possibilities to test all combinations. QCs intention is to discuss with operators and NW vendors and to align what needs to be supported. The idea is to enable the deployment. ZTE thinks it is a valid problem and would like to see a solution. DOCOMO is concerned that operators may change their deployment over time and then old UEs would not support this. Motorola agrees with QC and others that this is actually an advantage for operators. UEs should only indicate support for bandwidth combinations that they have been tested for. NSN acknowledges the problem and agrees that a UE capability is needed. TS has also some concerns like DOCOMO. Samsung thinks that UE vendors will impelement what operators require. ALU supports the need for the signalling. Verizon also supports the proposal in order to limit the number of combinations and allow UE to indicate the combinations it supports. Vdf would expect that UEs support all possible combintations. There would also be less complexity for the network. Huawei shares DOCOMO's view that UEs should not be created for current deployments. QC clarifies that it is not only about UE but also about NW which might not offer testing opportunities.

=> No conclusion yet. We will wait what RAN4 concludes on the issue during this week.

Other

R2-120081 Clarification on sCell index removal; HTC; CR; 36.331; (0851); F; REL-10; LTE_CA-Core;
- ALU wonders in which scenario the eNB would want to do this. HTC thinks this is also for DRBs. ALU clarifies that the issue is different since all SCells are released during re-establishment.

=> Not agreed.

R2-120272 Clarification on number of PDCP SDUs for categories 6-8 UEs; HTC; CR; 36.306; (0080); F; REL-10; LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core;
- Nokia wonders whether the PDCP sequence number can handle 500 packets per subframe. HTC thinks the PDCP SN is quite long. Samsung thinks that we discussed the stalling and agreed that we don't need to increase the SNS. LG clarifies that the sender could bring at most 2048 PDCP SNs in flight. Samsung wonders whether there is any point in defining a number now for Cat. 8?

=> We can add additional rows for Cat. 6, 7 with the suggested numbers.
=> Discuss offline whether Cat. 8 should be added and which value to set.
=> Can provide updated CR on number of PDCP SDUs for categories 6-8 UEs in R2-120826 CR0080 (HTC)
=> After offline discussion HTC reports that Cat. 8 UE may not exist soon. Therefore Cat. 8 will be set to "FFS"
- ALU would prefer to take out the Cat. 8 row.

R2-120826 Clarification on number of PDCP SDUs for categories 6-8 UEs; HTC; CR; 36.306; 0080; F; REL-10; LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core;
=> Take out the Cat. 8 row (instead of "FFS")
=> Change the title to "categories 6-7"
=> With these changes the CR is agreed in R2-121019 CR 0080 R1

R2-120306 UE Initiated Dynamic Activation and De-activation of Secondary Cells; Qualcomm Incorporated; Disc; REL-10; LTE_CA-Core;
- DOCOMO does not consider the scenario relevant.

IPR2025-00720, OnePlus Ex. 1004

- Ericsson wonders whether the deactivation would be permanent every time the UE is paged. QC assumes this would happen only a couple of times per day (e.g. when a person does a phone call on the other RAT).
- LG wonders whether this would not require full knowledge of available traffic which the UE does not have. So, the network should always know the UEs preference. QC thinks it is not to enable the UE to request more carriers but rather to tell the network that it needs its processing capabilities for other purposes. Broadcom has the same concerns as LG.
- Huawei thinks is similar to DSDS. NSN is also not convinced about the use case. NSN thinks this is anyway too late for Rel-10. Broadcom agrees that this could anyway cause problems to the other RAT when the network does not deactivate the carrier. QC thinks this is not like DSDS since there multiple RFs in this case. QC this is a principle problem with RFs operating on a certain bandwidth.
- Samsung would like to discuss this again in the next meeting and provide more information about use cases.

=> Noted. Limited support. Can come back when more support.

R2-120307 UE Initiated Dynamic Activation and De-activation of Secondary Cells; Qualcomm Incorporated; CR; 36.321; (0530); F; REL-10; LTE_CA-Core;
withdrawn

R2-120336 Simultaneous transmission related to SRS; NTT DOCOMO, INC; Disc; REL-10; LTE_CA-Core;
Proposal 1:
- Ericsson thinks that this is also a RAN1 issue how to prioritize SRS between different cells. DOCOMO thinks that 36.302 should capture these aspects. Samsung thinks that this case was already discussed in RAN1. And if so, we could also capture it in RAN2 spec. Huawei agrees that this could be specified in RAN2 specs.

=> Support for clarifying this in 36.302 according to what RAN1 has already specified.
Proposal 2/3:
- NSN and QC thinks that RAN1 intentionally did not specify it since it happens rarely. DOCOMO thinks that it is anyway important to know the UE behaviour. QC thinks this should not be driven from RAN2. Samsung thinks that this should be driven in RAN1. Ericsson agrees.

R2-120338 Correction to the combination of physical uplink channels; NTT DOCOMO, INC; CR; 36.302; (0030); F; REL-10; LTE_CA-Core;
- ALU wonders whether we really want to extend the scope of this section to reference signals. DOCOMO thinks it should be captured here.
- NSN and Huawei think that there will be some confusion with “subframe” and “symbol”.

=> Updated CR on the Correction to the combination of physical uplink channels can be provided in R2-120827 CR0030 (DOCOMO)

R2-120827 Correction to the combination of physical uplink channels; NTT DOCOMO, INC; CR; 36.302; 0030; F; REL-10; LTE_CA-Core;

=> CR was agreed during the meeting but as wrong CR number on CR cover revised in R2-121055

R2-121055 Correction to the combination of physical uplink channels NTT DOCOMO, INC CR 36.302 0030 1 F REL-10 LTE_CA-Core

=> CR is agreed

Late or withdrawn

R2-120078 Clarification on sCell index removal; HTC; CR; 36.331; F; see R2-120081 instead; REL-10; LTE_CA-Core;

R2-120308 UE Initiated Dynamic Activation and De-activation of Secondary Cells; Qualcomm Incorporated; CR; 36.321; F; see R2-120307 instead; REL-10; LTE_CA-Core;

R2-120310 UE Initiated Dynamic Activation and De-activation of Secondary Cells; Qualcomm Incorporated; CR; 36.321; F; see R2-120307 instead; REL-10; LTE_CA-Core;
All 3 Tdocs are withdrawn

6.2 WI: Relays (RP-110911)

(LTE_Relay-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-110911)

IPR2025-00720, OnePlus Ex. 1004

No contributions.

6.3 WI: MBMS enhancements (RP-101244)

(MBMS_LTE_enh-Core, leading WG: RAN2, REL-10, started: June 10, closed: March 11, WID: RP-101244)
Including output of email discussion [76#35] - LTE: UE category in presence of MCH reception [QC]

UE processing capabilities for MCH

R2-120132 Email discussion summary: [76#35] - LTE: UE category in presence of MCH reception; Qualcomm Incorporated; Report; related to email discussion [76#35]; REL-10; MBMS_LTE_enh-Core;

Proposed to confirm that…
- UE processing capability defined for DL-SCH today is shared for processing of DL-SCH and MCH in Carrier Aggregation operation.
- UE may encounter processing capability limitations due to the fact that the eNB is unaware of UE reception of an MBMS service.
- No eNB scheduling restriction will be defined in the specifications.
- No UE behaviour will be defined as to how it detects occurrence of processing capability limitations.
- Occurrence of the problem situation is expected to be rare.

Proposed to discuss prioritization between unicast and MCH in case of processing capability limitation (5 companies proposed prioritizing unicast and 8 companies proposed leaving it up to UE implementation)

Discussion on prioritization:
- Samsung thinks it might be OK to leave it up to UE implementation.
- ALU thinks UE behaviour must be predictable. Unicast should be prioritized over MBMS. Ericsson thinks it can be up to UE implementation since in Rel-11 it is already up to the UE to prioritize among MBMS and Unicast. ALU thinks Rel-11 is different since we have a full solution. Rel-10 is a half solution and therefore it should be predictable. Ericsson thinks it is not a problem when a few transport blocks are lost. ALU thinks Rel-11 prioritization is for congestion handling and not about processing limitation.
- NSN would be OK to leave it up to UE implementation. ALU wonders why it is beneficial to leave it up to UE implementation. Companies only argued that it is not a problem. QC thinks these are implementation reasons.

=> It is up to UE implementation whether to prioritize MBMS or unicast when exceeding the UEs processing capabilities.

R2-120133 UE processing requirement in the presence of MCH transmission; Qualcomm Incorporated; CR; 36.306; F; REL-10; MBMS_LTE_enh-Core;
- Samsung wonders whether it is sufficiently clear that this applies only to carrier aggregation. Nokia suggests to replace “only in carrier aggregation operation” to “only when the UE is configured with SCells”. Samsung thinks that we only target the case where the UE receives MBMS on a Serving Cell.

=> Clarify that we only target the case where the UE receives MBMS on a Serving Cell
- NSN wonders why we have “as combined MCH transport blocks” on the cover page.

=> Remove “as well as combined MCH transport blocks” from cover page
=> An updated CR on UE processing requirement in the presence of MCH transmission can be provided in R2-120828 CR0082 (QC).

R2-120828 UE processing requirement in the presence of MCH transmission; Qualcomm Incorporated; CR; 36.306; F; REL-10; MBMS_LTE_enh-Core;
=> CR is agreed

R2-120134 DRAFT LS on UE processing requirement in the presence of MCH transmission; Qualcomm Incorporated; LSout; REL-10; MBMS_LTE_enh-Core;
- Huawei wonders whether there will be any impact to RAN1 work. QC does not see any changes needed in RAN1 specs. But processing affects RAN1 in general.
- QC would remove the second bullet.
- Nokia does not see a need for the LS.

=> Not agreed. No need to send an LS

IPR2025-00720, OnePlus Ex. 1004

Limit Counting Response

a) UE responds only to counting request received on the R-PLMN?
b) UE lists only services which it is able to decipher (and does not send a response if there is no such service)?

R2-120103 Limiting MBMS counting responses to within the PLMN; Nokia Siemens Networks, Nokia Corporation; CR; 36.331; (0855); F; REL-10; MBMS_LTE_enh-Core;
- TS wonders about the case where two operators share a band having one PLMN each but broadcasting service in common. Would that case be limited by this approach. Nokia thinks that the UE could provide the response if the network broadcasts both PLMN IDs.
- Nokia wonders whether it is acceptable for a network to receive counting responses even if the network has no idea about MBMS.
- Huawei would support the NSN CR.
- Ericsson supports this CR
- Huawei would like to improve the wording.
- Samsung wonders about reception from a cell broadcasting an EPLMNs.

=> Can discuss offline about reception from a cell broadcasting an EPLMNs
=> The principle is agreed
=> Can discuss detailed wording offline.
=> Updated CR can be provided in R2-120830 CR0855.

R2-120830 Limiting MBMS counting responses to within the PLMN Nokia Siemens Networks, Nokia Corporation CR 36.331 0855 - F REL-10 MBMS_LTE_enh-Core
revised in R2-121017

R2-121017 Limiting MBMS counting responses to within the PLMN; Nokia Siemens Networks, Nokia Corporation; CR; 36.331; 0855 R1; F; REL-10; MBMS_LTE_enh-Core;
=> CR is agreed

R2-120420 Clarification on MBMS counting for uncipherable services; Samsung; CR; 36.331; (0875); F; REL-10; MBMS_LTE_enh-Core;
- CATT thinks the response should rely on the interest and not on the reception status. Samsung wonders why the network would want to receive a response for a service the UE cannot/shall not decode.
- ALU wonders whether the assumption is that the UE would already know whether it can decipher the content already when indicating the interest. Samsung thinks that when it is clear for the UE that it will not be able to decipher, it should not send a counting response. Samsung does not consider this timing issue a big problem.
- LG thinks that so far we were reluctant to specify any limitations for the case that the UE cannot receive the service.
- LG thinks that even for the intra-PLMN case the UE might not be able to decipher a service. Huawei agrees that they are probably no alternatives but could be combined. However, Huawei does not see a real need for the solution proposed by Samsung.
- QC wonders whether the note should be limited to ciphering or whether there could be other reasons. Huawei did not notice the “e.g.” before and is not a bit concerned that we agree on something we don’t fully understand. Huawei would be OK to limit it to the ciphering case. NSN thinks that the note can anyway not change the UE behaviour and sees inconsistencies between cover sheet and the CR. Samsung thinks there are many such clarifying notes. Ericsson would suggest to say “prevented from receiving due to ciphering…”

=> Should discuss the “e.g.” and actual restrictions.
=> An updated CR can be provided in R2-120831 CR0875

R2-120831 Clarification on MBMS counting for uncipherable services; Samsung; CR; 36.331; 0875; F; REL-10; MBMS_LTE_enh-Core;
- Samsung indicates that we could merge it with the Nokia CR.

=> Set Tick Boxes
=> With this change the CR is agreed R2-121020 CR 0875 R1

R2-120715 Inclusion of the mbsfn-AreaIndex in the MBMSCountingResponse message; LG Electronics Inc.; CR; 36.331; (0889); F; REL-10; MBMS_LTE_enh-Core;
- CATT thinks this can be left for UE implementation for Rel-10.
- LG thinks it is quite essential since otherwise the UE could use SIB13 information from another cell.
- NSN thinks the CR is technically correct and could support it.

=> We agree to clarify this.

IPR2025-00720, OnePlus Ex. 1004

=> Can discuss updates to cover page offline.
=> An updated CR can be provided in R2-120832 CR0889
=> Has been merged into the Nokia CR (R2-121017 = revision of R2-120830).

6.4 WI: Minimisation of Drive Test (RP-100360)

(MDT_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: RP-100360)

No contributions.

6.5 WI: eICIC (RP-100383)

(eICIC_LTE-Core, leading WG: RAN1, REL-10, started: March 10, closed: June 11, WID: RP-100383)

R2-120208 Clarification on MBSFN and measurement resource restrictions; Samsung; CR; 36.331; (0862); F; REL-10; eICIC_LTE-Core;
- Ericsson does not agree to this CR and thinks that this has been discussed at length and the current text seems correct. Ericsson does not think the problem description justifies the change. ZTE shares Ericsson's view. It is not necessary for the UE to read SIB2 from the neighbour cell. NSN agrees with Ericsson and ZTE that the change is not needed. Samsung would not want to change anything but removing the unnecessary condition. ZTE thinks that this might not be future-proof. Renesas has some sympathy and thinks we might need to discuss more. QC supports Renesas' view.

=> Postponed. Can discuss further offline.
Finally revised in R2-121031

R2-121031 Clarification on MBSFN and measurement resource restrictions; Samsung; CR; 36.331; 0862; F; REL-10; eICIC_LTE-Core;
- Ericsson wonders about the technical arguments about this change. QC explains that they see no cases where the if-statement would apply. QC also indicates that RAN4 has concluded that the UE should assume all CRS being available in all measurement subframes.
- Ericsson wonders what the impact on the network is. Samsung suggests to remove the Tick. Ericsson wonders if it is then not actually editorial.
- Ericsson thinks that a UE being handed over could have the previous subframe configuration. Nokia does not think that this is possible and thinks the CR clarifies the specification.
- Ericsson and ALU do not like the CR
- Ericsson thinks the consequence analysis is not complete. QC wonders whether Ericsson would be OK with the change if we update the cover page. Ericsson would be OK with that.
- ALU would also suggest to discuss the reason for change.
- Ericsson would first like to see the updates to the cover page.

=> RAN2 agrees to the change. "Consequence if not approved" and "Reason for change" should be discussed/update on the cover page. An updated CR can be provided in R2-121036 CR0862 R1

R2-121036 Clarification on MBSFN and measurement resource restrictions; Samsung; CR; 36.331; 0862 R1; F; REL-10; eICIC_LTE-Core;
- Ericsson detected a problem if there is one MBSFN subframe per radio frame the UE knows the configuration of the neighbour cells. And then, removing the condition is not valid anymore.

=> The CR is agreed

6.6 WI: TEI10 and earlier releases

Including output of [76#36] - LTE: Handling of FDD/TDD capabilities [QC]
Input related to discussion on FGI 27 (LS in RP-111769) and inter-RAT ANR related FGIs (LS in RP-111772)

FDD/TDD capability solutions

Options:
1) TAU update (idle mode only): UE uses TAU to indicate changed FGIs/capabilities?

IPR2025-00720, OnePlus Ex. 1004

a) Capability update during TAU (for IDLE mode, FGI30=false) + Additional capability signalling for later?
b) Capability update during TAU with mode specific capabilities at least for "the other" mode. + Network may request additional capabilities?

2) *FDD FGI/UE capability first: UE indicates the FDD FGIs/capabilities with current signalling and TDD FGIs/capabilities in an extension signalling?*
3) *Mode-dependent FGI/UE capability signalling: UE indicates the FGIs/capabilities according to the eNB mode at attach-time, and indicates the other-mode FGIs/capabilities in an extension signalling?*
4) *Signalling differences to common set: UE indicates the common FGIs/UE capabilities, and uses extension to indicate both FDD and TDD delta to this set?*

R2-120293 Report of Email discussion [76#36] - Handling of FDD/TDD capabilities; Qualcomm Incorporated; Report; related to email discussion [76#36]; REL-9; TEI9, LTE-L23;

[Late]

- Huawei clarified that, in accordance with their paper R2-120063 they are actually in favour of a temporary TAU based solution.
- Nokia thinks that the solution proposed by Samsung appears to be the best.
- NSN is not entirely against an IDLE mode TAU solution. But NSN sees no need to have two solution in the same release. QC thinks that both solutions would probably not be available at the same time. NSN would only want to have one solution. Clearwire sees that we could get a legacy UE problem that might appear in the market before we have agreed on ASN.1 changes. TAU could be made much quicker. NSN thinks that no solution can be implemented before it is standardized. Clearwire how long it would take until such an ASN.1 change hits the market. Clearwire fears that UEs actually do detach/attach. Samsung thinks that ASN.1 changes don't necessarily take more time to implement as long as the behaviour is clear. TAU might in the end not be as straight forward as it seems.
- NSN would prefer option c).
- CATT would also accept solution c). CATT might want to think about some enhancements.
- Sprint thinks that Rel-9 UEs will be in the market soon and therefore support a TAU based solution for those.
- Samsung thinks that the TAU solution does not work for inter-RAT handover mobility cases. The UE does not know which capabilities to send. Clearwire does not see a need to support this. Samsung clarifies that this is what we currently have on the market. NSN thinks that with the TAU solution a UE could not report always the FDD capabilities. In order to be able to use TAU solution the UE would not be allowed to support inter-RAT mobility. ALU wonders why the UE cannot report its common capabilities. Samsung thinks that this would affect existing networks when the capabilities change.
- Renesas prefers option c) since this will always work whereas the others have certain limitations.
- ZTE is concerned that with a) it is not clear for how long we will have this additional TAU solution. c) is more future proof. Vodafone shares the concerns with the TAU solution.
- Clearwire wonders whether we would make the signalling extension mandatory so that UEs will not be allowed to use detach/attach. QC thinks there is no option to remove the attach/detach. QC thinks it would be possible to have a phase-out approach. Samsung thinks we would need a broadcast bit. ALU would not like to see additional signalling for a temporary solution. We could re-introduce the note in SA2.
- Samsung thinks that the TAU solution could maybe be seen as an implementation issue assuming that it has not network impact. Vodafone thinks that there is definitely some network impact.

Main options on the table:

A) The UE reports mode dependent capabilities; TAU for Idle mode mobility; Common capabilities assumed for inter mode/RAT HO
C) Common capability + two extended IEs for separated FDD/TDD capabilities which identified as real different capabilities by RAN1/RAN2

For Rel-9:

1) Introduce an idle mode only solution in Rel-9 TAU + Combined Mode solution for Rel-9: 7
2) Just introduce a combined mode solution in Rel-9 (e.g. C): 17

=> We will introduce a combined mode solution in Rel-9

IPR2025-00720, OnePlus Ex. 1004

Agreements
1 We will introduce from Rel-9 onwards the possibility to signal common capabilities + two extended IEs for separated FDD/TDD capabilities
FFS (RAN decision) which capabilities are allowed to be different between FDD/TDD (RAN2 will discuss and suggest a set of RAN2 related capabilities to RAN)
2 We will not support an idle mode only solution based on capability change with TAU

R2-120421 Dual-xDD UE with different FDD/TDD Capabilities/FGIs; Samsung; Disc; REL-9; TEI9, LTE-L23;
R2-120423 Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE (option 1); Samsung; CR; 36.331; A; cat.F CR missing; REL-10; LTE-L23, TEI9;
Both not treated

R2-120424 Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE (option 2); Samsung; CR; 36.331; A; cat.F CR missing; REL-10; LTE-L23, TEI9;
- Huawei wonder why we need the "else" part. Samsung clarifies that it applies for single mode and for dual mode when the capabilities are the same.
- QC wonders whether we have now introduced a circular reference in the ASN.1. Samsung agrees that this needs to be solved. Samsung thinks we should also discuss whether we need to introduce possibility to extend it in the future.
- QC thinks the CR does not introduce any Rel-10 capability duplication
- QC wonders how we will prepare a CR if we don't know which capabilities RAN will agree to be supported for both modes. Huawei understands that the purpose is to understand how it works. No need to discuss individual IEs. ALU thinks we should update the CR during the plenary in order not to cause delays.
- Samsung thinks we have to agree whether we duplicate everything or whether we introduce separate ASN.1. NSN wonders why the AS release needs to be included. NSN would prefer to include only the parameters that are agreed. NSN would prefer that we discuss for new (Rel-11) capabilities whether it should be allowed to be different. Renesas thinks if we duplicate everything, we can agree the restrictions later on. Samsung would prefer not to introduce new ASN.1 structure.

Agreements
1 We will include in UE-EUTRA-CapabilityAddXDD-Mode only those IEs that contain at least one capability that is allowed to be different between FDD and TDD.
2 We will not introduce a new ASN.1 structure of lower level capabilities (but it will be decided per capability whether it may be different between FDD and TDD).

=> An updated Rel-10 CR can be provided in R2-120833 CR0895 (Samsung)
R2-120833 Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE (option 2); Samsung; CR0895; 36.331; A; cat.F CR missing; REL-10; LTE-L23, TEI9;
see email discussion [77#02]

R2-120063 Consideration on dual mode (FDD&TDD) UE capability handling; Huawei, HiSilicon; Disc; REL-10; TEI10, LTE-L23;
R2-120141 Discussion on TDD/FDD Capability Handling; ZTE Corporation; Disc; REL-10; TEI10, LTE-L23;
Both not treated
R2-120296 Technical solutions for the FDD/TDD capabilities issue; Qualcomm Incorporated; Disc; REL-9; TEI9, LTE-L23;
=> revised in R2-120793
R2-120793 Technical solutions for the FDD/TDD capabilities issue; Qualcomm Incorporated; Disc; REL-9; TEI9, LTE-L23;
not treated
R2-120794 Removal of discrepancy on the use of TAU; Qualcomm Incorporated, Clearwire; CR; 36.306; F; REL-9; TEI9, LTE-L23;

[Late]
- Vodafone is reluctant to remove it.
- QC thinks that the note is incomplete since there are other cases for which TAU can be used to update the capabilities.

IPR2025-00720, OnePlus Ex. 1004

=> Not agreed

R2-120795 Removal of discrepancy on the use of TAU; Qualcomm Incorporated, Clearwire; CR; 36.306; A; REL-10; TEI9, LTE-L23;
not treated after R2-120794 conclusion

R2-120298 Connected Mode solution for FDD/TDD capabilities; Qualcomm Incorporated; CR; 36.331; (0866); F; REL-9; TEI9, LTE-L23;
R2-120300 Connected Mode solution for FDD/TDD capabilities; Qualcomm Incorporated; CR; 36.331; (0868); A; REL-10; TEI9, LTE-L23;
Both not treated

R2-120697 FDD/TDD capabilities; Panasonic; Disc; REL-10; TEI10, LTE-L23;
not treated

R2-120777 How to Handle FDD/TDD capabilities; CATT; Disc; REL-11; TEI10, LTE-L23;
not treated

Capabilities allowed to be different for TDD/FDD?

- QC has maintained an updated the spreadsheet with companies' views on which capabilities need to/should be allowed to be different between FDD and TDD. QC will distribute this list so that companies can provide further input.
- Nokia wonders whether we have to align this with RAN1.
- Clearwire wonders what this discussion means for FGIs that are already mandatory to be "true" in Rel-9. QC thinks we could also discuss those. Samsung thinks it would be difficult to revert RAN's decision.
- Nokia wonders whether we focus on technical implementation differences or on IoT possibilities.
- QC suggests to have an ad-hoc session on this issue.

=> Will have an ad-hoc session to discuss the bits. We should start with the Rel-9 capabilities as top priority. Ad-hoc session will be led by QC. It takes place on Wednesday 16:30 (after the HetNet Mobility Ad-Hoc)

=> After ad-hoc discussion an updated list of FGIs/Capabilities can be provided in R2-120834 (QC)

- CATT suggests sending an LS about the RAN2 agreements to SA2.

=> We will send an LS to SA2 informing them about our agreements on the chosen TDD/FDD capability solution. A draft LS can be provided in R2-120848 (QC)

R2-121007 FDD/TDD Capability split ad hoc session report, Report, Qualcomm

=> RAN2 agrees to the suggested split/no split in section 2.3 and 2.4

Access Stratum Release:

- Vodafone would prefer not to split the access stratum release. Otherwise it would create a lot of complication. Samsung thinks from a UE point of view this would be preferable. But if we allow different releases there are suddenly two stacks with different releases. Unclear where the split it. Inter-mode handover could become difficult. Therefore, Samsung would be fine to not split this bit. ALU is also concerned what it would mean to have two releases. What would it mean for ASN.1... would it support ASN.1 of the highest release. DT agrees with Vdf, ALU, Samsung and ALU that a UE should only have one release, i.e., not split. Huawei shares this view. Nokia has an interest to split this bit but understands that there might be complexity problem. So, if other UE vendors don't see a strong need to split, Nokia would also be fine with that. QC would like to explore the idea. Regarding the HO concern, QC could imagine that a UE not supporting inter-mode handover should not have this problem. Samsung thinks this is really a technical issue which we should not leave to RAN but solve in RAN2. Samsung wonders what this would mean for MDT. QC thinks the UE could consider the other mode as another RAT.
- Vodafone thinks the solution is intended to be simple and quick. Therefore, we don't have time for a thorough investigation.

IPR2025-00720, OnePlus Ex. 1004

- QC thinks we should further investigate it and, for now, ensure that it could be split with the agreed ASN.1.
- NSN thinks that we always said that we want to have common release.
- CMCC sees no need to split and thinks the difference between TDD and FDD should not be too large. This bears the risk of market fragmentation. CMCC would also prefer to take the decision in RAN2. DOCOMO would also prefer not to split.
- QC thinks there have been a lot of mandatory Rel-10 features which a UE would have to implement both for FDD and TDD before being able to build a dual mode UE. Chairman wonders whether those features should not be covered by split-FGI bits. QC thinks that there are many small issues that don't have an FGI and sometimes not even a name.
- Renesas agrees with QC. Renesas thinks there have been big IOT problems in the past and if we can avoid them by indicating different releases, we should keep this possibility. Vodafone thinks that if there is inter-mode handover there should also be the possibility for IOT.
- Nokia suggests to add the release indicator into the new signalling but mandate it to be the same. If issues are identified in the future, we could then revisit and allow to split.
- TI shares the opinion of the other operators and considers different releases more difficult to handle since it is not a two-state variable.

=> We will not allow to split the Access Stratum Release

FGI 30 (Handover between FDD and TDD):

- Vodafone thinks that a system supporting handover between modes, it should support it in both directions and therefore offer IOT. CMCC does not see a use case for a one-way handover. QC explains that in the past it happened that inter-RAT handovers were only supported and offered in one direction (AMPS => 1x, 1x => HRPD). QC thinks that there is a risk that two-way handover will not be IOTable for all bands. Huawei can already offer it today and does not see an IOT problem. Huawei thinks we do not need to allow it now. If issues are seen in the future we could still allow setting it differently for the different modes. Motorola supports QC's view and thinks that there has to be a good number of IOT opportunities. NSN thinks it is not urgent from ASN.1 perspective. NSN would like to understand the problem with having different bands.

=> RAN2 could not decide whether it should be allowed to set FGI 30 (Handover between FDD and TDD) differently for TDD and FDD. Main concern from the proponents is that no IOT opportunities for two-way handover may be available.

Proximity Indication:

- Ericsson explains that they did not see any technical reason for why a split would be needed. NSN does not see a reason either. The proximity indicator depends on the finger print and NSN does not see how that would be different for FDD and TDD. Nokia thinks the proximity indication is very much up to UE implementation. Therefore, Nokia does not see a need to split. Samsung thinks that a split is needed since the indication should be tested in each mode. Nokia could agree that it is not really a technical but rather an IoT reason. Samsung clarifies that this is not related to the mode of the CSG cell but to the mode of the serving cell. If we don't split, all four combinations need to be supported. But Samsung does not have a very strong opinion.

=> RAN2 could not decide whether it should be allowed to set ProximityIndication differently for FDD and TDD. No real technical concerns but rather IOT opportunity. We will add the capabilities for proximity indication capabilities to the ASN.1 so that they could be set differently for FDD and TDD and we leave the final decision to RAN.

e-RedirectionGERAN-r9

- QC clarifies that if this one is agreed not to be different the whole structure would be out. Therefore, the decision has ASN.1 impact.
- NSN thinks this is a pure IOT issue and not a technical problem.

=> RAN2 sees no need to split the e-RedirectionGERAN-r9 capability.

FGI7 (RLC UM)

=> RAN2 does not see a need to split FGI7

- Samsungs opinions raised on the different IOT bits is mainly driven by IOT availability, i.e., no technical concerns.

IPR2025-00720, OnePlus Ex. 1004

=> RAN2 could not agree on the need to allow splitting the remaining FGI bits (see 2.2, except for RLC UM) but no technical reasons for splitting or not splitting were raised. That means, the decision depends only on IOT availability and is therefore left to RAN.

=> We will agree the other FGI related CRs separately and send them to RAN for approval. We will also merge these into this FGI-split CR.

=> We will technically endorse Rel-9 Cat F. + Rel-10 Cat. A covering the Rel-8/9 capabilities/FGIs

- Samsung explains that for Rel-10 it will probably not be possible to agree on IOT aspects for Rel-10 and it could therefore be discussed to postpone the CR covering the Rel-10 capabilities to June plenary. CMCC agrees that it is too early to discuss Rel-10 IOT availability. It would be acceptable for QC as long as it is not postponed beyond June. QC would like to prepare the full set of CRs including Rel-10 capabilities. NSN assumes that the Rel-10 CR would contain only the minimum set of agreeable capabilities. QC suggests to base the Rel-10 CR on the same spread sheet and on the discussion we already had. QC does not assume that the Rel-10 CR will be approved in March but they would like to see the full package now even if we only agree it in June.

=> We will also technically endorse a Rel-10 Cat. F CR covering the Rel-10 capabilities.

- QC explains that the spread sheet also covers the current agreement from RAN1. RAN1 is expected to have another discussion on Friday.

=> We will update our CR within one week after the RAN2 meeting taking into account latest agreements in RAN1.

✉ **LTE – FGI FDD/TDD: One week email discussion [77#02] to technically endorse the 36.331 CRs introducing split FDD/TDD capabilities. The final CRs will include RAN2 and RAN1 related FGIs and capabilities. (Samsung)**

=> Should discuss offline during this week an initial version of the CR before starting email discussion (Samsung)

R2-120297 Acceptable Capability Differences between FDD and TDD; Qualcomm Incorporated; Disc; REL-9; TEI9, LTE-L23;
R2-120299 Acceptable Capability Differences between FDD and TDD; Qualcomm Incorporated; CR; 36.331; (0867); F; REL-9; TEI9, LTE-L23;
R2-120301 Acceptable Capability Differences between FDD and TDD; Qualcomm Incorporated; CR; 36.331; (0869); A; REL-10; TEI9, LTE-L23;
All 3 Tdocs not treated

FGI for inter-RAT ANR

R2-120188 FGI handling for inter-RAT ANR; Nokia Siemens Networks, Nokia Corporation; Disc; 36.331; REL-9; TEI9, LTE-L23;
- noted

R2-120618 Inter-RAT FGI bits; Alcatel-Lucent; Disc; REL-8; LTE-L23;
- ZTE wonders whether we need a complete solution for all RATs. ALU is not convinced that there is a need to split the bits.

Proposal #2: Remove CDMA ANR from definition of bit 19 for now
- NSN wonders whether this is possible to do now. ALU clarifies that this was from Rel-8. NSN thinks that even for Rel-8 there is an issue. ALU would also be happy to leave FGI19 as it is if that is possible. NEC would also prefer to keep it in.

Proposal 4:
- ALU clarifies that configuring a feature for which the FGI is set to false, configuration of the feature should not result in a re-establishment. Nokia does not see the reason to discuss it.

Discussion:
- NSN thinks we should split the bit but we can only do it from Rel-9 since we cannot extend Rel-8 signalling. Samsung thinks we can extend also the Rel-8 signaling but then we would have to include dummy bits in between. It is ugly but it would work. ZTE would also prefer to do the changes only from Rel-9 onwards. ALU is surprised that companies are

IPR2025-00720, OnePlus Ex. 1004

fine with a solution from Rel-9. ALU thinks that this approach would provide more flexibility and no UE would probably ever set FGI19=true. Samsung thinks the solution would not make it worse than it is today. ALU thinks that the bit is already being set by quite many UEs. TS thinks that there is not much support today. NSN thinks that RAN indicated that there is a problem and we should define a signalling solution. Samsung has some sympathy for ALU's view.

- ALU suggests to split FGI 19 so that it refers to UMTS ANR only. Ericsson thinks we should not change the meaning of the FG19.
- Vodafone and DOCOMO would like to avoid adding new bits. ZTE thinks we should follow RAN guidance. Samsung and ALU think that RAN tasked us to investigate whether it is necessary and feasible. Nokia thinks we are just asked to see if it is possible and if so, specify it.

Agreements
1 It is proposed to keep the definition of FGI19 as it is.
2 No new FGIs will be introduced in Rel-8
3 For Rel-9 we define 4 additional FGI bit indicating IOT for inter-RAT ANR in support in the individual RAT. We introduce an additional 32-bit FGI bitstring for Rel-9 and leave the remaining legacy bits in Rel-8 available for other features.

R2-120143 Discussion on FGI bit related to ANR and inter-RAT measurement; ZTE Corporation, China Telecom; Disc; REL-9; TEI9, LTE-L23;
not treated

R2-120147 FGI bit related to ANR and inter-RAT measurement; ZTE Corporation, China Telecom; CR; 36.331; F; REL-9; TEI9, LTE-L23;
=> Will fix typo in table.
=> Wording should be improved offline
=> The CR is not backwards compatible (removed the extension container)
=> An updated Rel-9 CR can be provided in R2-120836 CR0896 (ZTE)

R2-120836 FGI bit related to ANR and inter-RAT measurement; ZTE Corporation, China Telecom; CR; 36.331; CR0896, F; REL-9; TEI9, LTE-L23;
- Renesas suggests to say "this bit is independent of bits 33-36… and shall be set to …"
=> Replace "lateNonCriticalExtension" by "nonCriticalExtension"
=> Clarify to "set to 1"
=> With these changes the CR is agreed in R2-121044 CR0896 R1
=> This CR will be merged into the CR for FDD/TDD and also duplicate the new FGI set.

R2-120148 FGI bit related to ANR and inter-RAT measurement; ZTE Corporation, China Telecom; CR; 36.331; A; REL-10; TEI9, LTE-L23;
=> Will also have a Rel-10 CR
=> Same comments as above apply
=> An updated Rel-10 CR can be provided in R2-120837 CR0897 (ZTE)

R2-120837 FGI bit related to ANR and inter-RAT measurement; ZTE Corporation, China Telecom; CR; 36.331; CR0897; F; REL-10; TEI9, LTE-L23;
=> Replace "lateNonCriticalExtension" by "nonCriticalExtension"
=> Clarify to "set to 1"
=> With these changes the CR is agreed in R2-121045 CR0897 R1
=> This CR will be merged into the CR for FDD/TDD and also duplicate the new FGI set.

R2-120441 Inter RAT ANR FGI bit; NEC; Disc; REL-9; TEI9, LTE-L23;
not treated

FGI 1 and 21 (Frequency Hopping)

R2-120142 FGI for PUSCH frequency hopping (R8); ZTE Corporation; CR; 36.331; F; REL-8; LTE-L23;
- NSN thinks that there is no chance for confusion in the existing text. ZTE thinks that the terminology is not correct even though there might be no technical problem. Huawei thinks that if this is just a wording issue we might not need a CR for Rel-8/9/10.
=> CR not agreed.

IPR2025-00720, OnePlus Ex. 1004

R2-120145 FGI for PUSCH frequency hopping; ZTE Corporation; CR; 36.331; A; REL-9; LTE-L23;
=> CR not agreed.

R2-120146 FGI for PUSCH frequency hopping; ZTE Corporation; CR; 36.331; A; REL-10; LTE-L23;
=> CR not agreed.

Inter-Frequency- and Inter-Mode Measurements

R2-120716 Clarification on the setting of FGI bit 25; Intel Corporation; CR; 36.331; (0890); F; REL-8; LTE-L23;
revised in R2-120835

R2-120835 Clarification on the setting of FGI bit 25; Intel Corporation; CR; 36.331; 0890; F; REL-8; LTE-L23;
- Nokia agrees with Intel that there could be a problem with IoT. Nokia wonders whether it is possible to re-define FGI25 now. It would be OK if NW vendors are OK with this modification of bit 25. Huawei thinks that dual mode networks are already available and therefore the bit cannot be changed anymore. NSN is also not ready to agree on restricting FGI25.
- Intel thinks that this is not about technical feasibility but more about IoT opportunity. Samsung has some sympathy for the CR and supports it. QC also supports it. NSN thinks that if a solution is needed we should keep bit 25 as it is and introduce a new one with limited functionality.
- Huawei indicates that they have IOT opportunity for bit 25 as it is. Broadcom thinks that Rel-8 is not intended for inter-mode operation.

=> Consider to add an FGI bit for inter-frequency measurements within one mode. We will keep FGI25 as it is and consider introducing one new bit limited to intra-mode inter-frequency measurements. An updated CR can be provided in R2-120838 CR0890 R1 Rel-8 (Intel).

R2-120838 Clarification on the setting of FGI bit 25; Intel Corporation; CR; 36.331; 0890 R1; A; REL-8 LTE-L23;
For email discussion [77#03].

R2-120718 Clarification on the setting of FGI bit 25; Intel Corporation; CR; 36.331; (0891); A; REL-9; LTE-L23;
revised in R2-121012

R2-121012 Clarification on the setting of FGI bit 25 Intel Corporation CR 36.331 0891 - A REL-9LTE-L23
revised in R2-121039

R2-121039 Clarification on the setting of FGI bit 25; Intel Corporation; CR; 36.331; 0891 R1; F; REL-9 LTE-L23;
- Broadcom supports the CR should be Cat F.
- Ericsson and ALU would like more time to check this. There seem to be some issues with the notes column.
- Renesas thinks this would change the meaning of the FGI between Rel-9 and Rel-8. What happens when a Rel-9 UE enters a Rel-8 network? Samsung thinks there will be no problem since a UE setting it supports all.

=> RAN2 thinks that there should be a mechanism for the UE to indicate that it does not support inter-mode measurements.

✉ **LTE – FGI25: One week email discussion [77#03] to check and agree the inter-mode measurements (FGI25) issue. If agreed, the CRs will be sent to RAN for approval. (Intel)**

R2-120720 Clarification on the setting of FGI bit 25; Intel Corporation; CR; 36.331; (0892); A; REL-10; LTE-L23;
revised in R2-121013

R2-121013 Clarification on the setting of FGI bit 25 Intel Corporation CR 36.331 0892 - A REL-10 LTE-L23
revised in R2-121040

R2-121040 Clarification on the setting of FGI bit 25 Intel Corporation CR 36.331 0892 1 A REL-10 LTE-L23
For email discussion [77#03].

IPR2025-00720, OnePlus Ex. 1004

HNB

R2-120425 Minor correction regarding limited service access on non-CSG-member cell; Samsung; CR; 36.331; (0876); F; REL-10; EHNB-RAN2, TEI9;
=> CR is agreed in R2-120839 CR0876

R2-120248 SCell configuration for HeNB with carrier aggregation; Panasonic, NTT DOCOMO, INC.; Disc; REL-10; TEI10;
- Ericsson thinks that according to the standard the HeNB only supports only one carrier. Ericsson understands that it is possible to implement it this way. But it is at least specified that HeNBs have only one S1 interface to the CN. Therefore, Ericsson does not agree to the proposals. NSN thinks that we discussed that even though there is no requirements but we concluded that it is possible to do without any specification changes. Samsung agrees and assumes that such an HeNB would not even broadcast SIB1 on the second carrier. But all this does not need to appear in the specifications.

=> Noted. No support for adding anything to specifications.

R2-120249 CR on SCell configuration for HeNB with carrier aggregation; Panasonic; CR; 36.300; F; cat.A CR missing; REL-10; TEI10;
=> Not treated after R2-120248 conclusion.

R2-120751 Clarification of inter-RAT CSG cell reselection; LG Electronics Inc.; CR; 36.304; F; REL-10; EHNB-RAN2, TEI10;
- Nokia thinks this should have been in the common session. Nokia thinks this would need to be discussed offline and include UTRAN experts.
- QC thinks the cover sheet talks about selecting a UTRAN CSG while being in EUTRAN whereas the CR text is about selecting a EUTRAN CSG while being in UTRAN.
- ZTE thinks this is already sufficiently clear from 25.304 and 36.304.

=> Not agreed. Can be discussed offline. Can come back when more support.
Note: A revision of R2-120751 in R2-121037 was drafted but finally R2-121037 was withdrawn.

PWS/ETWS/CMAS

R2-120473 Change in Scheduling Information for ETWS and CMAS; Ericsson, ST-Ericsson; Disc; REL-8; ETWS, LTE-L23;
Proposal 1:
- Nokia understands that 36.331 already specifies this quite clearly. ST-E thinks that according to the current text the UE cannot rely on being paged when the scheduling information is updated. Huawei thinks the current specification is clear. ZTE thinks the intention of this proposal is OK. DOCOMO thinks this is sufficiently clear. ST-E agrees that it is clear what the UE is supposed to do but the intention is to clarify what the network is supposed to do.

Proposal 2:
- Nokia wonders whether this is the only way to stop scheduling. One could also use normal update of system information. ST-E understands that SIB change does not apply to warning messages. Nokia thinks it is not prohibited to change ETWS related SI with normal procedure. Huawei thinks the UE will stop reception when it has received all segments. Huawei thinks that the UE should read SIB1 periodically. Motorola thinks this is not specified anywhere. Motorola thinks that it is mentioned in several places that normal SUB update does not apply to warning messages. NSN thinks that the scheduling in SIB1 can be updated through normal system info modification. Motorola agrees with that interpretation but would like to clarify this aspect. Samsung wonders why proposal 2 is needed. The UE anyway has to read SIB1 upon modification boundaries and then sees that warning messages are no longer scheduled. ALU thinks there is no need to page when scheduling finishes.
- It is suggested to agree that “We assume that the UE can rely on being paged whenever the scheduling information for ETWS/CMAS changes so that the UE does not have to read SIB1 periodically.” and that “Expected network behaviour is that paging indication is sent whenever SIB1 content changes with system information modification as reason for the page.”

R2-120575 CMAS Triggers to read SIB1; Motorola Mobility; Disc; REL-9 PWS-RAN
- Not presented/treated. Should also be discussed offline

IPR2025-00720, OnePlus Ex. 1004

R2-120355 On SIB10/11 Reception Timing; NTT DOCOMO, INC.; CR; 36.331; (0871); F; REL-10; TEI10, PWS-RAN;
- Nokia thinks tends to agree that there is nothing wrong in the CR. But also with the current text there seems to be nothing wrong. LG thinks it would be good to clarify. But maybe the second sentence would be sufficient.
- Panasonic would like to add a note that the UE may assume that the available SI is still correct even when receiving a page. Nokia thinks it is already clear from the spec that the UE may receive multiple paging messages for the same warning message. Samsung thinks that one might have to page for more than one modification period. So, there could only be a problem during this period. ZTE supports the clarification.
- NEC supports the CR but would also like to have it for CMAS.
- Samsung thinks this is already clear from section 5.2.1.3.

=> Should discuss further what the expected network behaviour is. Is the general assumption that the network will page for maybe 1.5 modification periods but not continuously as long as messages are being sent?

=> Can work offline on the CR on SIB10/11 Reception Timing. Can consider a similar clarification for CMAS. And updated CR can be provided in R2-120840 CR0871 (DOCOMO)

R2-120840 On SIB10/11 Reception Timing; NTT DOCOMO, INC.; CR; 36.331; 0871; F; REL-10; TEI10, PWS-RAN;

=> CR is agreed

CRs for ETWS

R2-120475 Change in Scheduling Information for ETWS; Ericsson, ST-Ericsson; CR; 36.331; (0877); F; REL-8; ETWS, LTE-L23;

R2-120476 Change in Scheduling Information for ETWS; Ericsson, ST-Ericsson; CR; 36.331; (0878); A; REL-9; ETWS, LTE-L23;

R2-120477 Change in Scheduling Information for ETWS; Ericsson, ST-Ericsson; CR; 36.331; (0879); A; REL-10; ETWS, LTE-L23;

All 3 Tdocs not treated

CRs for CMAS

R2-120479 Change in Scheduling Information for CMAS; Ericsson, ST-Ericsson; CR; 36.331; (0880); F; REL-9; PWS-RAN;

revised in R2-121033

R2-121033 Change in Scheduling Information for CMAS; Ericsson, ST-Ericsson; CR; 36.331; 0880; F; REL-9; PWS-RAN;
- HTC thinks the last sentence is confusing since there is no paging message indicating CMAS not being scheduled. ST-E thinks that the sentence is required since otherwise “change” could be interpreted as covering also “stop”. ST-E thinks the sentence should be formulated in a neutral way since both network implementations are correct.
- Samsung thinks the whole text is more like a note since it does not describe UE behaviour but rather what the network is expected to do. ST-E would also be fine to put it into a note. We should say “UE may not rely on receiving…”.

=> Should be converted into a note. Formulation can be discussed offline.
- Huawei wonders why the first sentence is needed since that is already covered by the specification. Motorola thinks that there seems to be some understanding among some NW vendors that the UE is required to periodically check SIB1.
- Huawei thinks that Rel-10 is sufficient. Motorola would be happy to have it from Rel-9 onwards. ALU supports clarifying it from Rel-9

=> An updated CR can be provided in R2-121041 CR0880 R1 => withdrawn

=> CR will be provided to the next meeting.

=> We are planning to have a note for ETWS and CMAS describing the NW behaviour and capture that the NW will page when the scheduling changes and optionally page the UE when scheduling stops. Details of the text need to be seen before making the final agreement.

R2-120480 Change in Scheduling Information for CMAS; Ericsson, ST-Ericsson; CR; 36.331; (0881); A; REL-10; PWS-RAN;

revised in R2-121034

IPR2025-00720, OnePlus Ex. 1004

R2-121034 Change in Scheduling Information for CMAS; Ericsson, ST-Ericsson; CR; 36.331; 0881; A; REL-10; PWS-RAN;
(same updates as above)
=> An updated CR can be provided in R2-121042 CR0881 R1 => withdrawn

R2-120577 Draft 36331_CRxxxx_(Rel-9)_R2-12xxxx CMAS Triggers to read SIB1; Motorola Mobility; CR; 36.331; F REL-9 PWS-RAN
not treated

LCS related

R2-120765 Discussion on LPP Error Case â€œRequested Method Not Supportedâ€□; Qualcomm Incorporated; Disc; REL-9; LCS_LTE;
- HTC thinks we have discussed this before and it was concluded that no such update is needed. The assumption is that the ESMLC know exactly what the UE supports. NSN also thinks it is not good to change error handling behaviour for Rel-9.

=> No support. Noted

R2-120766 Clarification of LPP Error Case â€œRequested Method Not Supportedâ€□; Qualcomm Incorporated; CR; 36.355; (0069); F; REL-9; LCS_LTE;
=> Not treated after R2-120765 conclusion

R2-120767 Clarification of LPP Error Case â€œRequested Method Not Supportedâ€□; Qualcomm Incorporated; CR; 36.355; (0070); A; REL-10; LCS_LTE;
=> Not treated after R2-120765 conclusion

MBMS

R2-120495 Clarification on order of MTCH with respect to MCCH in MAC PDU; Alcatel-Lucent; CR; 36.321; (0535); F; REL-9; MBMS_LTE;
- NSN thinks that the scenario described by ALU cannot happen. ALU thninks that there is an inconsistency in RRC. ALU thinks the issue is when the MCCH repetition period is smaller than the MSP period. ZTE thinks this case should not happen to avoid unnecessary overhead. Huawei also thinks that this is not supported. MediaTek also does not consider this a problem. Samsung thinks that there will always be parameter combinations that are not valid. Ericsson does not see the issues either.

=> No support. Can discuss further offline.
=> Not agreed

R2-120497 Clarification on order of MTCH with respect to MCCH in MAC PDU; Alcatel-Lucent; CR; 36.321; (0536); A; REL-10; MBMS_LTE;
=> Not treated after R2-120495 conclusion

R2-120498 MAC PDU formatting for transmission of MCCH; Alcatel-Lucent; CR; 36.300; (0429); F; REL-9; MBMS_LTE;
=> Not agreed (related to previous discussion)

R2-120499 MAC PDU formatting for transmission of MCCH; Alcatel-Lucent; CR; 36.300; (0430); A; REL-10; MBMS_LTE;
=> Not treated after R2-12498 conclusion.

R2-120708 eMBMS Multibands Cell Selection and Reselection; Verizon Wireless; Disc; REL-9; MBMS_LTE;
- Nokia thinks we had this discussion already in RAN2-75bis and agreed it should only be part of Rel-11. Has something change. Verizon thinks that this is an important deployment problem that needs to be solved. Verizon had the feeling that companies might not have been fully aware of these problems before. Nokia agrees that the Rel-10 behaviour is not optimal for this scenario but this was what we have in Rel-9/10 and therefore we introduce more functionality in Rel-11.
- Vodafone thinks this proposed behaviour is similar to CSG reselection. Nokia agrees that there are similarities. But from a NW point of view it might have quite different impact since the behaviour of potentially many UEs changes. Nokia thinks we discussed congestion issues for Rel-11 and there it is not clear which type of solution is needed. If we just allow it for Rel-9/10 there seems to be no point in specifying congestion handling for Rel-11.
- Huawei wonders how the UE knows where to find MBMS services. If it is supposed to come from Rel-11 SI we might have to take this into account for Rel-11 discussions. MediaTek wonders as well. MediaTek thinks the current behaviour is good enough for Rel-

IPR2025-00720, OnePlus Ex. 1004

9/10. Verizon indicates that their UEs will rely on some proprietary solutions for obtaining this information.
- Huawei thinks that such UEs could be prevented from reselecting to a congested frequency by not providing with the proprietary MBMS information. Samsung wonders whether the UE is not allowed to prioritize the MBMS carrier based on standardized provided MBMS assistance information.

R2-120705 MBMS Multibands Cell Selection and Reselection; Verizon Wireless; CR; 36.304; F; REL-9; MBMS_LTE;
- Samsung thinks there are still two strategies on how to avoid congestion. As a result of agreeing on this CR, the decision seems taken: The UE can always reselect to the MBMS frequency and camp there. Huawei agrees.

=> CR is agreed in R2-120841 CR0174

R2-120706 MBMS Multibands Cell Selection and Reselection; Verizon Wireless; CR; 36.304; A; REL-10; MBMS_LTE;

=> CR is agreed in R2-120842 CR0175

R2-120271 Clarification on network sharing for MBMS; HTC; CR; 36.300; (0427); F; REL-10; TEI10, MBMS_LTE;
- Ericsson thinks that this does not need to be aligned with unicast network sharing. Ericsson is not supportive. ALU agrees with that comment and does not support this suggested change. HTC thinks from signalling point of view the network sharing is the same for unicast and MBMS. ALU clarifies that the UE cannot differentiate MBMS from different PLMNs… no, it cannot. Huawei thinks this has no practical use and we don't need to discuss it for Rel-10.

=> No support. Not agreed

R2-120274 Clarification on network sharing for MBMS; HTC; CR; 36.300; (0428); A; REL-11; TEI10, MBMS_LTE;
- Samsung thinks the current text is incorrect and should be clarified for Rel-11. Huawei thinks we should only say something in this section if there is something to be said.

=> Some support. Can discuss suitable clarification offline (e.g. void the section or keep just the last sentence). Not agreed.

Re-Establishment

R2-120418 SRB2 resumption following connection re-establishment; Samsung; CR; 36.331; (0874); F; REL-8; LTE-L23;
- Nokia does not think this is so critical for Rel-8.

=> Noted

R2-120419 Clarification on SRB2 resumption upon connection re-establishment (parallel message transmission); Samsung; CR; 36.331; F; cat.A CRs missing; REL-8; LTE-L23;

=> In the summary of change SRB1 is mentioned. Should say SRB2.
- CB: Rel-8 CR can be provided in R2-120843 CR0874 => Withdrawn
- CB: Rel-9 shadow CR can be provided in R2-120844 CR0898 => Withdrawn
- CB: Rel-10 shadow CR can be provided in R2-120845 CR0899

- Later, NSN indicates that they consider SRB2 to be very different from SRB1. SRB2 is not time critical and NSN does not expect this to happen anyway. Therefore, NSN does not agree that we need a CR. Samsung wonders how the UE knows what it needs to support. Huawei thinks the current specification is already clear. ALU thinks the question is whether this is essential and suggests to do it in Rel-10 only.
- Huawei does not see an issue with SRB2 since this case will not happen and even if it happens it would not matter. Samsung thinks there is an ambiguity whether one can send an SRB2 message before having received the RRCConnectionReconfigurationComplete.
- NSN if fine to clarify it in Rel-11 with magic sentence but they do not consider it an essential correction.
- ALU thinks we may better want to clarify that a UE is allowed to discard messages received on a suspended bearer. QC thinks the ALU proposal is going in the wrong direction. QC wants to ensure that the network never sends it. ALU would also be OK to formulate it as network constraint. RIM would also prefer to know what the UE needs to expect.

=> More offline discussion on Clarification on SRB2 resumption upon connection re-establishment seems to be needed. Can come back with updated CRs if needed.

IPR2025-00720, OnePlus Ex. 1004

R2-120845 Clarification on SRB2 & DRB resumption upon connection re-establishment, CR; 36.331; CR0899; Rel-10; F
- QC supports this CR

=> CR is agreed

R2-120205 HFN/SN handling at HO failure; Samsung; Disc; REL-9; TEI9, LTE-L23;
- RIM agrees that there is a need to have a common reference. Another solution would be to revert to HFN=0.
- NSN wonders how likely this is to occur. Samsung thinks it can happen with full configuration. LG thinks for AM DRB the count values are not reset. Samsung thinks in case of full configuration the DRB is released and SNs are reset. After reverting, the old HFN should be reused. ALU thinks that the behaviour in the source network should not in any way be impacted what the target network configured. Therefore, ALU supports this proposal. QC agrees with the intention.
- LG thinks it is not good to list the explicit state variables. LG understands that we want to restore the old radio bearer including RLC and PDCP. LG considers the sequence numbers to be part of that.

=> RAN2 confirms that the behaviour in the source network should not in any way be impacted by what the target network configured. At handover failure as part of restoring the context also the HFN/SN should be reverted back to those used in the source cell.
- Ericsson would prefer to capture this in the specifications.
- After offline discussion Samsung indicates that most companies would be OK to capture the UE behaviour in the chairman notes (see above).
- LG wonders whether we refer to the state before or after re-establishment. Samsung indicates that companies wanted to check this further and come back to that detailed aspect in the next meeting.

=> Will discuss until next meeting the detailed aspect raised by LG above

R2-120206 36.331 CR on HFN/SN handling at HO failure; Samsung; CR; 36.331; (0860); F; REL-9; TEI9, LTE-L23;

=> Can discuss suitable text and to come back.

=> Should consider adding a magic sentence.

=> An updated Rel-9 CR on HFN/SN handling at HO failure can be provided in R2-120846 CR0860

R2-120846 36.331 CR on HFN/SN handling at HO failure; Samsung; CR; 36.331; 0860; F; REL-9; TEI9, LTE-L23;

=> Withdrawn

R2-120207 36.331 CR on HFN/SN handling at HO failure; Samsung; CR; 36.331; (0861); A; REL-10; TEI9, LTE-L23;

=> An updated Rel-10 CR on HFN/SN handling at HO failure can be provided in R2-120847 CR0861

R2-120847 36.331 CR on HFN/SN handling at HO failure; Samsung; CR; 36.331; 0861; A; REL-10; TEI9, LTE-L23;

=> Withdrawn

Reselection

R2-120345 Correction to lower priority based criteria; Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd; CR; 36.304; (0171); F; REL-9; TEI9, LTE-L23;
- QC wonders whether this is a new feature? RIM thinks it is a useful change of behaviour, because without the CR the UE would remain camped on the no longer suitable serving cell for 10 seconds before performing cell selection as from 36.133 subclause 4.2.2.1, which would lead to service unavailability.
- Nokia thinks that if there are corresponding CRs already agreed in UTRAN, we could also agree these. But if we don't see a need for these CRs we should maybe also revert the UTRAN CR. Nokia needs more time to think.
- LG wonders whether it is a likely scenario. RIM thinks that this scenario is valid in both directions.
- Nokia thinks this is related to the discussion we had yesterday and there we concluded that it is not necessary to evaluate both reselection criteria.

=> Postponed. Can discuss further offline. Finally revised in R2-121021.

IPR2025-00720, OnePlus Ex. 1004

R2-121021 Correction to lower priority based criteria; Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd; CR; 36.304; 0171; F; REL-9; TEI9, LTE-L23;
- Motorola would prefer to look at this a bit more an to come back next meeting.
- DT wonders about the brackets. RIM thinks it is intentional. DT would prefer more time to discuss.

=> Postponed to next meeting.

R2-120347 Correction to lower priority based criteria; Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd; CR; 36.304; (0172); A; REL-10; TEI9, LTE-L23;
=> Postponed. Can discuss further offline. Finally revised in R2-121022.

R2-121022 Correction to lower priority based criteria; Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd; CR; 36.304; 0172; A; REL-10; TEI9, LTE-L23;
=> postponed

Other 36.331

R2-120162 CR to 36.331 on cdma2000 band classes and references; Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated; CR; 36.331; (0856); F; REL-9; TEI9, LTE-L23;
- Samsung thinks the CR is in principle correct but assumes that the UE does nested error handling, i.e., the UE should only discard the corresponding IE.

=> CR is agreed in R2-121001 CR0856

R2-120163 CR to 36.331 on cdma2000 band classes and references; Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated; CR; 36.331; (0857); A; REL-10; TEI9, LTE-L23;
=> CR is agreed in R2-121002 CR0857

R2-120187 Duplicated ASN.1 naming correction; Nokia Siemens Networks, Nokia Corporation; CR; 36.331; F; REL-10; TEI10, LTE-L23;
- Huawei thinks that the two definitions belong to different ASN.1 modules. Samsung shares this view that there is in principle no problem. We don't use the other list with this name in this module.
- ALU supports the CR even though they agree it is not a big problem. Samsung suggests to change to "…List2" like we did in other cases. Nokia thinks this would be OK.
- Huawei thinks the consequence if not approved should be "avoid confusion".

=> Update cover page accordingly.
=> Change to "…List2".
=> Updated CR on Duplicated ASN.1 naming correction can be provided in R2-121003 CR0900 (NNSN)

R2-121003 Duplicated ASN.1 naming correction; Nokia Siemens Networks, Nokia Corporation; CR0900; 36.331; F; REL-10; TEI10, LTE-L23;
=> Update tick boxes
=> With these changes the CR is agreed R2-121018 CR0900 R1

R2-120131 RRC connection re-establishment during SMC procedure; Qualcomm Incorporated; Disc; REL-9; TEI9, LTE-L23;
- Panasonic support QC's view. Panasonic thinks the NW could also reject the connection reestablishment. ZTE agrees with QC's proposal.
- NEC wonders why the UE does not wait for the L2 ACK for the SMC. QC thinks this is not specified.
- Huawei thinks that currect specification already says that SMC may only be sent before security is activated.

=> RAN2 confirms that the NW shall not sent the SMC after the reestablishment procedure.
=> Noted

R2-120351 Modification period for System Information validity with m = 2048 or m=4096; Research In Motion UK Ltd; Disc; REL-10; TEI10, LTE-L23;
- ZTE thinks the problem is valid and ZTE would prefer solution B). MediaTek considers this bad network implementation. Huawei thinks we already discussed this when we discussed the modification period. Huawei sees no need to clarify this. RIM thinks that if it is acknowledged that the NW configuration should not be used then we could also clarify that. Broadcom supports a clarification. Huawei thinks this is up to network implementation. QC supports clarifying this. LG supports the clarification.

IPR2025-00720, OnePlus Ex. 1004

- Samsung thinks there are many invalid parameter combinations that the network should not apply.

=> RAN2 agrees that the network should not send a combination of defaultPagingCycle and modificationPeriodCoeff parameters leading to m=2048 or m=4096

=> Noted

R2-120083 Clarification on cell selection procedure while T311 is running; HTC; CR; 36.331; (0853); F; REL-10; TEI10, LTE-L23;

- Panasonic and QC don't see any problem with the current spec. Nokia wonders whether UE will not even try to find an acceptable cell. Huawei sees no reason for entering IDLE more when selecting an acceptable cell. LG thinks that when the timer expires, the RRC connection will be released already and there is no reason to specify this additional condition. Nokia thinks that the UE will first select the first cell it finds and continue searching for a suitable cell.
- QC thinks that the consequence of the CR would be that the UE could quickly find an acceptable and drop the call. The intention is that it tries to find a suitable cell. ALU agrees. T311 should ensure that the UE keeps trying to find a suitable cell. LG agrees.
- Nokia wonders why we then want the UE to select an inter-RAT cell and to release the connection. Panasonic thinks that in that case NAS could recover the connection.

=> Not agreed

R2-120077 miscellaneous corrections on measurement; ASUSTeK; CR; 36.331; (0850); F; REL-10; TEI10, LTE-L23;

- LG agrees with the first change. NSN agrees
- LG thinks the current change is not needed as the whole text is already "for this measID"
- LG does not consider the last change essential.

=> We will correct the Mn in Rel-11

=> CR is postponed

R2-120164 Correction on SystemInformationBlockType12 Acquistion; ITRI; CR; 36.331; F; REL-9; TEI9, LTE-L23;

- NSN thinks this is just editorial and not critical to have.

=> Not agreed

R2-120165 Correction on SystemInformationBlockType12 Acquistion; ITRI; CR; 36.331; A; REL-10; TEI9, LTE-L23;

=> Not agreed

R2-120172 Change on notation of HARQ ACK/NACK; ITRI; CR; 36.331; (0859); F; REL-10; TEI10, LTE-L23;

- Ericsson prefers the ACK/NACK notation and does not see an alignment with RAN1 spec. Samsung agrees and considers this purely editorial. Also there is no HARQ-ACK in 36.321
- NSN does not see a need to align this between RAN1 and RAN2 specs… neither in RAN2 nor in RAN1 specification

=> Not agreed

R2-120223 CR on fullconfig condition; MediaTek; CR; 36.331; F; REL-9; TEI9, LTE-L23;

- ALU thinks it is clear that ON should be used here. Therefore the change is not correct. NSN agrees with ALU.

=> Not agreed

Other 36.306

R2-120238 Clarification on physical layer parameter values requirement; Samsung, Qualcomm Incorporated; CR; 36.306; (0078); F; REL-10; TEI10, LTE-L23;

- Samsung will have to correct summary of change
- DOCOMO and NSN think that the cover page seems to indicate the opposite of what the note says.
- DOCOMO thinks the text should be simplified.

=> We seem to agree on the principle as described by Samsung but need to work more on the wording.

=> Should update cover page and improve the wording

IPR2025-00720, OnePlus Ex. 1004

=> An updated CR on physical layer parameter values requirement can be provided in R2-121005 CR0078 (Samsung)

R2-121005 Clarification on physical layer parameter values requirement; Samsung, Qualcomm Incorporated; CR; 36.306; 0078; F; REL-10; TEI10, LTE-L23;
=> CR is agreed

Other 36.321

R2-120236 UE soft buffer management in case of more than 8 HARQ processes; Samsung; Disc; REL-10; TEI10, LTE-L23;
- LG thinks that soft-buffer overbooking is a RAN1 issue and wonders whether RAN2 should confirm proposal 1. Samsung thinks we could do that.
- Ericsson prefers not to have details of soft-buffer handling in the RAN2 specification. Ericsson thinks that either everything about soft buffer handling or nothing should be specified. Samsung would be OK to just have a common understanding in RAN2. ZTE considers this an implementation issue and sees no need to specify.
- CATT thinks that Proposal 1 can be derived directly from RAN1 specification.
- NSN thinks that RAN1 should confirm P1 and P0.
- Huawei agrees with proposals 0 and 1.
- Motorola shares Samsungs views on the proposals but does not see a need for a CR.
- Panasonic shares the view on P0 and P1 but would prefer if RAN1 would confirm this.
- LG thinks that RAN2 seems to agree that no changes to RAN2 specifications are needed. Therefore, Samsung can bring this up in RAN1 if they see a need. Samsung is fine with that.

Proposal 2:
- MediaTek thinks that a UE implementation may do as described in P2 and P3 but they would not like to have this in the specification.
- LG thinks that P2 is what is already allowed in the specification.

Proposal 3:
- LG thinks that this case is not covered in the MAC specification but left to UE implementation.

=> Can discuss further offline
=> Noted

R2-120237 UE soft buffer management in case of more than 8 HARQ processes; Samsung; CR; 36.321; (0529); F; REL-10; TEI10, LTE-L23;
=> Not agreed

R2-120181 Clarification on the transport block size change in an adaptive retransmit order for UL HARQ; Research In Motion UK Limited; CR; 36.321; (0528); F; REL-10; TEI10, LTE-L23;
revised in R2-120181

R2-120803 Clarification on the transport block size change in an adaptive retransmit order for UL HARQ; Research In Motion UK Limited; CR; 36.321; 0528; F; REL-10; TEI10, LTE-L23;
- LG wonders in which case the UE would receive such a grant. RIM thinks this case cannot be excluded. It would be a network error but we need a behaviour defined for this case. Chairman thinks that we don't need to specify UE implementation for faulty network implementation.
- NSN thinks we agreed last meeting to remove the text dealing with different transport block sizes. So, we should bring such text back now.
- Panasonic thinks this already covered by 36.214, section 9.3 (inconsistent control information). RIM thinks this does not apply since that section does not discuss the transport block size. Ericsson agrees with Panasonic that this is covered in RAN1.
- Renesas thinks that if the UE just discards the grant, the NW might send it again and again. Renesas thinks we should maybe flush the buffer for this process. Chairman thinks this unlikely network error case would resolve after max number of retransmission. Intel thinks there could be some problem.

=> Not agreed

R2-120361 PDCCH monitoring in UL unsynchronized state; ASUSTeK; CR; 36.321; (0531); F; REL-10; TEI10, LTE-L23;
Proposal 1:
- NSN thinks we don't need a specification text for this. Samsung thinks proposal 1 would be correct UE behaviour. LG shares Samsung's view but sees no need for a change.

IPR2025-00720, OnePlus Ex. 1004

Ericsson would not like to change the specification. Ericsson thinks the network could actually change TAC even though the timer is not running. LG wonders in which case the network could send a TAC while the TAT is not running. Ericsson thinks in case of small cells it could just send TA value 0 to put the UE in sync. Renesas agrees with Ericsson. Panasonic and Samsung think a MAC TAC cannot bring the UE in sync. CATT and AsusTEK think that in case of small cells the network should set the TAT to infinity. Huawei thinks the UE should apply the MAC TAC. Huawei thinks this would solve some misalignment between the TATs in the UE and eNB. Ericsson could also know whether the UE has moved or not. Panasonic thinks that if this would be possible we would not need a TAT. IDT thinks that at the time we designed Rel-8, we did want to allow that the MAC TAC restarts the TAT. ALU thinks that the current spec is clear that the UE has to apply it. Are we sure we are discussion this as a correction. Samsung thinks that this is not covered by RAN1 specifications.

Proposal 2:

- NSN thinks this behaviour is behaviour (possibility to release an RRC connection without having time alignment). Samsung agrees with NSN. UE does not need to care about TAT when receiving in DL. LG sees no need for a change. Ericsson thinks that the UE must receive PDCCH e.g. to received RA order. AsusTek is mainly concerned about SPS assignment. ZTE thinks proposal 2 is not needed.

=> Second and third change are not needed.

=> First change proposal requires more discussion. It should be discussed offline whether a UE with expired TAT must apply a MAC TAC.

- After offline AsusTek reports that most companies think that the UE would also process the MAC TAC when the TAT is not running. Some companies would like to check further.

=> CR is postponed

R2-120330 The minimum UL grant size to transmit RLC data; NTT DOCOMO, INC; Disc; REL-10; LTE-L23, TEI10;
revised in R2-120802

R2-120802 The minimum UL grant size to transmit RLC data; NTT DOCOMO, INC; Disc; REL-10; LTE-L23, TEI10;

- Intel thinks the problem does not exist since the multiplexing is clear in that first data shall be sent. Ericsson agrees in general with DOCOMO and agrees that 7 byte would be a suitable limit for all releases since RLC resegmentation and furthermore, PDCP headers should be kept in the same PDU as the PDCP payload. Samsung thinks a sensible UE implementation should do what is indicated in the Rel-10 CR. Samsung thinks we should go for 4 byte in Rel-10. Samsung thinks the Rel-10 CR takes care of the re-segmentation case.
- Huawei thinks that rather than including a little part of the data it may be better to include a BSR and let the network know how much data it has. NSN wonders how we set the limit.
- NSN thinks that in Rel-8/9 a limit of 7 should be applied. For Rel-10, 4 byte should be possible. Ericsson clarifies that even if we agree on 4 the eNB has to always grant at least 7 byte in order to accommodate for a potential re-segmentation PDU. Samsung thinks the CR is about UE behaviour. A network vendor may still decide to use only 7 byte.

=> Noted. Agreed to fix this. See CRs.

R2-120326 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR; 36.321; F; REL-8; LTE-L23;
revised in R2-120817

R2-120817 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR 0537; 36.321; F; REL-8; LTE-L23;

- Ericsson thinks the indentation level should be decreased by one.
- Ericsson thinks space for PCPC header should be accounted for.

=> CR is agreed.

R2-120327 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR; 36.321; F; REL-9; LTE-L23, TEI9;
revised in R2-120800

R2-120800 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR; 36.321; F; REL-9; LTE-L23, TEI9;
revised in R2-120818

R2-120818 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR 0538; 36.321; F; REL-9; LTE-L23, TEI9

IPR2025-00720, OnePlus Ex. 1004

=> CR is agreed

R2-120328 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR; 36.321; A; REL-10; LTE-L23, TEI9;
revised in R2-120801

R2-120801 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR; 36.321; A; REL-10; LTE-L23, TEI9;
revised in R2-120819

R2-120819 Correction to multiplexing and assembly; NTT DOCOMO, INC; CR 0539; 36.321; F; REL-10; LTE-L23, TEI9;
- Huawei would like to give more flexibility for the UE and also allow 7 byte as limit. Samsung thinks that 4 byte would reflect the correct UE behaviour. If we want to align we should align all releases to 4 byte. Motorola would prefer the Rel-10 CR as proposed here. NSN thinks that strictly speaking MAC should support data transmission from 4 byte onwards. 7 byte is allowed for Rel-8/9 since there are already UEs in the field.
- LG thinks the “AMD PDU Segment” is not defined in MAC. Samsung agrees that we should usually avoid mixing terminology but considers this case particularly important.

=> CR is agreed

R2-120362 Corrections to DRX and RA procedure; ASUSTeK; CR; 36.321; (0532); F; REL-10; TEI10, LTE-L23;
Proposal 1:
- HTC thinks that this is not a valid condition. Ericsson agrees that this is not needed since clear from RRC spec. LG agrees. Huawei thinks it is technically correct but not essential.

Proposal 2:
- This should not be clarified in this sections. Ericsson thinks that the existing note covers all cases including the SR case. LG agrees. Huawei agrees it is covered by the current text.

Proposal 3:
- Ericsson: editorial. Huawei agrees.

Proposal 4:
- Is OK as described but a corner case and does not need to be updated. Huawei thinks the first paragraph already covers this. LG does not think it is needed. AsusTek thinks that Proposal 4 is a problem. NSN thinks the UE should restart timer so it is not a measurement gap for the UE anymore. So, no problem.

=> Not agreed

R2-120363 Clarification on SPS; ASUSTeK; CR; 36.321; (0533); F; REL-10; TEI10, LTE-L23;
Proposal 1:
- NSN thinks the current text is correct. LG thinks in case there could be multiple.

Proposal 2:
- NSN would not prefer to change the current text. LG agrees with NSN that the intention was to restrict this functionality.
- Huawei wonders whether the current text can be applied to the handover case. So, the current text is correct.
- NSN thinks we discussed in the last meeting a reconfiguration that replaces one configuration by another but not the case that removed SPS configuration.

Proposal 3:
- NSN considers this editorial

=> Not agreed

R2-120364 DL and UL SPS Reconfiguration; ASUSTeK; CR; 36.331; (0872); F; REL-10; TEI10, LTE-L23;
- LG wonders whether there is a use case where UL and DL SPS are used for different services. AsusTek would like to make the configuration more flexible.
- ZTE wonders whether this would be possible for TDD. ZTE does not see a need for this. Samsung thinks it would be possible.
- Nokia thinks it could be possible but it is an unnecessary optimization. AsusTek thinks it is not only an optimization. Ericsson does not consider this needed.
- Samsung has some sympathy since there could be a talk-spurt in one direction but not in the other. Samsung supports the proposal.

=> Not much support
=> Not agreed

IPR2025-00720, OnePlus Ex. 1004

Other 36.322

R2-120180 Selection of an AMD PDU upon expiry of t-PollRetransmit; Research In Motion UK Limited; CR; 36.322; (0095); F; REL-10; TEI10, LTE-L23;
- ZTE is not convinced that there needs to be a prioritization and would like to keep this up to implementation. RIM thinks it should only be up to the UE for the case that the last PDU is not available.
- NSN indicates that we discussed this earlier and concluded to leave it up to UE implementation.
- CATT thinks it is sufficient to leave it up to UE implementation. RIM thinks the highest number is better to acknowledge.
- Ericsson would also like to keep it up to UE implementation

=> Not agreed

Late or withdrawn

R2-120082 Clarification on mobile originating CS fallback access barring; HTC; CR; 36.331; (0852); F; REL-10; TEI10, LTE-L23;

R2-120079 Clarification on mobile originating CS fallback access barring; HTC; CR; 36.331; F; see R2-120082 instead; REL-10; TEI10, LTE-L23;

R2-120080 Clarification on cell selection procedure while T311 is running; HTC; CR; 36.331; F; see R2-120083 instead; REL-10; TEI10, LTE-L23;

R2-120331 The minimum UL grant size to transmit RLC data; NTT DOCOMO, INC; Disc; see R2-120330 instead; REL-10;

R2-120704 MBMS Multibands Cell Selection and Reselection; Verizon Wireless; CR; 36.304; F; see R2-110705 instead; REL-9; MBMS_LTE;

R2-120601 Introduction of FGI bits for Inter-RAT ANR; Ericsson, ST-Ericsson; Disc; REL-8; LTE-L23;

R2-120602 Introduction of FGI bits for Inter-RAT ANR; Ericsson, ST-Ericsson; CR; 36.331; (0884); F; REL-8; LTE-L23;

R2-120610 Introduction of FGI bits for Inter-RAT ANR; Ericsson, ST-Ericsson; CR; 36.331; F; REL-9; LTE-L23;

R2-120611 Introduction of FGI bits for Inter-RAT ANR; Ericsson, ST-Ericsson; CR; 36.331; F; REL-10; LTE-L23;

All 9 Tdocs are withdrawn

6.7 WI: Other LTE Rel-10 WIs

e.g. (SONenh_LTE-Core, leading WG: RAN3, REL-10, started: March 10, closed: June 11, WID: RP-101004)

No contributions.

7 LTE Release 11

7.1 WI: Carrier Aggregation Enhancements (RP-111749)

(LTE_CA_enh-Core, leading WG: RAN1, REL-11, started: March 11, target: Sep.12, WID: RP-111749)
Agreement status is reflected in running stage-2 CR: R2-116503 (after RAN2-76)

7.1.1 General

No contributions.

7.1.2 Multiple timing advance

7.1.2.1 RACH procedure

Msg2 location for SCell RA? CBRA on SCells?

Msg2 location for SCell RA
"PDCCH for Msg2 on same cell as Msg1 (SIB2-linked):

IPR2025-00720, OnePlus Ex. 1004

a) Msg2 PDCCH addressed to RA-RNTI (CSS) on the same SCell as Msg1?
PDCCH for Msg2 on different cell than Msg1 possible (PDCCH-less SCell-only TA group supported):
b1) Msg2 PDCCH addressed to RA-RNTI (CSS) on the PCell?
b1-1) distinguish by different RAPIDs per serving cell
b1-2) distinguish by different RA-RNTIs per serving cell
b1-3) distinguish by adding a cell index to RAR
b2) Msg2 PDCCH is addressed to RA-RNTI (CSS) on a scheduling P/SCell of the SCell of Msg1?
b3) Msg2 PDCCH is addressed to C-RNTI (USS) on the PCell or on an SCell configured with PDCCH?"

Support for CBRA on SCells?

R2-120084 RA procedure on SCell; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
- Samsung thinks that RAN1's intention was not to exclude a solution along the lines of b2). Therefore, Samsung thinks the solution b2) should still be on the table. IDT has a similar understanding as NSN.
- ITRI wonders whether we have to reserve dedicated preambles for all cells. NSN thinks for non-contention based RA the eNB always assigns dedicated preambles.

=> Noted

R2-120119 RA procedure on SCell; HT mMobile Inc.; Disc; REL-11;
- LG wonders what the benefit of b2) over b1) is except for the PDCCH load on the PCell. htM considers this the main problem.
- NSN clarifies that there are flavours of b1) that do not increase the load on the PDCCH. Ericsson agrees that blocking is not a problem.
- IDT points out that also b3) can reduce PDCCH overhead by piggybacking the Msg2 to a normal data transmission.

=> Noted

R2-120699 Message2 location; LG Electronics Inc.; Disc; REL-11;
- NSN wonders how the HARQ operation works when the UE is not in sync. Samsung thinks the HARQ ACK/NACK would be sent on the PCell.
- LG assumes that the eNB would not send a HARQ retransmission (i.e., a Msg2 is transmitted only once). If the eNB would not receive a HARQ ACK it could trigger another PDCCH order.
- Ericsson thinks that no cell-specific cell index needs to be introduced. And Ericsson thinks that no new equation for calculating different RA-RNTI for the different cell needs to be introduced. Ericsson thinks that RA could be distinguished by different preambles. LG thinks that the option of different preambles would be too limiting. Ericsson thinks the eNB would only distinguish between preambles used for RA on PCell and preambles used for RA on SCells. ZTE agrees that the Ericsson proposal is much simpler.

=> Noted

R2-120447 Way forward on MSG2 location; Huawei, ITRI, Pantech, Panasonic, Renesas Mobile Europe Ltd, Potevio, MediaTek, HiSilicon, NEC; Disc; REL-11;
- Ericsson wonders what complex mechanism Huawei refers to. Re-using the existing mechanism (Msg2 dedicated to RA-RNTI) is existing functionality. Huawei that the contention handling is not needed.
- Samsung thinks the paper asks for a simple solution. At the same time the paper lists all the complexity of the solution b3). Samsung agrees that complexity should be avoided and these papers show actually how complicated b3 is. Huawei thinks that for all solutions we need to discuss further details.
- Nokia explains that the C-RNTI based solution was already discussed for Rel-8 (for CFRA) and it was discarded. Nokia wonders what has changed since then. Huawei thinks in Rel-8 it was good to align the mechanisms. Now in Rel-10 we only have CFRA in.
- Ericsson wonders whether there will really be a lot of downlink data to multiplex with the Msg2 in b3. Huawei thinks there does not need to be a lot of data. IDT thinks that there are cases where the UE has a lot of data in both directions.

=> Noted

Discussion:
- Motorola supports b3.
- Nokia thinks that HARQ retransmissions of Msg2 do not seem to be possible according to the LG contribution. Then multiplexing would not be possible. IDT thinks one would have

IPR2025-00720, OnePlus Ex. 1004

to define a RA response window and stop the preamble retransmissions when receiving a MAC TAC within this window. IDT thinks the window could be configured larger. Ericsson expects problems when there are preamble or Msg2 failures. Ericsson understands that the UE would continue performing preamble transmissions while performing HARQ ACK/NACK on the PCell. Samsung thinks that there seem to be many flavours of b3.
- Samsung thinks that b3 will consume more time for specifying.
- NSN thinks that the HARQ retransmissions would actually increase the delay if the preamble was lost.
- Renesas thinks that RA is the most complex procedure and HARQ is much simpler.
- ZTE thinks we should use existing CFRA as baseline.
- Samsung cannot accept the way forward on b3. Samsung thinks that b3 has many open issue as can be seen in the way-forward document.
- Huawei thinks we could solve the open issues

Indicative show of hands
b1) 14 companies
b3) 18 companies

- Motorola thinks there are different flavours both in b1 as well as in b3. NSN is concerned that b3 is a completely new procedure. Motorola thinks this is also the case for b1).

=> Should discuss more offline (IDT) and come back after coffee break
=> After offline discussion IDT reports that no company changed position. Since the show of hands was quite even the proposal is to have an email discussion.

✉ **LTE - CAenh: Email discussion [77#25] until next meeting to develop complete realizations for b1 and b3 that should be simple and working. There should be only one solution on each side! This should preferably include draft MAC CRs for both solutions. (IDT)**

Agreements
1 We will not support contention based random on SCells

R2-120068 Solutions for Cross-Scheduled Msg-2; Huawei, HiSilicon; Disc; REL-11;
R2-120126 Discussion on the Msg2 position for RA on SCell; Renesas Mobile Europe; Disc; REL-11;
R2-120176 Random Access Response in multiple TA; Research In Motion UK Limited; Disc; REL-11;
R2-120219 Msg2 PDCCH location of Scell RACH; MediaTek; Disc; REL-11;
R2-120138 MSG2 addressing for MTA RA; ZTE Corporation; Disc; REL-11;
R2-120250 CBRA on SCell; CATT; Disc; REL-11;
R2-120251 CFRA on SCell; CATT; Disc; REL-11;
R2-120265 Discussion on the open issues of RACH on SCell; Intel Corporation; Disc; REL-11;
R2-120659 MSG2 location for SCell RACH; Pantech; Disc; REL-11;
R2-120730 PDCCH and PDSCH location for Msg2; Fujitsu; Disc; REL-11;
R2-120481 Random Access Response for an SCell; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120484 SCell RACH procedure; Motorola Mobility; Disc; REL-11;
R2-120502 Discussions on Msg2 location and monitoring for SCell RA; Samsung; Disc; REL-11;
R2-120209 Contention-based RACH on SCell; Samsung; Disc; REL-11;
R2-120603 RA procedure for SCell; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; REL-11;
R2-120631 MSG1 transmission for RACH Procedure for SCells; InterDigital Communications; Disc; REL-11;
R2-120632 MSG2 Reception for RACH Procedure for SCells; InterDigital Communications; Disc; REL-11;
R2-120633 Comparison of Alternatives for MSG2 reception for SCells; InterDigital Communications; Disc; REL-11;
R2-120474 Need for cross carrier scheduling in Rel-11 CA scenarios; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120202 Considerations on CBRA and Msg2 transmission for SCell; Potevio; Disc; REL-11;
All 20 Tdocs not treated

RA Failure
R2-120228 Handling of RA Failures on SCells; Acer Incorporated; Disc; REL-11;
Proposal 2:
- Huawei wonders Alternative 3 is considered to have less complexity.

IPR2025-00720, OnePlus Ex. 1004

- NSN wonders what is needed for Alternative 3. Acer thinks that currently MAC only informs RRC which then resets MAC so that preamble transmissions stop. Huawei wonders whether the intention is that the UE stops preamble transmissions once the maximum number has been reached. Acer confirms and would like to do that on MAC level (without informing RRC). LG would prefer that the UE continues preamble transmissions until the eNB deconfigures the cell. NSN thinks that MAC should stop preamble transmission when reaching the maximum. Acer wonders why LG wants the eNB to stop the RA transmissions. LG thinks it is to avoid UE autonomous actions. Huawei agrees that the RA was triggered by the eNB so the eNB should also stop it. LG would assume that the eNB deactivates the Scell when not detecting preambles. Ericsson is concerned that this would also disable the downlink. Huawei thinks that the eNB could then release the UL SCell configuration.
- Samsung thinks that it is tricky to rely on network behaviour here.
- DOCOMO thinks that preambles should be stopped by the UE to cover the false-alarm case.
- Samsung reports that in a small offline discussion there seemed to be consensus to keep it simple and to let MAC stop the RA procedure when reaching the maximum number of RA transmissions. MAC will not inform RRC. RRC will not trigger RLF. The UE will not report to the eNB. LG thinks the simplest way would still assume that the simplest solution is to rely on the eNB to take control. Samsung thinks that also in Rel-8 we should have ensured in MAC that RA transmissions are stopped. Companies in the offline thought that this is the intention of PREAMBLE_TRANS_MAX.
- LG thinks that RA failure happens rarely and therefore there seems to be need to specify UE behaviour for such a corner case. Acer thinks that there might be a need to specify that deactivation of an SCell stops an ongoing RA procedure.

=> Can take the decision on stopping preamble transmission in MAC or not one we agreed on the RA

Agreements
1 MAC will not inform RRC about reaching PREAMBLE_TRAN_MAX and consequently, RRC will not trigger RLF.
2 The UE does not report to the eNB that it has reached PREAMBLE_TRANS_MAX on an SCell.
FFS whether MAC stops the RA procedure when reaching PREAMBLE_TRANS_MAX

R2-120059 RACH failure handling on SCell; Huawei, HiSilicon; Disc; REL-11;
R2-120255 SCell RA Failure; CATT; Disc; REL-11;
[Moved Here from 7.1.2.2]
Both not treated

R2-120213 Random access failure for SCell; Samsung; Disc; REL-11;
R2-120220 Uplink transmission upon RACH failure; MediaTek; Disc; REL-11;
[Moved Here from 7.1.2.2]
Both not treated

R2-120734 Remaining issues on SCell RA procedure; Fujitsu; Disc; REL-11;
[Moved Here from 7.1.3]
not treated

Triggers for RA on SCells

R2-120085 RA triggers; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
=> Noted

R2-120118 Initiating RA procedure on SCell; HT mMobile Inc.; Disc; REL-11;
- IDT thinks in order to receive on the DL SCell the UE does not need to be in sync.
- Ericsson thinks the gain in latency is very small and not worth the complexity. QC agrees.

=> No support. Noted.

Agreements
1 Agree that only PDCCH order triggers a RA procedure on SCell. (The FFS in the stage-2 description can be removed)

IPR2025-00720, OnePlus Ex. 1004

R2-120733 Trigger of RA procedure on SCell(s); Fujitsu; Disc; REL-11;
[Moved Here from 7.1.3]
- Nokia thinks this is up to eNB implementation and already possible. Fujitsu thinks that other cases for PDCCH order are explicitly listed. NSN thinks that the current specification does not prevent the eNB from sending it whenever it wants to. Fujitsu finds the specification misleading. Motorola agrees with Nokia and NSN. The UE does not need to behave differently.

=> No support. Noted

Other

R2-120214 Number of SCells with RACH in a STAG; Samsung; Disc; REL-11;
- Ericsson assumes that if one cell has higher RA load one might want to use the other one.
- ALU thinks that the eNB needs multiple RA opportunities to change timing reference. Samsung wonders why the same issue does not exist in the pTAG.

=> Noted

R2-120254 RACH Configuration in sTAG; CATT; Disc; REL-11;
[Moved here from 7.1.2.2]

=> Noted

Discussion:
- Samsung would like to consider the signalling overhead due to RA configuration update. CATT thinks that by limiting it to one SCell you would actually have to reconfigure each time you want to change the timing reference.
- IDT thinks that on the PCell TAG we can only have RA on the PCell. Why do we need more flexibility on SCell TAGs? CATT thinks that PCell has always good quality. Huawei thinks that the difference is that we cannot reconfigure the timing reference on the PCell TAG.
- Motorola sees no use case for multiple RA SCells except for changing timing reference. And in that rare case it can be done with a preceding reconfiguration.

=> No conclusion. We will first discuss the timing reference.

7.1.2.2 Timing- and Pathloss Reference

Remaining open stage-2 issues on Pathloss- and Timing Reference? Need for RLM on SCells that are associated with an SCell-only TA group?

Timing Reference
Upon deactivation of the DL timing reference of an SCell-only TA group…
*a) The UE may use **any other** activated DL SCell as timing reference?*
*b) The UE uses the activated SCell with **smallest cell** index in the same TAG as timing reference?*
*c) The UE **suspends any uplink transmission** in this TA group until the network has triggered another RA?*
d) The UE uses the SCell where the latest (previous) RA procedure was performed?

During SCell-RA procedure
a) Suspend all UL transmission in this TA group until Mag2 has been received and TA applied?
b) Continue UL transmission with previous timing reference until Mag2 has been received and TA applied?

R2-120086 Remaining issues on Timing Reference; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
Proposal 1:
- Ericsson wonders whether there is then a new state for that SCell. NSN thinks it would be deactivated but the UE has to do something more. Samsung thinks then the UE has to use more power than in normal deactivated state.
- Samsung wonders whether it is necessary to define the timing reference. NSN wants to know which cell is there reference. Samsung thinks that if even a deactivated cell can be used as Timing Reference, we could also always use the scell with the lowest cell index no matter whether it is activated or not. Samsung thinks that that would avoid the timing reference change.
- IDT thinks that option 3 avoids the jump.

IPR2025-00720, OnePlus Ex. 1004

- Renesas wonders whether there is any difference to pTAG. NSN agrees that the UE needs to do more than for a deactivated scell that is not used as timing reference.

=> Noted

R2-120087 Draft LS to RAN4 on timing reference for sTAG; Nokia Siemens Networks, Nokia Corporation; LSout; REL-11;
not treated

R2-120060 Consideration on error cases handling for timing reference; Huawei, HiSilicon; Disc; REL-11;
Proposal 1:
- DOCOMO does not want this restriction. Huawei agrees that it is not nice but does not work with otherwise with current agreements. Ericsson does not like such a restriction either.

Proposal 2:
- NSN thinks that for preamble transmission it should already use the new SCell as reference. Renesas wonders whether this does contradict our previous agreement that all SCells use a common UL timing.

=> Noted

R2-120127 Further analysis on timing reference for sTAG; Renesas Mobile Europe; Disc; REL-11;
=> Noted

R2-120605 Error handling for Timing reference of sTAG; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; REL-11;
=> Noted

Upon deactivation of the DL timing reference of an SCell-only TA group…
a) The UE should continue using the deactivated DL SCell as timing reference?
b) The UE uses the activated SCell with smallest cell index in the same TAG as timing reference?
b1) Always use the activated SCell with smallest cell index in the same TAG as timing reference, i.e., not the SIB2 linked DL SCell where RA was performed.
c) The UE suspends any uplink transmission in this TA group until the network has triggered another RA (no timing reference)?
d) The UE uses the SCell where the latest (previous) RA procedure was performed?

X) Do not allow to deactivation of the timing reference

Discussion:
- Samsung thinks that the options above (except b1) show that the decision made in the previous meeting was not a good choice as we now have to handle the case of deactivating the timing reference SCell. Samsung also thinks that there are further error cases that are not well covered by these solutions. Therefore, Samsung would like to revisit the decision from the last meeting and thereby avoid getting the error cases. NSN thinks there will be a timing jump when the UE changes the timing reference to the one with lowest cell index. Samsung thinks that this would assume that the DL SCells are not aligned. But DL SCells in one TAG can be assumed to be aligned.
- LG thinks that an alternative would be to forbid deactivating the timing reference. Ericsson thinks this is not a good option. Samsung thinks that the deactivation timer could make it happen anyway.
- Samsung indicates that RAN4 specifications already define timing jumps.

During SCell-RA procedure
a) Suspend all UL transmission in this TA group until Mag2 has been received and TA applied?
b) Continue UL transmission with previous timing reference until Mag2 has been received and TA applied?

✉ **LTE – CAenh: Email discussion [77#26] until next meeting on how to solve the error cases related to timing reference. (Ericsson)**

IPR2025-00720, OnePlus Ex. 1004

R2-120076 further consideration on timing reference of sTAG; ASUSTeK; Disc; REL-11;
R2-120166 Deactivation of DL Timing Reference in sTAG; ITRI; Disc; REL-11;
R2-120221 Discussion on timing reference in sTAG; MediaTek; Disc; REL-11;
R2-120229 Changing of DL Timing Reference; Acer Incorporated; Disc; REL-11;
All 4 not treated

R2-120252 Timing Reference Change; CATT; Disc; REL-11;
revised in R2-120799
R2-120799 Timing Reference Change; CATT; Disc; REL-11;
not treated

R2-120504 Issues on SCell timing reference; Samsung, Ericsson, ST-Ericsson; Disc; REL-11;
not treated

Pathloss Reference
R2-120088 Open issues on pathloss reference for sTAG; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
not treated

R2-120264 Remaining open issues on timing and pathloss reference for sTAG; Intel Corporation; Disc; REL-11;
revised in R2-120821
R2-120821 Remaining open issues on timing and pathloss reference for sTAG Intel Corporation Disc
not treated

R2-120168 Consideration on FFS of pathloss reference configuration; ITRI; Disc; REL-11;
R2-120604 Pathloss reference for sTAG and need of RLM; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; REL-11;
Both not treated

RLM on SCells
R2-120089 RLM on SCell; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120247 The error case handling of timing/pathloss reference cell; Panasonic; Disc; REL-11;
R2-120472 RLF and RLM on SCells; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120344 Radio link monitoring for SCell in Rel-11; NTT DOCOMO, INC; Disc; REL-11;
All 4 Tdocs not treated

Other
R2-120253 Deactivation Timer Handling for Timing Reference Cell; CATT; Disc; REL-11;
not treated

Late or withdrawn
R2-120177 Timing and Pathloss Reference for SCell; Research In Motion UK Limited; Disc; REL-11;
withdrawn

R2-120167 Discussion on the need for RLM on SCells; ITRI; Disc; REL-11;
R2-120198 Further considerations on Timing and Pathloss Reference; ZTE Corporation; Disc; REL-11;
Both withdrawn

7.1.2.3 Other stage-2 aspects

Other issues related to Multiple TA
R2-120210 Different max power level in different PAs?; Samsung; Disc; REL-11;
R2-120211 Draft LS on Tx architecture; Samsung; Disc; REL-11;
R2-120731 Further consideration on the TAG change procedure; Fujitsu; Disc; REL-11;
R2-120660 TA validity in Multiple TA environments; Pantech; Disc; REL-11;
R2-120139 SCell RACH collision with other UL transmission; ZTE Corporation; Disc; REL-11;
All 5 Tdocs not treated

Late or withdrawn
R2-120700 Scell RACH trigger; LG Electronics Inc.; Disc; REL-11;
withdrawn

IPR2025-00720, OnePlus Ex. 1004

7.1.2.4 Stage-3 UP details

TA MAC CE? PHR for MTA? …

This agenda item 7.1.2.4 was treated separately on Thursday morning in a parallel "LTE User Plane ad hoc on Carrier Aggregation enhancements" chaired by RAN2 vice-chairman SeungJune Yi (LG).
The corresponding report of this ad hoc was presented on Friday in the main session in R2-121010 (see AI 12.1) and it is also copied into Annex G.

7.1.3 Other

Not related to multiple TA

Cell-Specific TDD Configuration
DRX
a) union of all PDCCH subframes?
b) union of consistent DL subframes?
c) union over activated scheduling cells?
Same for all timers or differentiated?

R2-120360 DRX operation with different TDD UL/DL configurations; ASUSTeK, Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120130 Discussion on DRX for CC specific TDD configuration; Renesas Mobile Europe; Disc; REL-11;
R2-120465 Different TDD configurations in inter-band CA; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120069 DRX operation for different TDD DL/UL configuration; Huawei, HiSilicon; Disc; REL-11;
All 4 Tdocs not treated

General – RAN1 Issues
R2-120292 Cell specific TDD configuration Inter-band Carrier Aggregation; Samsung; Disc; REL-11;
R2-120061 Scheduling timing design for TDD inter-band CA with different UL-DL configurations; Huawei, HiSilicon; Disc; REL-11;
Both not treated

PHR
R2-120245 TB size mismatch problem with ePHR in combination with Semi-Persistent Scheduling; Panasonic; Disc; REL-11;
R2-120624 Pcmax Inclusion for Inter-band PHR; InterDigital Communications; Disc; REL-11;
R2-120626 Triggers and Timers for Inter-band and RRH PHR; InterDigital Communications; Disc; REL-11;
All 3 Tdocs not treated

Other
R2-120246 Issues on exceeding maximum timing difference of aggregated cells; Panasonic; Disc; REL-11;
R2-120266 CA Signaling Enhancement for Hetnet Type Deployments; Intel Corporation; Disc; REL-11;
R2-120496 New carrier type and power imbalance; Nokia Corporation, Nokia Siemens Networks; Disc; REL-11;
All 3 Tdocs not treated

Continuation until next meeting:
Email discussions on where to transmit Msg2 and on managing timing reference (see above)

✉ **LTE – CA: One week email discussion [77#04] to agree on updated running stage-2 CR**

=> We will send an LS to RAN1 informing them about all agreements made on carrier aggregation so far. We will primarily attach the running stage-2 CR to the LS. (Nokia)

IPR2025-00720, OnePlus Ex. 1004

7.2 WI: Enhancements for diverse data applications (RP-111372)

(LTE_eDDA-Core, leading WG: RAN2, REL-11, started: March 11, target: Sep.12, WID: RP-111372)
TR 36.822 captures agreements made so far. Version 0.2.0 capturing agreements of RAN2-76 in R2-116559.

7.2.1 RRC Connection Handling and DRX

Evaluations, Problems, Solutions? Need for enhancements? If so, which?
Including output of email discussion [76#37] - LTE: EDDA discussion on RRC Signalling and DRX efficiency [RIM]
(agreed updated TR?)

TR updates

R2-120549 [76#37] - LTE: EDDA discussion on RRC Signalling and DRX efficiency; Research In Motion UK Limited; TP 36.822; related to email discussion [76#37]; REL-11;
revised in R2-120805

R2-120805 [76#37] - LTE: EDDA discussion on RRC Signalling and DRX efficiency; Research In Motion UK Limited; TP 36.822; related to email discussion [76#37]; REL-11;
=> Update is agreed

R2-120546 Editorial Corrections to TR 36.822; Research In Motion UK Limited; TP; 36.822; REL-11;
=> Corrections are agreed

=> An updated TR including the agreed text proposals above can be provided in R2-121008, v0.2.1

R2-121008 Update of 3GPP TR 36.822, v0.2.1
=> TR is agreed in R2-121016, v0.3.0

Simulation results

State-Transitions and Handover Signaling

R2-120367 Further results on network signalling load and UE power consumption; Nokia Corporation, Nokia Siemens Networks; Disc; REL-11;

- Huawei wonders about the result in Figure 4.
- Samsung thinks we should consider abstract traffic parameters so that the solution is future proof.
- ALU wonders how the UE could assist the network in case it has multiple applications running. Would the UE consider the overall traffic or per application. Nokia could e.g. consider to distinguish whether the user is actively using the phone or not. So, it could be the result of one or multiple applications.
- ALU thinks that the network can also trace the incoming packets. Why would the UE be able to do this better than the NW? Nokia would like to raise this discussion to understand whether companies consider this additional information important or helpful. RIM thinks that the UE has certainly some information that the network does not have.
- Ericsson wonders what is meant with optimized performance. Nokia considers low battery consumption and network signalling. Ericsson wonders whether this optimum can only be reached with UE's assistant.
- DOCOMO thinks that the different procedures cause different amount of signalling overhead (e.g. Figure 4).
- QC would support that the UE provides indication and support to the network. Intel also thinks that it would be useful.
- ALU thinks a UE specific configuration is already possible today. Whether UE assisted configuration is helpful is not clear.
- Huawei thinks that the contributions provides interesting results about power consumption and signalling load but it does not in anyway justify that UE assistance needs to be provided. NSN thinks that the paper shows that perfect parameter settings result in good performance. However, NSN thinks that the network does not have the means to select these parameters without assistant information
- NSN indicates that we also have UE triggered connection release in UTRAN.
- NSN would also assume that the UE has better information available. But of course not all network vendors need to provide this information.

IPR2025-00720, OnePlus Ex. 1004

- Samsung thinks that without deep packet inspection is not available in the network, UE can of course provide additional information. MediaTek thinks it would be beneficial if the UE provides additional information about QOS requirements.
- Huawei thinks the results indicate that long DRX cycles result in low power consumption. In addition some speed estimation seems needed which the network can do. Nokia indicates that different parameters would result in different configuration requirements.
- cewit wonders where the network would get the information from if not from the UE.
- DT would like to understand if we talk just about a single bit or more detailed information.
- Huawei indicates wonders whether early release to IDLE would always result in less battery consumption.

=> Assistant information provided by the UE to the network is considered useful but further discussion is required to decide e.g. which information should be provided. Cases where multiple applications are running on a smartphone should be taken into account. Resulting signlaing overhead should be taken into account.

- RIM thinks there are useful results in this document and parts should certainly be included in the TR… maybe slightly condensed.
- Intel wonders whether the simulations should be done with different traffic patterns.

=> Noted

R2-120291 Diverse data simulation results; Samsung; Disc; REL-11;
[Moved Here from 7.2.3]

- Huawei wonders what DRX-Off time is. Samsung clarifies it is the time when the UE is not in Active Time.
- RIM thinks that we cannot yet conclude that the DRX mechanism as such is sufficient. It depends also on how we interpret “sufficient”. RIM and DT think we should in particular compare connected mode DRX to IDLE mode.

Agreements
1 The existing DRX mechanism with proper settings is a good mechanism from UE battery power savings point of view but further comparison with IDLE mode power consumption may be needed.
2 RAN2 should focus on signalling overhead optimisation aspects (IDLE<->CONNECTED transitions; mobility signalling; …).

R2-120449 Analyses of RRC Connection Handling; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120101 Simulation results for instant message traffic; CMCC; Disc; REL-11;
R2-120258 Signaling Overhead for IM traffic and Background traffic; CATT; Disc; REL-11;
R2-120761 Evaluation of RRC signalling overhead and power consumption; China Unicom; Disc; REL-11;
All 4 Tdocs not treated

Power Consumption and DRX

R2-120578 Impact of DRX to always-on background traffic; Renesas Mobile Europe; Disc; REL-11;

- Observation 2 should have said: “Observation 2. With high mobility cases, UE kept in idle state or in RRC connected state with short DRX cycle length is preferred”
- Ericsson wonders what the main reason for the RLF was? Were the measurements lost? Renesas explains that the target eNB is not yet prepared.

=> Noted

R2-120544 Evaluations on DRX and Relationship to QoS; Research In Motion UK Limited; TP; 36.822; REL-11;
R2-120667 Impact of DRX parameters and RRC Inactivity Timer on power consumption for Background Traffic; Intel Corporation; Disc; REL-11;
R2-120500 DRX for background traffic; Nokia Corporation, Nokia Siemens Networks; Disc; REL-11;
R2-120712 Power Consumption evaluation of Full Connected DRX; Intel Corporation; Disc; REL-11;
R2-120511 Mobility evaluation considering the usage of long DRX cycle; Huawei, HiSilicon; Disc; REL-11;
R2-120791 DRX efficiency for diverse data applications; Huawei, HiSilicon; Disc; REL-11;
All 6 Tdocs not treated

- RIM thinks that currently section 5 does not contain results on UE power consumption. So, we could try to formulate a formulate text proposal on these aspects.

IPR2025-00720, OnePlus Ex. 1004

✉ **LTE – EDDA: Will have an email discussion [77#27] until next meeting to prepare a text proposal capturing simulation results on power consumption with DRX. (RIM)**

- Samsung suggests to also provide a list of TDocs providing simulations results. RIM thinks that those numbers are available in the status report and don't need to be added to the TR.

Enhancements

R2-120493 Fast RRC connection release; Alcatel-Lucent; Disc; REL-11;

- NSN thinks that receiving the RRCConnectionRelease while TAT is not running is supported. HARQ feedback would not be sent by the UE. The eNB could send blind retransmissions. Huawei indicates that if we don't want the RLC STATUS the NW must not set the poll bit.
- RIM wonders if still some resolution mechanism would be required for the case that the UE does not receive the message. ALU thinks the network could not re-use the C-RNTI for a while. RIM wonders for how long. If the time is not long enough there would still be ambiguity. Nokia clarifies that it is not desirable from power consumption point of view if the UE is kept in connected for very long. Huawei thinks the network could send a PDCCH order after 100ms to verify that the UE is not responding.

=> RAN2 confirms that the UE is able to receive the first transmission on DSCH when TAT is expired. To avoid that an RLC ACK triggers a RA, the NW should not set the poll bit. The network may need to account for the case that the Connection Release message is lost (C-RNTI ambiguity; UEs staying in connected mode for very long when missing the command, …).

R2-120435 UE-supported DRX parameter settings; Ericsson, ST-Ericsson; Disc; REL-11;

- QC thinks an approach as described in this contribution would be useful.
- Renesas thinks it would be useful if the UE provide can select DRX parameters. Renesas wonders whether we could not skip the first part, i.e., that the network does not even provide options. Ericsson thinks that it is important that the network provides options so that it really supports the configuration the UE chooses.
- NSN thinks the UE should provide e.g. the periodicity of packets and the eNB can then set a DRX pattern. It should not be up to the UE to select DRX parameters.
- ALU wonders when the NW would provide the options? Every time the traffic changes.
- DT wonders how the UE picks the DRX parameter set. DT thinks that maybe only two different cycle lengths may be needed. Then, this solution would be overkill.

=> Noted

R2-120444 Connectionless approaches to supporting Diverse Data Applications; IPWireless Inc.; Disc; REL-11;

- QC thinks that SA2 has agreed to consider connection less approach in Rel-12. So, we should wait a bit. IPWireless thinks that we are now considering this type of applications and therefore it would be relevant to consider this now.
- NSN thinks that such an approach would have a lot of impact on many functions. NSN wonders which parts we could address in Rel-11. IPWireless thinks that we would have to sent LSs to SA2 and get their opinion about Rel-11. ALU indicates that SA2 has taken it out of Rel-11. Sending LSs would not help. IPWireless is concerned that we discuss EDDA and might end up with solutions that are lacking a valid approach. RIM thinks we should do RAN improvements in the scope of this WI but we should not work on potential Rel-12 activities planned in SA2.

=> Noted

R2-120439 Allowing DRX during UL scheduling; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120550 RRC Enhancements for Background and IM Traffic; Research In Motion UK Limited; Disc; REL-11;
Both not treated

Late or withdrawn

R2-120547 RRC state control analysis; Research In Motion UK Limited; Disc; REL-11; [Late]
withdrawn

IPR2025-00720, OnePlus Ex. 1004

R2-120655 RRC State Selection for background traffic scenarios; Qualcomm Incorporated; Disc; proposal covered by email discussion summary for [76#37]; REL-11;

[Late]

withdrawn

7.2.2 L1 control channels

Evaluations, Problems, Solutions for PUCCH and PDCCH load? Need for enhancements? If so, which?

R2-120545 Evaluation of SR for background traffic; Research In Motion UK Limited; Disc; 36.822; REL-11;
- ALU wonders whether the two approaches (SR/RA) were run independently and if so, whether their combination might perform differently. RIM confirms that they evaluated them separately.
- QC thinks that the low utilization of SR in itself is not a problem. We might rather consider the latency a problem resulting from long D-SR periodicities
- Ericsson wonders whether collision probability of 1% is needed. Is the selection of preambles considered or only UEs transmitting at the same time. RIM assumed that the RA resources is shared for connected mode UEs sending RA upon data arrival as well as RA to establish the RRC connection. Therefore, RIM required 1% collision probability. Ericsson wonders whether it really matters to have a few retransmissions of preambles. Ericsson thinks that in the MTC WIs we assumed that a UE could perform 10 preamble transmissions.
- Huawei thinks that if we want to keep more UEs connected, it will increase the amount of UL control resources and therefore, enhancements would be good.
- NSN finds it too early to say that we need to enhance D-SR or RA.

=> Can include the results of figures 1 and 3 within section 5 of TR 36.822.

R2-120503 Improving the trade-off between SR delay and uplink resource usage; Huawei, HiSilicon; Disc; REL-11;
R2-120580 PUCCH improvements for Diverse Data Applications; Renesas Mobile Europe; Disc; REL-11;
R2-120762 Evluation on the PDCCH capacity for background traffic; China Unicom; Disc; REL-11;
R2-120189 PUCCH analysis for EDDA; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
All 4 Tdocs not treated

7.2.3 Other

R2-120262 Analysis of Skype background traffic; CEWiT, Samsung; Disc; REL-11;
R2-120510 Enhanced MAC/RLC procedures for isolated packet transmission; Huawei, HiSilicon; Disc; REL-11;
Both not treated

Continuation until next meeting

Email discussion on update for TR covering power consumption with DRX (see above)

7.3 WI: Service continuity improvements for MBMS for LTE (RP-111374)

(MBMS_LTE_SC-Core, leading WG: RAN2, REL-11, started: June 10, target: March 12, WID: RP-111374)
Agreement status is reflected in running stage-2 CR: R2-116508 (after RAN2-76)

7.3.1 General

E.g. Running Stage-2 CR

No contributions.

7.3.2 Assistance Information

Provisioning of MBMS SAIs in the RAN (for serving cell? for neighbour cells? for both?), …

IPR2025-00720, OnePlus Ex. 1004

Including output of email discussion [76#38] - LTE: MBMS Assistant Information [Huawei]

Which assistance information?
x) No additional information provided by RAN?
~~a) LTE MBMS frequencies indicated in SIB of all cells that have neighbour cells carrying MBMS~~
~~b) MBMS SAIs of the current cell are indicated in system information~~
c) MBMS SAIs of the inter-frequency neighbour cells are indicated in system information?
d) MBMS SAIs of the current cell and of inter-frequency neighbour cells are indicated in SI (b+c)?
e1) Connected UE indicates the MBMS service ID in the MBMSInterestIndication message?
e2) Connected UE requests the SAIs of neighbouring frequency(ies) from the network (dedicated RRC signalling)?

Which cells provide information about neighbours?
- MBMS cells provide SAI of neighbour cells?
- MBMS and non-MBMS cells provide SAI of neighbour cells?

Where to provide SAIs (if agreed to be provided)it?
- SIB13 for current frequency?
- SIB5 for neighbour frequencies?
- New SIB for neighbour frequencies?

SAI dynamic or semi-static?

R2-120513 [76#38] - LTE: MBMS Assistance information; Huawei; Report; related to email discussion [76#38]; REL-11;

- ZTE expects that e1 would have an impact on the counting solution. Huawei does not exactly describe the proposal e1. CATT does not see such impact. Anyway would anyway prefer solution d) since it would also support IDLE mode. ALU also does not see an impact. ALU sees some ambiguity with solution d). ALU points out that it would be possible to provide in option e1 the SAI instead of the MBMS Service ID. ZTE thinks that if we go for e1 we do no longer need to Rel-10 counting. Huawei tends to agree.
- NSN thinks that e1 requires that all cells are always aware of the ongoing services on all neighbour cells. ALU thinks that it was said that the SAI does not require the eNB to be aware of the service. Huawei wonders whether this would be an e3? ALU thinks the only difference to e1 is that it contains the SAI. Huawei is not so happy to get more new solutions brought up now. ALU points out that they did point out this solution with SAI as well. ALU thinks the same solution has also been proposed by Huawei to the previous meeting.
- ALU thinks during the email discussion the requirements were not clear.
- Samsung wonders whether we still need the frequency in the USD. LG thinks we still need frequency information in the USD. Samsung thinks that this would be two solutions. Samsung thinks that the main motivation is to limit the service interruption in connected.
- Samsung thinks we have to discuss whether the SAI is just geographical information or if it is updated dynamically. Can the UE indicate interest based on the SAI or does it have to check the MCCH. Huawei thinks the SAI would be static.

- NSN would assume that all cells (except CSG) would provide the SAI in SIB.
- ALU thinks that broadcast is mainly for IDLE mode. Do IDLE mode UEs need to get information from non-MBMS cells. NSN thinks it is for both connected and idle mode. LG supports NSN's view. QC shares that view.
- QC thinks the UE may indicate interest based on the SAI without reading neighbour cell's MCCH.
- NEC thinks that only MBMS capable cells should broadcast SAI. Orange thinks that all cells should broadcast SAI. NSN thinks that bullet 2 is to ensure service continuity. If a network does not provide it there will not be service continuity.
- LG thinks that CSG cells may not be able to provide SAI since that information is not available.

Agreements
1 MBMS cells provide MBMS SAIs of the current cell and of neighbour frequencies in System Information
2 In order to ensure service continuity also non-MBMS cells provide SAI of neighbour frequencies.

IPR2025-00720, OnePlus Ex. 1004

(FFS for CSG cells)
3 The UE may indicate interest based on the SAI provided in SIB of neighbour cells and does not need to read MCCH of the inter-frequency MBMS cells.
4 In IDLE mode a UE may prioritize the MBMS frequency based on the SAI if provided in SI and does not need to read MCCH

R2-120426 MBMS assistance information; Samsung; Disc; REL-11;
R2-120487 Provisioning of additional information in RAN for RRC_Connected UEs; Alcatel-Lucent; Disc; REL-11;
R2-120285 MBMS Assistance Information for idle and connected mode; Qualcomm Incorporated; Disc; REL-11;
R2-120259 MBMS Assistance Information from E-UTRAN; CATT; Disc; REL-11;
All 4 Tdocs not treated

Frequency and SAI in USD?
R2-120488 Remaining issues on provisioning of MBMS SAIs in the RAN; Alcatel-Lucent; Disc; REL-11;
R2-120098 Frequency Information in USD; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
Both not treated

7.3.3 Congestion and Admission Control

Including output of email discussion [76#39] - LTE: MBMS Congestion Handling [Nokia] (Network controlled prioritization of MBSM carrier in IDLE mode cell selection? Where to camp when cell on MBMS carrier is congested?)

R2-120109 [76#39] - LTE: MBMS Congestion Handling; Nokia Corporation, Nokia Siemens Networks;
Report; related to email discussion [76#39]; REL-11;
not treated

Need for additional congestion handling?
a) Existing mechanisms are sufficient (always allowed to prioritize an MBMS frequency)?
b) Possibility to prevent UE from prioritizing on MBMS frequency (3.1)
c) UEs are always allowed to prioritize an MBMS frequency. An additional indicator that the cell is congested. (3.2.b)

When may a UE prioritize the MBMS frequency?
At any time?
Only when the service is ongoing?

R2-120427 Handling of congested MBMS frequecy; Samsung; Disc; REL-11;
R2-120104 Cell reselection rules for UEs active in MBMS; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120231 Behaviour of RRC Idle UE; LG Electronics Inc.; Disc; REL-11;
R2-120489 Cell re-selection frequency prioritisation by Idle UEs w.r.t SAIs; Alcatel-Lucent; Disc; REL-11;
[Moved Here from 7.3.2]
R2-120225 Congestion and admission control for MBMS cell; MediaTek; Disc; REL-11;
R2-120492 Congestion and admission control; Alcatel-Lucent; Disc; REL-11;
R2-120778 MBMS Congestion Handling; CATT; Disc; REL-11;

7.3.4 Other

E.g. conditions for sending the MBMSInterestIndication? MBMS capabilities? Handling of CSGs?

MBMS Capabilities
R2-120105 UE capability and MBMS; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120780 MBMS UE capability extensions; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120224 MBMS UE Capability; Mediatek; Disc; REL-11;
R2-120260 MBMS CA Capability; CATT; Disc; REL-11;
All 4 Tdocs not treated

MBMSInterestIndication
Open Issues:
- Earliest time to send the indication (after RRCConnectionSetupComplete or SecurityModeComplete)?
- eNB indicates that UE is supposed/allowed to send MBMSInterestIndication?

IPR2025-00720, OnePlus Ex. 1004

- Need to suppress indications (always? only if current configuration prevents MBMS reception?)
- Forward MBMSInterestIndication during handover?

R2-120781 MBMSInterestIndication for connected UEs; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120512 Open issues for MBMSInterestIndication; Huawei, HiSilicon; Disc; REL-11;
R2-120261 MBMS Service Continuity in RRC-Connected Mode; CATT; Disc; REL-11;
R2-120490 Requirement on MBMSInterestIndication message transmission instance w.r.t. UE capability; Alcatel-Lucent; Disc; REL-11;
R2-120106 MBMS in different PLMNs and MBMSInterestIndication; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120156 Limitation of MBMS interest transmission; ASUSTeK; Disc; REL-11;
R2-120717 Handling of MBMS Interest Indication for Mobility; LG Electronics Inc.; Disc; REL-11;
R2-120232 Further discussion on priority information; LG Electronics Inc; Disc; REL-11;
All 8 Tdocs not treated

CSG

Leave IDLE mode reselection between CSG and MBMS to UE implementation? Need to provide additional information about available MBMS services?
Enhancements for connected mode mobility to CSGs? Network may take MBMSInterestIndication into account?

R2-120779 MBMS Continuity and the Relationship with CSG; CATT; Disc; REL-11;
R2-120721 Mobility between MBMS and CSG; LG Electronics Inc.; Disc; REL-11;
R2-120648 Selection/Reselection between MBMS capable cells and CSG cells; Kyocera; Disc; REL-11;
R2-120649 MBMS service continuity for mobility to/from CSG cells; Kyocera; Disc; REL-11;
R2-120114 UE prioritization between MBMS cell and CSG cell in RRC_IDLE; CHINA UNICOM; Disc; REL-11;
R2-120097 MBMS Service continuity and CSG cells; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120658 MBMS cell and CSG reselection for service continuity; Pantech; Disc; REL-11;
All 7 Tdocs not treated

Other

R2-120428 MBMS enhancements for REL-11, Idle; Samsung; Disc; REL-11;
R2-120719 Further discussion on MBMS service continuity; LG Electronics Inc.; Disc; REL-11;
R2-120230 Camping of CA-capable UE; LG Electronics Inc.; Disc; REL-11;
R2-120284 On the need for System Time for eMBMS Operation; Qualcomm Incorporated; Disc; REL-11;
R2-120709 MBMS Service Continuity for Inter-RAT Mobility; LG Electronics Inc; Disc; REL-11;
R2-120155 MBMS service continuity for connection re-establishment; ASUSTeK; Disc; REL-11;
R2-120178 Enabling MBMS Service Continuity in connected mode; Research In Motion UK Limited; Disc; REL-11;
All 7 Tdocs not treated

Continuation until next meeting

- ✉ **LTE – MBMS: One week email discussion [77#06] to capture the agreements in the running stage-2 CR (will not be provided to plenary) (Huawei)**
- ✉ **LTE – MBMS: Email discussion [77#28] until next meeting whether the frequency information needs to be provided in USD given the decision to broadcast SAI in the RAN (Huawei)**
- ✉ **LTE – MBMS: Email discussion [77#29] until next meeting on congestion handling for MBMS based on the decisions from this meeting (Samsung)**
- ✉ **LTE – MBMS: Email discussion [77#30] until next meeting on details of MBMSInterestIndication (LG)**

7.4 WI: Network-Based positioning Support for LTE (RP-101446)

(LCS_LTE-NBPS-Core, leading WG: RAN2, REL-11, started: March 09, target: March 12, WID: RP-101446)
Need for explicit indication that SRS is being aborted or updated?

Stage-2 CRs

IPR2025-00720, OnePlus Ex. 1004

R2-120203 Support for NBPS in LTE; TruePosition; Disc; REL-11;

- Ericsson thinks this is similar to the previous discussion and their concerns raised in the paper to the previous meeting still hold. TP wonders whether those concerns are that there might be cases where narrow band may be needed. Ericsson is e.g. been concerned that no RAN4 performance evaluation has been performed based on which such decisions could be taken. Ericsson also thinks that conformance testing would need to evaluated in other groups and that would also apply for NBP. TP thinks there has been an 18 month long evaluation in RAN1. TP thinks that every evaluation done was based on 911 requirements. Ericsson explains that the requirements are specified after the feature has been specified. RAN4 specifies performance measurements as also RAN4/1 indicated in their LSs.
- ALU wonders whether the intention is to restrict the feature to E911. TP just thinks that if other applications are proposed that is fine. But for the evaluations E911 requirements have been used. ALU wonders why we should then restrict the specification to "Wideband". TP thinks that was the requirement. Andrew thinks that section 5 does not restrict the feature to "Wideband". ALU wonders whether it would be possible to make that clear in the CR. Andrew considers it to be clear.

=> Noted

R2-120812 draft proposed CR on TS 36.305 for Support of NBPS in LTE from TruePosition and Andrew

- Ericsson thinks the text clearly indicates that it has to be a wideband SRS signal.
- Ericsson is also concerned that there is no definition of the term "Wideband".
- Andrew thinks it is essential and required to specify Wideband here.
- TP suggests to have the "Wideband" requirement in the stage-2 description and replace it e.g. by "full bandwidth".
- TP does not consider that RAN2 is establishing a requirement but rather stating in this specification the result of what has been simulated in other groups. Ericsson thinks it is clearly stated in the RAN1 LS that they do no specify the requirements either.
- Ericsson is also interested to move forward with this. Therefore, Ericsson submitted an alternative CR in R2-121024 as well as a draft LS in R2-121025.
- TP indicates that the text was rewritten triggered by Ericsson that the eNB might assign other or no resources. TP wants to ensure that the eNB assigns what is required.
- TP suggests that we could alternatively specify that the E-SMLC can specify what the eNB has to configure in accordance with what is required to meet the performance requirements. TP thinks that currently the ESMLC would just request to setup SRS and the eNB can configure whatever it wants.
- AT&T explains that they have many requirements from their regulators and they do not want to limit themselves in any way and hope that we can proceed with whatever is required.

=> revised in R2-121030

R2-121024 Network Based Positioning Support, Ericsson, CR 36.305, 0032 B LCS_LTE-NBPS-Core
[Late]

- Ericsson explains that the term "Wideband" is removed. Except for that and updates to the cover page the proposal is the same as the CR provided by TP.

=> CR is not agreed

R2-121025 [Draft] LS on network-based positioning; LCS_LTE-NBPS; Ericsson
[Late]

- Ericsson would hope that the alternative CR would be agreeable and then address the wideband issue in the LS.
- TP thinks that the text to RAN4 does not address the "wideband" issue. Ericsson wonders how a suitable sentence could look like. TP would suggest to go ahead with their CR and to add an FFS and to ask RAN4 to investigate this further. If RAN4 identifies that wideband is not applicable, it could be removed again. TP does not want the requirement on high accuracy is lost what would happen with the LS proposed by Ericsson. Ericsson wonders whether TP would object to the alternative CR and not like to see an LS at all. TP does object to the alternative CR and having stated only a simple work procedure in the LS.

- ALU suggests to include in the CR: "SRS including but not limited to full-bandwidth SRS"

IPR2025-00720, OnePlus Ex. 1004

- TP would be OK with that if we would in addition change the CR so that the ESMLC can explicitly request a certain SRS bandwidth from the eNB.

=> Change section 5.2.X to

"An E-SMLC can interact with the Serving eNodeB in order to retrieve target UE configuration information to support the uplink positioning method. The configuration information may include information required by the LMUs in order to obtain uplink time measurements; see clause 8.X.2. The E-SMLC can indicate to the serving eNodeB the need to direct the UE to transmit SRS signals (up to the maximum SRS bandwidth applicable for the carrier frequency) for uplink positioning. If the requested resources are not available, the eNB may assign other resources (or no resources e.g. if none are available) and report the resource allocation to the E-SMLC.
The E-SMLC can also request one or more LMUs to perform uplink time measurements and report the results."

=> Replace all other occurrences of "Wideband" by "(5.2.X)"
=> The updated CR can be provided in R2-121030 CR0033

R2-121030 draft proposed CR on TS 36.305 for Support of NBPS in LTE from TruePosition and Andrew
=> The CR is technically endorsed and will be sent to RAN1, 3 and 4

=> Will send an LS to RAN1, RAN3 and RAN4 based on R2-121025:
- TP suggests to remove the directive to RAN4.
=> Remove Action on RAN4
=> Change "TSG RAN WG3:" to "TSG RAN WG3/4:"
=> Attach the CR provided in R2-121030 (once technically endorsed)
=> Provide the final LS with these updates in R2-121029

Additional Functionality

Not yet treated at this meeting:
R2-120174 Supporting Procedures for Uplink Positioning; Andrew Corp; Disc; REL-11;
R2-120204 SRS Update/Reset for NBPS; TruePosition; TP; 36.305; REL-11;

7.5 WI: Further Enhanced Non CA-based ICIC for LTE (RP-111369)

(eICIC_enh_LTE-Core, leading WG: RAN1, REL-11, started: March 11, target: June 12, WID: RP-111369)

Note decision from RAN-53: "Second priority topics will be kept on hold for 6 months in all WGs." This means that RAN2 should not work on issues other than inter-frequency support until RAN-55. Note also that it was decided at RAN2-75bis, not to work on inter-frequency measurement subframe restrictions unless RAN4 indicates that it is required to solve RSRQ accuracy problems.

R2-120273 Network assistance information for CRS interference cancellation; Samsung; Disc; REL-11;
- Ericsson agrees on the observations e.g. that the UE needs to know the neighbour cell configuration. Ericsson also agrees whether a UE is able to do interference cancelation in this way but not entirely sure whether to use a capability. Ericsson thinks it might be a bit early to take decisions given RAN1 status. - Ericsson is not convinced that savings in IDLE mode are not so large (maybe no broadcast needed).
- NSN is not convinced that any explicit signalling is needed since the UE is in a good position to decode the aggressor. Samsung agrees that the UE can do this but it needs to know the antenna port and MBMS configuration of the aggressor. QC agrees with Samsung that this information would help the UE. QC thinks it could be possible to detect this information from the neighbour cell but there could be multiple aggressor cells of which some do not provide ABS information. The channel estimation depends on whether or not the neighbour uses ABS. Renesas agrees with Samsung and QC. RAN1 indicated that benefit of signalling is useful. RAN2 could start thinking about how signalling could be provided but taking detailed decisions could be difficult now. Given that IDLE mode is deprioritized it would be difficult to take decisions now. Ericsson agrees that the information in the LS is not sufficient to take such decisions now. LG thinks that RAN1 has

IPR2025-00720, OnePlus Ex. 1004

almost decided to go for higher layer signalling. ZTE agrees that it is early but would technically prefer the two proposals.
- QC thinks it is strange to wait for RAN1 to decide on IDLE mode since they do not care about it. QC does not support IDLE mode solution and it seems that RAN2 agrees to that. Samsung thinks we should also consider IDLE mode and we should have a joint approach.
- DOCOMO wonders whether RAN1 discussed all scenarios (including CSG) and whether different solutions may be needed.
- QC explains that dedicated signalling information could be provided during handover from the macro cell or while the UE is in the center of the pico cell.
- Renesas thinks we could discuss potential ways on how to provide information to the UE.
- QC thinks that IDLE mode support is very complicated and should be deprioritized for now.
- Huawei thinks we should wait for further RAN1/4 decisions e.g. on cell detection before excluding IDLE mode from a signalling point of view. Ericsson supports Huawei on this proposal.
- Samsung thinks that without IDLE mode support many UEs will fall back to the macro cell when going into IDLE. Ericsson would not like to exclude IDLE mode at this stage.
- QC thinks that going for broadcast would still require dedicated signalling support e.g. for HO case.
- Ericsson thinks that RAN4 should decide whether the UE can derive the required information autonomously or whether higher layer signalling is needed.

=> RAN2 thinks that higher layer signalling for CRS interference cancelation could be provided either in dedicated or broadcast signalling.

R2-120469 On Reduced Power ABS; Ericsson, ST-Ericsson; Disc; REL-11;
- Huawei wonders which parts are already supported in Rel-10. Ericsson thinks it is possible to perform transmission in the macro with reduced power but for a particular UE it is not possible to rapidly change between full and reduced power since there is only power offset.
- Samsung wonders whether the existing patterns would not be sufficient. Ericsson explains that we have measurement patterns which do not say whether a subframe is ABS or not. In a deployment they could overlap but do not need to.
- DOCOMO agrees to the investigations and agrees that we should wait for RAN1. DOCOMO wonders whether this concept is efficient taking into account the dynamic power range defined in RAN4. Ericsson agrees that this is an issue that needs to be taken into account. Therefore, we need to wait for RAN4.
- Noted

R2-120530 Signaling impacts for low-power ABS concept; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
- Noted

=> We will wait for further progress in RAN1 and RAN4.

R2-120745 RAN2 impact for supporting FeICIC; LG Electronics Inc.; Disc; REL-11;
R2-120365 RAN2 work on FeICIC; NTT DOCOMO, INC.; Disc; REL-11;
Both not treated

Other

R2-120217 36.331 CR on detection of system information modification; Samsung; CR; 36.331; (0863); F; REL-11;
- ZTE assumes this requires the eNB to align the paging occasions and the subframe patterns. Samsung thinks that the eNB is anyway paging continuously. This is only to clarify when the UE is supposed to listen. MediaTek thinks that we discussed earlier when connected mode UEs are supposed to read paging. What does this clarification given in addition? QC agrees that the network will page continuously. It is just to clarify that the UE should not try to decode in certain subframes. LG thinks in connected mode the UE can decode at any time and sees no need for a restriction but would rely on UE implementation. Renesas agrees with LG and MediaTek. Renesas reads the CR as a restriction for the UE which does not seem to be needed. Renesas agrees that these are the subframes in which the UE would most likely be able to decode. Samsung thinks that we mandate how many times the UE should attempt to decode and it should do that in

IPR2025-00720, OnePlus Ex. 1004

subframes where it is likely to be able to decode. Nokia thinks such requirements are covered by RAN4 performance requirements. Huawei thinks we should wait and have this discussion together with other control channel requirement related discussions.
- Ericsson thinks that the "measSubframePatternPCell" may or may not coincide with ABS patterns.

=> Not agreed. Can discuss further

Late or withdrawn

R2-120216 Detection of system information modification; Samsung; Disc; REL-11; [Late]

withdrawn

7.6 WI: Signalling and procedure for interference avoidance for in-device coexistence (RP-111355)

(SPIA_IDC_LTE-Core, leading WG: RAN2, REL-11, started: Sep.11, target: June 12, WID: RP-111355)
Output of corresponding SI RP-100671 is available in TR 36.816.
Agreement status is reflected in running stage-2 CR: R2-116510 (after RAN2-76)

7.6.1 General

E.g. Running stage-2 CR

Gaps instead of DRX for IDC TDM

R2-120054 Limitations of a DRX based scheme; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
- Ericsson thinks that the CQI reporting could be made to work also for the DRX solution. NSN agrees that it would be possible.
- Ericsson thinks that also the gap solution would require aligning with the assigned PUCCH resources in order to optimize utilization. NSN thinks that the network has to choice whereas with DRX the network has to take PUCCH into account.

=> Noted

R2-120055 Gaps for IDC Interference; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;

=> Noted

Discussion:
- Huawei thinks we already agreed to use DRX and should stick to that. NSN thinks we should not ignore issues that there apparently are with the DRX approach and that will require changes to DRX.
- Huawei wonders how these gaps would work together with e.g. inter-frequency gaps. Ericsson thinks that the longer IDC gaps could have an impact.
- Motorola thinks this is an interesting approach that would make the behaviour more predictable but some more thorough investigation would be needed.
- IDT thinks the gap based solution would have less impact on other functionality. IDT thinks these new gaps would be configured independently of the measurement gaps.
- CMCC thinks that based on the results of the SI and according to the current work we should stick to the DRX solution. CMCC understands that the current DRX mechanism is not that predictable but that could be enhanced. NSN thinks that the study item has not discussed the issues brought up in this paper. And with the existing gap mechanism everything is already in place in MAC.
- Renesas supports the NSN view and thinks that DRX would cause more problems.
- NSN clarifies that if the choice is between reusing DRX as we have it in Re-10 or using gaps as we have them since Rel-8, NSN has no preference. But when we start enhancing DRX, NSN prefers to go for gaps. Ericsson thinks we have so far not agreed to any change except for adding one parameter value. IDT thinks by using DRX for IDC, it could no longer be used as efficient power saving mechanism in those scenarios. Ericsson thinks that the UE can be configured with short and long cycles and if there is no data the UE falls to the long cycle… so there would still be sleep opportunity. IDT acknowledges this but thinks the DRX flexibility would anyway be limited in order to create the IDC opportunities.

IPR2025-00720, OnePlus Ex. 1004

- Fujitsu wonders whether the gaps could have an impact on RAN4. NSN wonders why. Fujitsu thinks this because it is a measurement gap.
- Ericsson thinks that scheduling restrictions can ensure that PUCCH does not interfere to ISM.
- LG does not want to modify the existing DRX.
- MediaTek wonders if we would have to introduce multiple new gap patterns? NSN clarifies we will need more than the existing patterns but how many we need depends on the use cases.
- Ericsson thinks that DRX has already been implemented and tested and should therefore be used. To apply gaps for IDC would require changes to the existing gap patterns.
- Samsung thinks we would first need to see whether gaps also work for short periods (e.g. BT+LTE). Huawei agrees with Samsung that it could be difficult to introduce really short gaps.

Indicative Show of Hands:

a) Use Rel-10 DRX as IDC TDM mechanism (maybe additional parameter values): 7
b) Further enhanced DRX as IDC TDM mechanism: 13
c) Use measurement gap mechanism with new patterns as IDC TDM mechanism: 7

- NSN would interpret that the proponents of a) and c) are the ones that think that any Rel-10 like mechanism (+ one or few additional parameters) are sufficient. Where as b) reflects the companies that consider further enhancements needed.
- CMCC thinks the results show that we should stick to the DRX solution.
- LG could accept a) or c) but not b). Samsung thinks that a) does not work. Samsung would like to better understand if c) will work for BT+LTE. Suggests to further analyze c).

=> For the time being we stick to the DRX solution but we will further evaluate the gap pattern based solution. If we stick to DRX we will still consider enhancements.

- NSN thinks that for any proposed enhancement to the DRX solution companies should bring a MAC CR showing the impact.

R2-120639 Predictable Idle Periods for In-device Coexistence; InterDigital Communications; Disc; REL-11;
R2-120572 Consideration on Bluetooth and E-UTRAN co-existence; Renesas Mobile Europe; Disc; REL-11;

[Moved Here from 7.6.2.1]

Both not treated

DRX Enhancements

R2-120286 Requirements to make DRX solution predictable for in-device coexistence; Samsung; Disc; REL-11;

- Samsung clarifies that a pending SR does not keep the UE awake through the unscheduled period.
- Ericsson thinks it is possible to mask the SR so that they always occur during active time. Then, also the grant falls into active time as well. Samsung thinks in case of LTE+BT these intervals are so short that the grant might arrive in the unscheduled period.
- ZTE thinks that in certain cases the RA might need to be prioritized (e.g. in HO cases). Ericsson agrees.

=> Noted

R2-120666 DRX changes for predictable TDM patterns in IDC; Qualcomm Incorporated; Disc; REL-11;

Proposal 1:

- IDT thinks that the paper shows that using DRX for IDC TDM would be quite inefficient. MediaTek thinks that limiting the DRX flexibility may actually be more efficient.

Proposal 2:

- Samsung is concerned that the UE cannot determine the DRX parameters and would rather prefer HARQ bitmaps to be sent from the UE to the NW. ZTE shares Samsung's view.

Proposal 4:

- Ericsson wonders whether this is for short or long gaps. Ericsson would consider this an optimization.

IPR2025-00720, OnePlus Ex. 1004

Agreements
1 Agree that additional DRX parameter values are needed to make the DRX solution work

7.6.2 FDM/DRX Solution

7.6.2.1 Triggering and Measurements

Including output of email discussion [76#40] - LTE: IDC Trigger [MediaTek]

R2-120226 Output of Email Discussion on IDC Trigger; MediaTek; Report; related to email discussion [76#40]; REL-11;
Proposal 2:
- Ericsson understands that many companies would like to define some thresholds for the trigger and therefore some test cases would be needed. We should maybe discuss what is actually included in the indication. If the indication contains explicit values, there would need to be a possibility their correctness.
- MediaTek thinks that many companies would like testability but wonder whether it can be achieved in the scope of this WI.
- QC thinks that the email discussion has concluded that for ISM being the victim, we cannot define or verify thresholds. Lack of testability in one direction would make testability in the other direction obsolete. QC thinks it would be better to define prohibit timers. Ericsson does not agree to this argument since the network may react differently to different indications. NSN thinks we have no other choice than trusting the UE for Band 7 so we can also trust it for Band 40. MediaTek thinks that it depends on whether we have separate indications for the two cases. If there is just one common indication, there is no reason for verifiability. Samsung wonders why we want to have different indications. Ericsson would actually prefer to get qualitative indications indicating e.g. an interference level.
- LG is concerned that one device may send the indication when the ISM device is enabled the other when the interference occurs. ZTE does also not want to rely on the UE implementation.

Proposal 3:
- Ericsson is not convinced that the network *can* trust the UE.

Agreements
1 An unusable frequency is an LTE frequency where the ongoing In-Device Coexistence (IDC) interference problem between the LTE radio and the ISM radio exists within the same UE but cannot be solved by the UE itself.
2 The network can trust the assessment of the UE, where the condition is FFS

- Motorola would like operators and network vendors to get more involved in order to progress on the question whether IDC triggers should be up to UE implementation, verifiable or fully specified.

R2-120289 Relevance of measurement as trigger for sending in-device interference indication to eNB; Samsung, Qualcomm Incorporated, Broadcom, Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
- Motorola thinks that some level of coordination is needed in order to ensure that RRM measurements are not polluted by ISM interference. Samsung thinks it is much easier to know in which subframesd ISM will not transmit rather than the other way around. Once a pattern has been set, the LTE UE knows when the ISM is not supposed to transmit.
- Motorola points out that the share of polluted symbols might be much higher than assumed here.

R2-120466 Measurements and triggers for IDC indication; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120359 Details on IDC indication; Nokia Corporation; Disc; REL-11;
[Moved Here from 7.6.2.2]
R2-120290 Measurement for mobility purpose during in-device interference; Samsung, Broadcom; Disc; REL-11;
R2-120183 Interference measurement for BT; Research In Motion UK Limited; Disc; REL-11;
R2-120663 Measurement on IDC to prevent ping-pong HO; Pantech; Disc; REL-11;

IPR2025-00720, OnePlus Ex. 1004

R2-120182 Measurement and UE internal coordination for triggering; Research In Motion UK Limited; Disc; REL-11;
R2-120267 Triggering for in-device coexistence; Intel Corporation; Disc; REL-11;
R2-120662 IDC trigger issue; Pantech; Disc; REL-11;
All 8 Tdocs not treated

7.6.2.2 IDC Signalling Procedure

Proximity indication-like message or re-using existing measurement configuration or capability? What information to provide to the network (for FDM? For TDM?)?

R2-120099 On the procedure of interference avoidance for IDC; CMCC; Disc; REL-11;
R2-120664 IDC trigger procedure; Pantech; Disc; REL-11;
R2-120140 Signaling Procedure of FDM solution for IDC; ZTE Corporation; Disc; REL-11;
R2-120281 Detailed infromation from UE to eNB in the indication to inform in-device interference; Samsung; Disc; REL-11;
R2-120574 UE-assisted enhancement under DRX method in LTE+WiFi scenario; Renesas Mobile Europe; Disc; REL-11;
R2-120064 Signalling procedure for IDC; Huawei, HiSilicon; Disc; REL-11;
R2-120065 Assistance information handling concerning the FDM and TDM solutions; Huawei, HiSilicon; Disc; REL-11;
R2-120268 Signaling procedure for in-device coexistence; Intel Corporation; Disc; REL-11;
R2-120288 Signaling procedure to handle in-device interference; Samsung; Disc; REL-11;
R2-120144 Left Issues in DRX solution for IDC; ZTE Corporatoin; Disc; REL-11;
R2-120442 IDC indication configuration and reporting; NEC; Disc; REL-11;
R2-120707 Overall IDC signaling procedure; LG Electronics Inc.; Disc; REL-11;
All 12 Tdocs not treated

7.6.3 Autonomous denial

Restrictions for when to apply autonomous denial of LTE transmission/reception? How to specify? Additional information by network or UE?

R2-120468 Autonomous denials for rare signaling; Ericsson, ST-Ericsson; Disc; REL-11;
R2-120790 Autonomous denial for Wi-Fi Beacon; Samsung; Disc; REL-11;
R2-120642 Restricting Frequency and limiting Impact of Autonomous Denials; InterDigital Communications; Disc; REL-11;
R2-120573 Enhanced solution for WiFi beacon handling; Renesas Mobile Europe; Disc; REL-11;
R2-120486 Restrictions on Autonomous denial; Motorola Mobility; Disc; REL-11;
R2-120735 Network-controlled autonomous denial; Fujitsu; Disc; REL-11;
All 6 Tdocs not treated

7.6.4 Other

E.g. Forwarding IDC information at handover?

Forwarding at handover

R2-120609 IDC Information forwarding; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; REL-11; [Moved Here from 7.6.3]
R2-120227 IDC Information Forwarding at Handover; MediaTek; Disc; REL-11;
R2-120058 Inter-eNB Communication for IDC; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120703 Necessary procedure for avoiding ping-pong to problematic frequency; LG Electronics Inc.; Disc; REL-11;
R2-120057 IDC Signalling to Target eNB; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
All 5 Tdocs not treated

Other

R2-120056 IDC Considerations for MDT; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11; not treated

Continuation until next meeting

IPR2025-00720, OnePlus Ex. 1004
Page 359 of 700

✉ **IDC: One week email approval [77#07] for update of running stage-2 CR capturing the agreements from this meeting (CMCC).**

7.7 WI: RAN overload control for Machine-Type Communications

(SIMTC-RAN_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, target: March 12, WID: RP-111373)
EAB stage-3 details for LTE (discuss and progress running 36.331 CR)

No contributions.

7.8 WI: TEI11

RoHC Context Transfer

R2-120239 Discussion on ROHC context transfer; Samsung, Alcatel-Lucent; Disc; REL-11; TEI11, LTE-L23;
revised in R2-120824

R2-120824 Discussion on ROHC context transfer; Samsung, Alcatel-Lucent, KDDI; Disc; REL-11; TEI11, LTE-L23;
- NSN thinks for the network side it would come for free if limited to intra-eNB. However NSN is concerned about inter-eNB support via X2.
- Renesas wonders whether the contexts are not implementation specific and that could cause interoperability issues. Samsung does not want to discuss the container but rather keep it transparent so that it only works across eNBs of the same vendor.
- Huawei wonders whether one would not also have to update the context when transiting between talk spurt and silence phase. Samsung confirms that there is also an update but the header size is much smaller than the headers required during handover.
- Huawei does not expect a large gain from RoHC context transfer and would prefer to avoid the inter-eNB case.
- LG thinks that it can be easily implemented but wonders how much gain there really is. If it is proven to have a gain, LG would be OK to accept this. Samsung explains that they already put some effort in the gain analysis and wonder whether companies would expect simulations. ALU supports the proposal since they expect a gain in cell edge performance. Ericsson doubts that there will be a big gain.
- NSN thinks that when RoHC is used, there could be a gain but one question is when we use RoHC. Samsung understands that RoHC should be used for VoIP handling.
- Huawei considers it a short-cut to conclude that the absence of three full IP header increases the coverage that much.
- Samsung indicates that it also has an impact to other WGs which would in principle require a dedicated WI. However, Samsung would prefer to handle it as TEI11. Ericsson thinks before we do anything else, we should ensure that there is sufficient gain from the proposal. Ericsson wonders what a dedicated WI would be about. NSN would be OK as long as we don't have RAN3 impact. If it is kept intra-eNB (no RAN3 impact), NSN would be OK to handle it in TEI11.

=> Noted. Some support. Should evaluate and discuss expected gains more.

R2-120240 ROHC context transfer: Overall procedure and impact on RAN3 specification; Samsung; Disc; REL-11; TEI11, LTE-L23;

R2-120241 Draft CR to 36.300 for ROHC context transfer support; Samsung; CR; 36.300; (0426); F; REL-11; TEI11, LTE-L23;

R2-120242 Draft CR to 36.306 for ROHC context transfer support; Samsung; CR; 36.306; (0079); F; REL-11; TEI11, LTE-L23;

R2-120243 Draft CR to 36.323 for ROHC context transfer support; Samsung; CR; 36.323; (0091); F; REL-11; TEI11, LTE-L23;

R2-120244 Draft CR to 36.331 for ROHC context transfer support; Samsung; CR; 36.331; (0864); F; REL-11; TEI11, LTE-L23;
All 5 Tdocs not treated

DTX Detection of PUCCH format 2

Related to R2-120020, LS on DTX detection of PUCCH format 2
(A draft response LS can be provided (after the discussion in AI7.8) in R2-120811 (DOCOMO) (see section 3.2))

IPR2025-00720, OnePlus Ex. 1004

R2-120287 Draft response LS on DTX detection of PUCCH format 2; Samsung; LSout; LS09; is a reply LS to R4-116249 = R2-120020; REL-11; TEI11, LTE-L23;
=> Finally this LS version is not agreed, see R2-120811 instead

R2-120333 PUCCH format 2 DTX detection function; NTT DOCOMO, INC; Disc; REL-11; TEI11, LTE-L23;
=> Noted

Discussion:
- NSN agrees with DOCOMOs proposals and thinks that the point raised in the Samsung paper has already been discussed in RAN4.
- Samsung indicates that if RAN2 does not see a need to discuss it here, they are fine with that.
- Samsung thinks that 10% would be really high for the functionality to be useful. DOCOMO thinks that 10% would be OK since the eNB would wait for several DTX detection events before concluding that the UE is out of coverage. Ericsson is not really convinced that we need the DTX detection functionality but are fine with the suggested answer.

=> We will send LS response to RAN4 indicating that 1% false alarm would be preferred, and if needed that a 10% false alarm would also be acceptable for the PUCCH format2 DTX detection function.
=> Reply LS will be drafted by NTT DOCOMO in R2-120811 (see 3.2)

LCS

R2-120768 Support for Multiple Serving Cells in LPP; Qualcomm Incorporated; Disc; REL-11; LCS_LTE, TEI11;
- NSN thinks that it is unusual to send SCell configuration to the E-SMLC.
- NSN wonders how much it helps to measure on another cell of the same eNB. QC thinks that the SCell measurements could be much better than those on the PCell.
- Huawei thinks that CA is quite dynamic. What would happen if the SCells change in the UE. QC is not sure this would be more dynamic than e.g. cell change which needs to be provided to the E-SMLC anyway. Huawei thinks that currently the UE has only one chance to ask the eNB to configure gaps when receiving the request from the E-SMLC. The UE does not have another chance when e.g. a serving cell is removed and the UE would need gaps.
- NSN wonders what happens when an SCell is deactivated. Would the server then reselect the set of cells? QC thinks that of course the UE could then ask for gaps.

=> Not much support. Can discuss further offline to get more support.

R2-120769 Addition of Support for Multiple Serving Cells; Qualcomm Incorporated; CR; 36.355; C; REL-11; LCS_LTE, TEI11;
not treated

Other

R2-120620 CDMA inter-working with LTE network sharing; Alcatel-Lucent; Disc; REL-11; TEI11, LTE-L23;
- Samsung wonders how the UE knows which configuration to apply. Would we specify limitations? ALU thinks this would not impact the LTE side. UE would select it internally.
- NSN wonders what the requirements are. E.g. what about legacy UEs which are not part of the primary network. ALU thinks that would require some discussion.
- QC assumes that this comes from a real operator requirement and therefore QC would support it.

=> Some support. But need to discuss further.

R2-120429 UE status reporting; Samsung; Disc; 36.331; REL-11; TEI11, LTE-L23;
not treated

Late or withdrawn

R2-120263 Draft LS on DTX detection of PUCCH format 2; Samsung; LSout; see R2-110287 instead; REL-11; TEI11, LTE-L23;
R2-120770 Addition of Support for Multiple Serving Cells; Qualcomm Incorporated; CR; 36.355; C; see R2-120769 instead; REL-11; LCS_LTE, TEI11;
R2-120771 Addition of Support for Multiple Serving Cells; Qualcomm Incorporated; CR; 36.355; C; see R2-120769 instead; REL-11; LCS_LTE, TEI11;
All3 Tdocs are withdrawn

IPR2025-00720, OnePlus Ex. 1004

7.9 WI: Other Rel-11 WIs

For WIs for which RAN2 is not prime responsible WG

Security Algorithms
(EEA3_EIA3, leading WG: SA3, REL-11, started: June 09, closed: Dec.11, WID: SP-090457)

R2-120062 Introduction of a new security algorithm ZUC; Huawei, CATR, CATT, CMCC, China Telecom, China Unicom, ZTE, Potevio, New Postcom, HiSilicon, Ericsson, ST-Ericsson, Alcatel-Lucent Shanghai Bell; CR; 36.331; (0848); B; note: This is related to an SA3 WI for which there is no corresponding RAN WI.; REL-11; EEA3_EIA3;
- Samsung wonders whether the intention is to introduce Rel-11 specification now? Huawei indicates that SA3 and CT1 agreed their CRs and therefore we should also agree it. Huawei thinks it would be better to agree it here and to approve it at plenary.
- ALU suggests to agree the CR and keep it on hold until we create the Rel-11 spec. Huawei wonders whether we treat all Rel-11 discussions in this way. ALU thinks if there is another CR and we want to create the spec then we should of course implement all. The same question could be asked for other CRs. Samsung thinks we should only create the spec if it is really needed and postpone it as much as possible.
- Samsung thinks we should in general discuss when we want to create the Rel-11 specs. June or even later.

=> CR is agreed but kept on hold, i.e., we do not send it to RAN until we decide to create the Rel-11 specification.
=> Chairman will report in RAN plenary that we agreed the CR and keep it on hold (link to corresponding RAN3 CR)

CoMP
(COMP_LTE_DL-Core, leading WG: RAN1, REL-11, started: Sep.11, target: Sep.12, WID: RP-111365)
(COMP_LTE_UL-Core, leading WG: RAN1, REL-11, started: Sep.11, target: Sep.12, WID: RP-111365)

R2-120650 CoMP Related RAN2 Issues; Huawei, HiSilicon; Disc; REL-11; COMP_LTE_DL-Core, COMP_LTE_UL-Core;
not treated

7.10 SI: Hetnet mobility enhancements (RP-110709)

(FS_HetNet_eMOB_LTE, leading WG: RAN2, REL-11, started: March 11, target: Sep. 12, WID: RP-110709)
TR 36.839 captures agreements made so far. Version 0.4.0 capturing agreements of RAN2-76 in R2-116545

7.10.1 General

E.g. updates of TR

No contributions. See email discussion [77#08].

7.10.2 Calibration Simulations

Concluding calibration simulations
Including output of email discussion [76#20] - LTE: HetNet Mobility calibration simulations [ALU]

R2-120199 Email discussion: [76#20] - LTE: HetNet mobility calibration simulations; Alcatel-Lucent (Rapporteur); Report; related to email discussion [76#20]; REL-11;
=> revised in R2-120797

R2-120797 Email discussion: [76#20] - LTE: HetNet mobility calibration simulations; Alcatel-Lucent (Rapporteur); Report; related to email discussion [76#20]; REL-11;
-

R2-120825 Off-line ad hoc on LTE HetNet simulations, Alcatel_Lucent (rapporteur); REL-11
Informal (offline) ad hoc on LTE HetNet simulations held on Wednesday afternoon (chaired by Jialin Zou (Alcatel-Lucent)) with the intention to discuss remaining calibration simulation related issues but potentially also other HetNet Mobility simulation related aspects.

IPR2025-00720, OnePlus Ex. 1004

=> Noted

Agreements
1 The averaged calibration results of all the companies will be included into the TR document with the reference to the email discussion report for more details
2 Clarify the measurement error description in TR36.839 based on the following understanding from the email discussion.
1. The RSRP measurement error can be added before or after L1 filter as long as the error requirement (90% bound for +/- 2dB) is met at the input of L3 filter
2. For calibration purpose we do not model measurement error with wideband CQI for radio link monitoring and HOF decision
3 Conclude the HetNet mobility simulation platform calibration effort in RAN2#77

R2-120464 Discussion on large-area HetNet simulations; Ericsson, ST-Ericsson; Disc; REL-11;
Observation 1: The Rel-8 mobility procedures work also in HetNet deployments.
Observation 2: These initial results indicate a similar increase in handover failure rate as observed during the simulation calibration for HetNet deployments.
Observation 3: Most handover failures occur during the handover preparation phase
Observation 4: Most handover failures occur for pico to macro handovers
Observation 5: The RRC re-establishment procedure can play an important role in ensuring robust mobility performance for packet data users

- NSN agrees to 2-5 but observation 1 looks a bit too generic and NSN sees room for enhancements.
- MediaTek thinks that Ericsson shows that mobility performance is very load dependent. However, MediaTek would assume that high load cases are more important… otherwise no pico cells would not have been deployed. Also MediaTek would assume that the UL load is very low. Ericsson agrees that it would be interesting to simulate with higher load (user density) in the pico cell areas.
- Huawei thinks the results are also caused by the placing of the pico cell within the macro cell. Therefore the observations seem a bit generic.
- Samsung thinks that observation 1 is premature. 2-3 are OK. Observation 5 is not very clear.
- ALU thinks that some modelling details still need to worked out and some results look better than expected.
- Huawei thinks that observation 4 might not hold for realistic deployments, i.e., traffic offloading where the pico is placed within the macro cell coverage. MediaTek agrees that the scenario used in the calibration is not realistic. MediaTek thinks the picos could appear anywhere within the macro cell. Renesas agrees with this. Ericsson did some studies where picos are placed closer to the macro. But placing them at random positions would make it difficult to analyse and compare results. It may also be difficult to discuss which placement is most realistic. But Ericsson agrees that more deployments should be studied.

=> Noted

R2-120651 Evaluation of Mobility Performance in HetNet with Simulations; Alcatel-Lucent; Disc; REL-11;
Observation 1: Most HOFs occur in state 2. This indicates that the radio link condition of the serving cell is a major factor impact the HOF performance. Most HOFs are due to the PDCCH failure before the HO procedures completed.
Observation 2: The HOF rate is higher in HetNet than in the legacy macro only system
Observation 3: Higher UE speed will reduce the time window for the UE and system to complete the HO procedure, which leads to higher HO failure rate.
Observation 4: Pico to macro HOF rate is the highest for all the configuration sets and speeds

- Huawei wonders where the pico cells were placed. ALU says they were placed on the macro boundary.

Observation1:
- QC sees this trend in pico to macro. For the other direction QC observes more failures in target cell. Macro interference is therefore the main cause for HOF.
- MediaTek thinks that observation one also depends on the bias.

Observation 4:
- MediaTek thinks this assumes that the same HO parameters are used in picos and macros.

=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-120348 Large Area System Simulation results for Hetnet mobility; Renesas Mobile Europe Ltd.; Disc; REL-11;

[Moved Here from 7.10.5]

Proposal 1: Conclude in the SI that the for low mobility UEs (i.e. speed <60 km/h), no significant mobility problems are seen.

Proposal 2: Conclude in the SI that for high mobility UEs (speed >60 km/h), outbound mobility seems to be the biggest problem case.

Proposal 3: Studying eICIC in the Hetnet scenario should still be done to provide good conclusion for the Hetnet SI.

Proposal 1:

- Samsung thinks that quite a few companies have observed some issue also in these cases. ZTE shares Samsung's view. ALU would like to see more results from other companies to be able to make this conclusion. NSN tends to agree. NSN wonders whether the pico placement still follows the calibration assumptions for the pico placement. NSN would like to see more realistic placement. NSN would also like to investigate the connection/relation to DRX.

Proposal 2:

- ZTE thinks that it is important to consider the problem of unnecessary HO to pico cells. Renesas thinks that it would be nice to reduce those but it is not essential to resolve.

Proposal 3:

- ZTE has a paper investigating eICIC.

- QC wonders why we have to investigate eICIC. ALU thinks this is required when we want to do CRE.
- MediaTek wonders which load level we should look at.
- DOCOMO assumes that a UE in long DRX has no data to transmit and therefore observed QoS would not really suffer from more HOFs. NSN thinks that intermittent traffic needs to be considered.

=> Noted

Agreements

1 Results indicate that handover performance in HetNet deployments is not as good as in pure macro deployments.
2 For low mobility UEs (i.e. speed <30 km/h), no significant problems have been observed in terms of HOF and loss of connectivity (some issues with ping-pong have been identified).
3 We will study more pico cell deployments e.g. with pico cells placed within the macro cell coverage (not only at the macro cell border) and with more pico cells per macro cells.
4 We will investigate further the impact of DRX settings on the handover performance
5 We will investigate further the impact of CRE/eICIC
6 We can investigate different load levels but should ensure that handover performance is good for all realistic load cases

7.10.3 Cell detection performance

Simulation-based evaluation of potential cell detection problems. Impact of DRX? Impact of eICIC (ABS)? Acceptable RLF rates? Impact on power consumption?...

Inter-Frequency

R2-120523 Enhancements for Small Cell Detection; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;

- ALU wonders why the macro cell power was 40 dBm. NSN thinks the same could be done with 46 dBm as well. ALU would prefer aligned assumptions.

Proposal 1:

- Samsung thinks if the load is low the impact of gaps on the performance would be low. NSN thinks that the frequency of measurements impacts the power consumption no matter what the scheduler does.
- Huawei wonders whether this new gap would be configured separately for different frequencies. NSN has not investigates such details yet.

Proposal 2:

IPR2025-00720, OnePlus Ex. 1004

- Samsung assumes that the UE would detect many pico cells and send many indications. NSN thinks the main concept is to assist the network to configure the UE with inter-frequency measurements.
- Renesas wonders how the UE detects the pico cells and what is a threshold for triggering? NSN did not think about a standardized method. LG wonders what happens after the indication. NSN thinks that the network will then configure an inter-frequency measurement. Those should have longer measurement period than today.
- Huawei wonders about the difference to the existing proximity indications.

Proposal 3:
- Huawei wonders whether the measurement mode would be configured per target cell depending on whether it is for coverage or offloading.

=> Noted

R2-120467 Detection of small cells in HetNets; Ericsson, ST-Ericsson; Disc; REL-11;
- ALU wonders why the UE does not have to perform frequent measurements while in the HetNet deployment. ALU thinks that even for the inter-frequency handovers there is a risk of HOF. Ericsson wonders what the mobility problem is. If the inter-frequency cell is deployed for coverage one can use the s-Measure criteria to start inter-frequency measurements. ALU thinks that the network might miss offload opportunities.
- MediaTek agrees that we should look at the things we already have. MediaTek wonders whether the UE would not always be better served by the pico cell.
- LG points out that there is just one s-Measure criteria and not multiple whereas the document seems to assume multiple s-Measure thresholds.
- ZTE wonders based on what information the network would enable/disable the inter-frequency measurements.
- ZTE thinks that power consumption is the key factor.

Observation 3:
- NSN wonders whether this means that the UE is still performing measurements at existing gap configurations. Ericsson confirms that if the UE is asked to perform inter-frequency measurements, it performs them with the existing gap pattern. Huawei wonders whether this means that there is no reduction of the measurements. Ericsson explains that the network can turn off measurements when it does not consider them needed (e.g. based on total load in the cells and UE traffic volume). Huawei wonders why one has to adapt the threshold if the intention is to just turn it off.

Proposal 1:
- NSN wonders whether studies have been done to evaluate performance and power consumption. Ericsson has not studies but would like to list the options available today.

=> Noted

R2-120654 Inter-frequency small cell identification; Qualcomm Incorporated; Disc; REL-11;
[Moved Here from 7.10.5]
- ALU understands that QC suggests to send beacon-like signal on the macro cell layer. ALU wonders about the complexity both for eNB and UE side. Such schemes should be discussed in RAN1 first. QC has not done simulations yet. NSN shares the concern e.g. with respect to legacy UEs. QC does not see legacy impact except that those Ues would see a barred cell. Those cells would be reported by the UE and it up to the eNB to trigger a HO. ZTE agrees that this should be discussed in RAN1 first.
- Huawei would like to understand this better. The eNB would require an inter-frequency measurement before triggering an inter-frequency HO. QC thinks the NW could handover the UE immediately or it could first trigger a inter-frequency measurement.
- DOCOMO wonder whether this requires new meausrement requirements. QC thinks the requirements would be like intra-frequency measurements today.
- MediaTek thinks that this would be similar that small cells can always do carrier aggregation. If that is the case one could better use CA.
- NSN wonders why the SIB1 is required. QC agrees that one can also skip SIB1. It would result in the same behaviour.
- Nokia thinks we should discuss whether there are different requirements for HetNet inter-frequency discovery than for normal inter-frequency discovery.

=> Noted

R2-120277 Enhanced cell identification and measurements for CA; NTT DOCOMO, INC.; Disc; REL-11;
[Moved Here from 7.10.3]

IPR2025-00720, OnePlus Ex. 1004

Proposal 1: RAN2 is respectfully asked to discuss whether the following requirements for inter-frequency pico cell measurements can be agreed [1]:
Requirement 1: UE power consumption for inter-frequency pico cell measurements in Hetnet deployments should be minimised.
Requirement 2: Any interruptions on the Macro serving cells due to inter-frequency pico cell measurements should be minimised.
Requirement 3: Mobility performance served by Macro cell carriers should not be degraded by measuring inter-frequency pico cells.
Requirement 4: The UE should be able to measure a sufficient number of inter-frequency carriers in Hetnet deployments.
Requirement 5: Performance requirements for inter-frequency pico cell measurements should focus on low mobility scenarios.

- QC agrees that we need to set requirements but misses numbers in this proposal (e.g. how long detection may take). Huawei shares this concern and thinks we need more analysis before agreeing on these requirements. Huawei would appreciate this list as a guideline but not as requirements. Renesas agrees but would in general appreciate requirements. NSN thinks we cannot yet set detailed specific requirements at this stage. We can just capture a guideline for further studies.
- Nokia thinks we could discuss whether we can make the cell detection delay requirement looser. DOCOMO thinks for SCell detection it would be acceptable to have longer detection delay.
- Vdf would like to agree on a few scenarios that we want to cover. Samsung and Nokia agrees that the requirements really depend on the use case (e.g. deployment, coverage or offloading)
- ALU thinks that SCell detection was not in the scope of this Study Item.
- Nokia wonders what we are actually going to evaluate.

=> Noted

Agreements
1 For inter-frequency small cell detection evaluation we focus on a scenario where one (macro) frequency layer provides full coverage and where pico cells are provided on a second frequency layer for offloading purposes including means to improve perceived QoS in hot spot locations.
2 We should investigate whether the same findings apply also to detection of candidate SCells on the second frequency layer
3 We will evaluate in particular UE power consumption and how much offloading opportunity and QoS benefit is lost e.g. due to not being able to detect the cell timely.

R2-120095 Small Cell Discovery in HetNet; Huawei, HiSilicon; Disc; REL-11;
not treated

R2-120520 TR updates for small cell detection; Nokia Siemens Networks, Nokia Corporation; TP; 36.839; REL-11;
[Moved Here from 7.10.1]
not treated

Other
R2-120710 The issue of pico cell avoidance; Samsung; Disc; REL-11;
R2-120269 Mobility performance in HetNet deployment; Intel Corporation; Disc; REL-11;
R2-120137 Performance Analysis on ABS in HetNet; ZTE Corporation; Disc; REL-11;
R2-120451 Discussions on Pico cell discovery in a HetNet; HTC; Disc; REL-11;
[Moved Here from 7.10.5]
R2-120175 Pico cell discovery in a Heterogeneous Network; Research In Motion UK Limited; Disc; REL-11;
All 5 Tdocs not treated

7.10.4 Mobility state estimation performance

Simulation-based evaluation of potential mobility state estimation problems?

MSE enhancement options for HetNets

IPR2025-00720, OnePlus Ex. 1004

a) Count only macro cells for MSE?
b) Indicate in HO command which cells (not) to count for MSE?
c) Weigh different cell types differently in the counting for MSE?
d) Count only cells deployed for coverage (no hot-spots within coverage of another cell)?

Other improvement options
1) Apply different TTT/Threshold parameters for different cell types?
2) Count also handovers on other RATs?
3) UE provides MSE state upon IDLE=>CONNECTED Transition?
4) Scale the hysteresis parameter in measurement reporting criteria with MSE state?
5) eNB makes HO decision dependent on UE's speed?
6) eNB adjusts HO parameters according to UE's speed?
7) UE adjusts HO parameters according to UE's speed?
8) Apply ABS at the pico cell to protect high-speed Ues on intra-frequency macro layer?
...

R2-120652 On UE-speed-based methods for improving the mobility performance in HetNets; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; REL-11;
[Moved Here from 7.10.5]
R2-120096 Further evaluation on enhancements of mobility state estimation in HetNet; Huawei, HiSilicon; Disc; REL-11;
R2-120350 Improvements to Mobility State Estimation in Hetnet; Renesas Mobile Europe Ltd.; Disc; REL-11;
R2-120524 UE MSE and HetNet Mobility; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
All 4 Tdocs withdrawn

R2-120222 TTT configuration for HetNet mobility; MediaTek; Disc; REL-11;
revised in R2-120822
R2-120822 TTT configuration for HetNet mobility MediaTek Disc REL-11 FS_HetNet_eMOB_LTE
not treated

R2-120505 Mobility State Estimation Enhancements; Samsung; Disc; REL-11;
R2-120509 Pico to Macro Failure Improvements; Samsung; Disc; REL-11;
R2-120656 Consideration on counting only macro cell changes; Pantech; Disc; REL-11;
R2-120657 Selective counting in HetNet MSE; Pantech; Disc; REL-11;
R2-120736 Discussion on the scenario for UE mobility state estimation; Fujitsu; Disc; REL-11;
R2-120711 UE speed estimation in HETNET; Samsung; Disc; REL-11;
[Moved Here from 7.10.5]
All 6 Tdocs are not treated

Late or withdrawn
R2-120508 Pico to Macro Failure Improvements; Samsung; Disc; see R2-120509 instead; REL-11;
R2-120352 CR for excluding handover from mobility state estimation; Renesas Mobile Europe Ltd.; CR; 36.331; B; note: A SI can have no TS impact!; REL-11;
R2-120353 CR for counting handovers in other RATs for mobility state estimation; Renesas Mobile Europe Ltd.; CR; 36.304; C; note: A SI can have no TS impact!; REL-11;
R2-120354 CR for reporting UE mobility state to the network; Renesas Mobile Europe Ltd.; CR; 36.331; B; note: A SI can have no TS impact!; REL-11;
All 4 Tdocs are withdrawn

7.10.5 Other

R2-120525 Re-establishment issues in HetNet scenarios; Nokia Siemens Networks, Nokia Corporation; Disc; REL-11;
R2-120653 Discussion on Context Fetch for RRC Connection Re-establishment in LTE HetNets; Alcatel-Lucent, Alcatel-Lucent Shanghai Bell; Disc; REL-11;
R2-120432 Other solution direction for coping with difficult radio environments; Samsung; Disc; REL-11;
R2-120107 Discussion of HetNet Mobility; Nokia Corporation, Nokia Siemens Networks; Disc; REL-11;
R2-120108 HetNet mobility and DRX; Nokia Corporation, Nokia Siemens Networks; Disc; REL-11;
All 5 Tdocs not treated

Late or withdrawn

IPR2025-00720, OnePlus Ex. 1004

R2-120135 Consideration on HetNet mobility problem; Qualcomm Incorporated; Disc; REL-11; [Late]
not treated

R2-120136 HetNet mobility simulation with eICIC; Qualcomm Incorporated; Disc; REL-11;
R2-120349 On the use of proximity indication in Hetnet; Renesas Mobile Europe Ltd.; Disc; REL-11;
R2-120737 Consideration on the mobility enhancement in Hetnet; Fujitsu; Disc; REL-11;
All 3 Tdocs are withdrawn

Continuation until next meeting

- ✉ **One week email approval [77#08] to capture agreements from this meeting in the TR (ALU). Can be provided in R2-121028 36.839 v0.4.1**
- ✉ **Email discussion [77#31] until next meeting on inter-frequency small cell detection. Should investigate performance of existing functionality. Can discuss potential enhancements. (DOCOMO)**
- ✉ **Email discussion [77#32] until next meeting on the impact of DRX on HetNet mobility performance. (Nokia)**
- ✉ **Email discussion [77#33] until next meeting on the need for mobility state estimation enhancements. (Renesas)**

7.11 SI: Other Rel-11 SIs

For SIs for which RAN2 is not prime responsible WG

No contributions.

8 UTRA Release 9 and earlier releases

REL-4 TEI4:

REL-5 HSDPA-L23 (RAN2):

REL-5 TEI5:

REL-6 EDCH-L23 (RAN2):

REL-6 RANimp-RABSE (RAN2):

REL-6 TEI6:

REL-7 RANimp-CPC (RAN1):

REL-7 RANimp-EnhState (RAN2):

R2-120315 Correction of IE HARQ info handling Renesas Mobile Europe Ltd. CR 25.331 (4901) - F REL-7RANimp-EnhState
- Panasonic: Rel-6 network assumes that the UE keep this info, the Rel-7 behaviour is that the UE should clear it.
- Renesas: the correction is for Rel-7 UE supporting that feature
- ST-Ericsson: we investigated this. We support Renesas, maybe with a different wording.
- Huawei: worried about impact on legacy networks.
  - ⇨ The CR is withdrawn

R2-120317 Correction of IE HARQ info handling Renesas Mobile Europe Ltd. CR 25.331 (4902) - A REL-8RANimp-EnhState
R2-120318 Correction of IE HARQ info handling Renesas Mobile Europe Ltd. CR 25.331 (4903) - A REL-9RANimp-EnhState
R2-120319 Correction of IE HARQ info handling Renesas Mobile Europe Ltd. CR 25.331 (4904) - A REL-10 RANimp-EnhState
R2-120321 Correction of IE HARQ info handling Renesas Mobile Europe Ltd. CR 25.331 (4905) - A REL-11 RANimp-EnhState

IPR2025-00720, OnePlus Ex. 1004

The above 4 documents not treated.

R2-120394 Correction of SRB1 mapping info for FACH Alcatel-Lucent CR 25.331 (4912) - F REL-7RANimp-EnhState
- Ericsson: about the first change: the two conditions are complementary, so they need to stay both there. The two variable are TRUE is different cases.
- ALU: but then there is an inconsistency, “it is referenced only from section 8.5.37”
- Ericsson: the network can use SRB1 also in other cases, so that variable needs to stay there. We don’t think is ambiguous even in case of SRNS relocation
- Renesas: this is not preventing from receiving these network messages
- Huawei: can you clarify?
- Ericsson: SRB1 mapping info is not always sent, but the mapping is in SIB5.
- Renesas: SRB1 mapping info is for DCCH
- QC: we shared Broadcom view.
- Ericsson: what the about the case of cell-reselection? You will have the same issue.
- On the second change: we don’t think we need it
- ALU: there is a problem in SRNS relocation
- ALU: after offline more discussion is required
- ST-Ericsson: we don’t want to delay changes to Rel-7.

=> Postponed

R2-120395 Correction of SRB1 mapping info for FACH Alcatel-Lucent CR 25.331 (4913) - A REL-8RANimp-EnhState

R2-120396 Correction of SRB1 mapping info for FACH Alcatel-Lucent CR 25.331 (4914) - A REL-9RANimp-EnhState

R2-120399 Correction of SRB1 mapping info for FACH Alcatel-Lucent CR 25.331 (4915) - A REL-10 RANimp-EnhState

R2-120400 Correction of SRB1 mapping info for FACH Alcatel-Lucent CR 25.331 (4916) - A REL-11 RANimp-EnhState

The above 4 documents not treated.

R2-120433 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson Disc REL-7RANimp-EnhState
- Interdigital: we also support the correction.
- NSN also supports
- Huawei also supports
- After come back:
- ST-Ericsson: can we agree on 434?
- Chair: needs more time.

⇨ Noted

R2-120434 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson CR 25.331 (4917) - F REL-7RANimp-EnhState

Revised in R2-120886

R2-120886 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4917 - F REL-7RANimp-EnhState
- Huawei: ok
- Broadcom: it is not a small correction, it is very important. “may delete stored HARQ info” should be “will delete”
- ST-Ericsson: we agree with the comment.
- Broadcom: I would like a revision to clarify this in consequences if not approved.
- Chair: “may” -> “will”?
- Chair: ” HAR” -> “HARQ”
- Renesas: ” UE not supporting HS in CELL_FACH state, may delete stored HARQ info”. Should be “UEs will delete stored HARQ info”
- Broadcom: we need to explain that the consequence could be call drop.
- Panasonic: we should add TEI7 because if we write only “RANimp-Enhstate” people can think that this affects only UEs supporting that feature.
- QC: consequences if not approved: the current text in this CR should be fine. Only UEs not supporting that feature will delete…

Revised in R2-120901

IPR2025-00720, OnePlus Ex. 1004

R2-120901 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4917 1 F REL-7RANimp-EnhState
- Panasonic: TEI7 is still missing
- Chair: it will be added in the revision.

The CR is revised in R2-120906

R2-120906 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4917 2 F REL-7RANimp-EnhState, TEI7
⇨ The CR is agreed

R2-120436 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson CR 25.331 (4918) - F REL-8RANimp-EnhState, TEI8
Revised in R2-120887

R2-120887 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4918 - F REL-8RANimp-EnhState, TEI8
Revised in R2-120902

R2-120902 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4918 1 F REL-8RANimp-EnhState, TEI8
- Panasonic: TEI7 is still missing
- Chair: it will be added in the revision.

The CR is revised in R2-120907

R2-120907 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4918 2 F REL-8RANimp-EnhState, TEI8
⇨ The CR is agreed (MCC: TEI7 corrected to TEI8 before RAN submission as this is a REL-8 cat.F CR)

R2-120437 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson CR 25.331 (4919) - A REL-9RANimp-EnhState, TEI8
Revised in R2-120888

R2-120888 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4919 - A REL-9RANimp-EnhState, TEI8
The CR is revised in R2-120903

R2-120903 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4919 1 A REL-9RANimp-EnhState, TEI8
- Panasonic: TEI7 is still missing
- Chair: it will be added in the revision.

The CR is revised in R2-120908

R2-120908 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4919 2 A REL-9RANimp-EnhState, TEI8
⇨ The CR is agreed (MCC: TEI7 corrected to TEI8 before RAN submission as this is a cat.A CR for a REL-8 cat.F CR)

R2-120438 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson CR 25.331 (4920) - A REL-10 RANimp-EnhState, TEI8
Revised in R2-120889

R2-120889 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4920 - A REL-10 RANimp-EnhState, TEI8
Revised in R2-120904

R2-120904 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4920 1 A REL-10 RANimp-EnhState, TEI8
- Panasonic: TEI7 is still missing
- Chair: it will be added in the revision.

The CR is revised in R2-120909

R2-120909 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4920 2 A REL-10- RANimp-EnhState, TEI8
⇨ The CR is agreed (MCC: TEI7 corrected to TEI8 before RAN submission as this is a cat.A CR for a REL-8 cat.F CR)

R2-120440 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson CR 25.331 (4921) - A REL-11 RANimp-EnhState, TEI8
Revised in R2-120890

IPR2025-00720, OnePlus Ex. 1004

R2-120890 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4921 - A REL-11 RANimp-EnhState, TEI8
Revised in R2-120905

R2-120905 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4921 1 A REL-11 RANimp-EnhState, TEI8
- Panasonic: TEI7 is still missing
- Chair: it will be added in the revision.

The CR is revised in R2-120910

R2-120910 Clarification on stored HARQ info when HS-DSCH reception is not supported Ericsson, ST-Ericsson, Renesas CR 25.331 4921 2 A REL-11- RANimp-EnhState, TEI8
⇨ The CR is agreed (MCC: TEI7 corrected to TEI8 before RAN submission as this is a cat.A CR for a REL-8 cat.F CR)

R2-120668 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 (4931) - F related to email discussion [76#30] REL-7RANimp-EnhState
- NSN: ok with the intention, but we are not sure about this HS_DSCH_RECEPTION_CELL_FACH_STATE to be TRUE at that time. Perhaps we can work on the wording.
- NSN: Also this variable should be set to false at the end of these checks but at the moment this is not written.
- Interdigital: we should put conditions on network and UE capability instead of the variable.

The CR is revised in R2-120873

R2-120873 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 4931 - F related to email discussion [76#30] REL-7RANimp-EnhState
- => The CR is agreed

R2-120669 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 (4932) - F related to email discussion [76#30] REL-8RANimp-EnhState, RANimp-UplinkEnhState
The CR is revised in R2-120874

R2-120874 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 4932 - F related to email discussion [76#30] REL-8RANimp-EnhState, RANimp-UplinkEnhState
⇨ The CR is agreed.

R2-120670 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 (4933) - A related to email discussion [76#30] REL-9RANimp-EnhState, RANimp-UplinkEnhState
The CR is revised in R2-120875

R2-120875 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 4933 - A related to email discussion [76#30] REL-9RANimp-EnhState, RANimp-UplinkEnhState
⇨ The CR is agreed.

R2-120671 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 (4934) - A related to email discussion [76#30] REL-10 RANimp-EnhState, RANimp-UplinkEnhState
The CR is revised in R2-120876

R2-120876 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 4934 - A related to email discussion [76#30] REL-10 RANimp-EnhState, RANimp-UplinkEnhState
⇨ The CR is agreed.

IPR2025-00720, OnePlus Ex. 1004

R2-120672 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 (4935) - A related to email discussion [76#30] REL-11 RANimp-EnhState, RANimp-UplinkEnhState
The CR is revised in R2-120877

R2-120877 Clarifications of the UE behaviours when initiating a cell update procedure Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications CR 25.331 4935 - A related to email discussion [76#30] REL-11 RANimp-EnhState, RANimp-UplinkEnhState
⇨ The CR is agreed.

R2-120682 Invalid configuration during radio bearer reconfiguration Qualcomm Incorporated CR 25.331 (4936) - F REL-7RANimp-EnhState
- QC: we will need some rewording.
- Broadcom: we think the UE behaviour is clear, UE should follow the specs.
- NSN: can you point it out?
- Broadcom: is not clear if the UE has nothing, but some other case is clear.
- Ericsson: we agree with the intention. We also welcome some more offline checking and pointing to reference.
- QC: After offline, companies seems to agree on this:

"If the network moves the UE to Enhanced CELL FACH state and the network hasn't given the RB mapping info in any dedicated message before, then RB mapping info need to be included in this message, otherwise the UE behaviour is unspecified"
- QC: we can postpone because we don't know yet if this should be captured in the specs or not and if yes how.
- Ericsson: I haven't followed this closely, but what the UE does in case? Why do we need to clarify this now?
- QC: what do you expect the UE to do?
- Ericsson: the UE should be able to handle the solution. It sounds strange.
- Renesas: we agree with Qualcomm.
- Broadcom: if we have a CR for this, then we need to cover also the case of Release 99, we have the same type of situation.
- QC: if everybody agrees with the intention we are fine to leave it in the chairman notes.
- Ericsson: this put a requirement on the network. It is up to network implementation.
- => Postponed

R2-120683 Invalid configuration during radio bearer reconfiguration Qualcomm Incorporated CR 25.331 (4937) - F REL-8RANimp-EnhState, RANimp-UplinkEnhState

R2-120684 Invalid configuration during radio bearer reconfiguration Qualcomm Incorporated CR 25.331 (4938) - A REL-9RANimp-EnhState, RANimp-UplinkEnhState

R2-120685 Invalid configuration during radio bearer reconfiguration Qualcomm Incorporated CR 25.331 (4939) - A REL-10 RANimp-EnhState, RANimp-UplinkEnhState

R2-120686 Invalid configuration during radio bearer reconfiguration Qualcomm Incorporated CR 25.331 (4940) - A REL-11 RANimp-EnhState, RANimp-UplinkEnhState
The 4 documents above not treated.

R2-120698 Clarification of F-DPCH with STTD in CELL_FACH Panasonic CR 25.319 - - F REL-8 CR to REL-7 WI? cat.A CRs missing REL-8RANimp-EnhState, RANimp-UplinkEnhState
- Chair: Clauses affected missing
- Ericsson: do we need this type of clarification in stage 2?
- NSN: we support the intention
- ALU: Ok, maybe a later release?
- Panasonic: ok for Rel-11
- Ericsson: need rewording
- Chair: Rel-11 CR with rewording?
- Ericsson: why we say that is not supported? We could say that is not configured. But we don't think we need it.
- Broadcom: we like it
- Renesas: same.
- The CR is revised in R2-120900

IPR2025-00720, OnePlus Ex. 1004

R2-120900 Clarification of F-DPCH with STTD in CELL_FACH Panasonic CR 25.319 - - F REL-11 CR , RANimp-UplinkEnhState, TEI11
- Ericsson: We are not really happy but we had discussion in RAN1, so we might accept this one. The intention would be that if we clarify this in stage 2 in RAN2, we don't need a RAN1 CR to 25.211
- QC: RAN1 CR is a stage 3 CR. We don't see the link. I have no feedback from RAN1 on this.
- Renesas: the RAN1 CR is up to RAN1.
- Ericsson: RRC specs do not allow the configuration of this, so for RNC is currently impossible to do this.
- NSN: we are positive with the intention of writing this in stage 2.
- QC: fine with the CR.
- NSN: the text could be more clear but no strong opinion
- Ericsson: it looks fine to us.
- NSN: OK

⇨ The CR is agreed.
Later it was found out that no CR number was allocated, so R2-120900 was published with no CR number.
The CR is revised in R2-120914

R2-120914 Clarification of F-DPCH with STTD in CELL_FACH Panasonic CR 25.319 0102 - F REL-11 CR, RANimp-UplinkEnhState, TEI11 (MCC: As RANimp-UplinkEnhState was a REL-8 WI also TEI11 will be added before RAN submission)
=> The CR is agreed

REL-7 MIMO-L23 (RAN2):

REL-7 RANimp-16QamUplink (RAN1):

REL-7 LCRTDD-EDCH-L23 (RAN2):

REL-7 RANimp-L2DataRates (RAN2):

REL-7 RANimp-64QamDownlink (RAN1):

REL-7 TEI7:

REL-8 LTE-L23 (RAN2):

R2-120561 Clarification on the black listed cells for cell reselection to E-UTRA (Rel-8) Huawei, HiSilicon, NTT Docomo CR 25.304 (0305) - F REL-8LTE-L23
- ALU: is any UE going to to this? And what is black list here?
- ST-Ericsson: we are fine. What about later release with early implementable?

=> The CR for Rel-8 is not agreed,
=> We will have a Rel-10 CR only, early implementable

R2-120563 Clarification on the black listed cells for cell reselection to E-UTRA (Rel-9) Huawei, HiSilicon, NTT Docomo CR 25.304 (0306) - A REL-9LTE-L23
Not treated

R2-120565 Clarification on the black listed cells for cell reselection to E-UTRA (Rel-10) Huawei, HiSilicon, NTT Docomo CR 25.304 (0307) - A REL-10 LTE-L23
- Chair: Rel-10 CR, cat F.
- The CR is revised in R2-120850.

R2-120850 Clarification on the black listed cells for cell reselection to E-UTRA (Rel-10) Huawei, HiSilicon, NTT Docomo CR 25.304 0307 - F REL-10 LTE-L23
⇨ The CR is agreed.

REL-8 RANimp-UplinkL2dataRates (RAN2):

REL-8 RInImp8-CsHspa (RAN2):

REL-8 RANimp-UplinkEnhState (RAN2):

IPR2025-00720, OnePlus Ex. 1004

R2-120122 Clarification of MAC-i PDU format when SI is sent alone before contention resolution
Broadcom Corporation CR 25.321 (0747) - F REL-8RANimp-UplinkEnhState
- Huawei: at least a MAC-I header and MAC-I PDU
- Ericsson: there is some legacy text that has not been updated, but this format from Broadcom is already allowed.
- QC: there are other papers on this.
- => Postponed

R2-120123 Clarification of MAC-i PDU format when SI is sent alone before contention resolution
Broadcom Corporation CR 25.321 (0748) - A REL-9RANimp-UplinkEnhState

R2-120124 Clarification of MAC-i PDU format when SI is sent alone before contention resolution
Broadcom Corporation CR 25.321 (0749) - A REL-10 RANimp-UplinkEnhState

R2-120125 Clarification of MAC-i PDU format when SI is sent alone before contention resolution
Broadcom Corporation CR 25.321 (0750) - A REL-11 RANimp-UplinkEnhState

The 3 documents above not treated

R2-120366 SI transmission during contention resolution Ericsson, ST-Ericsson, Broadcom Corporation, ZTE Disc REL-8RANimp-UplinkEnhState
- Chair: there are no questions
- Ericsson: is proposal 1 agreeable?
- QC: ok, but what is the last part meaning?
- Ericsson: the last bit is already used for the CCCH case.
- QC: maybe we can see a CR first.
- Huawei: this was also part of the other CR.
- QC: why don't we make this applicable for all cases?
- Ericsson: if we agree on P1 of the OTHER discussion paper , we can remove "In CELL_DCH state"
- Renesas: that is not desirable from the spec clarity point of view.
- Ericsson: there are other options.
- Renesas: no serious objections from the UE point of view, but network maybe don't need this.
- Renesas: we can agree on "this and only this".

=> Noted

Agreement:
- **For FDD and for DCCH/DTCH transmission In CELL_FACH state, when MAC-i is configured, if the size of the data plus header is less or equal to the TB size of the E-TFC selected by the UE minus 18 bits, a Scheduling Information shall be concatenated into this MAC-i PDU.**

R2-120368 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 (0751) - F REL-8RANimp-UplinkEnhState
Revised in R2-120859

R2-120859 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 0751 - F REL-8RANimp-UplinkEnhState

QC: not so sure about the second change.

Ericsson: we need to fix this issue. Of course there are different ways of doing it, we thought that this way has less impact than other solutions. It has been acknowledge that this is an issue.

Ericsson: the solution proposed by QC was presenting a new format. We think that is confusing and that use case should not happen.

QC: we would like a much cleaner and complete way. There is a corner case that Ericsson solution doesn't fix.

Ericsson: we don't think there is any corner case.

Renesas: we are discussing Rel-8, so the solution should have the least possible impact.

QC: there are a number of cases that have been discussed. So we don't need the CR?

Ericsson: we think that there are not corner cases. The "corner case" can only be caused by very bad network configuration.

QC: why do we need the second change?

IPR2025-00720, OnePlus Ex. 1004

Ericsson: to avoid wrong UE implementation.
QC:
Chair: network vendor will check.
⇨ Postponed

R2-120369 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 (0752) - A REL-9RANimp-UplinkEnhState
Revised in R2-120860

R2-120860 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 0752 - A REL-9RANimp-UplinkEnhState
⇨ Postponed

R2-120370 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 (0753) - A REL-10 RANimp-UplinkEnhState
Revised in R2-120861

R2-120861 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 0753 - A REL-10 RANimp-UplinkEnhState
⇨ Postponed

R2-120372 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 (0754) - A REL-11 RANimp-UplinkEnhState
=> Revised in R2-120862

R2-120862 SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state Ericsson, ST-Ericsson, Broadcom Corporation, ZTE CR 25.321 0754 - A REL-11 RANimp-UplinkEnhState
⇨ Postponed

R2-120552 Clarification ofon SI transmission during collision resolution phase Huawei, HiSilicon CR 25.331 - - F cat.A CRs missing REL-8RANimp-UplinkEnhState
- Ericsson: during contention resolution the UE shall attached the E-RNTI, so it is clear that the UE will not send 18 bits alone during this time, without E-RNTI.

=> The CR is not agreed

R2-120687 Scheduling information inclusion in Enh. CELL_FACH during collision resolution Qualcomm Incorporated Disc REL-8RANimp-UplinkEnhState
- QC: Some of the proposals from Ericsson have a risk, because they depend on network configuration
- Ericsson: can you clarify this: "*Smartphone-type traffic may generate vastly different size of data, so it is important that the network knows such information before making a scheduling decision*"?
- QC: this is just an example. We think that SI helps the network, Ericsson paper excludes some of the cases that we think is important to cover.
- Broadcom: if you have data, you send data.
- Ericsson: we agree with Broadcom. There is no use case for SI standalone with TEBS <>0.
- Huawei: what is the motivation?

=> Noted

R2-120373 SI attachment during CCCH transmission Ericsson, ST-Ericsson Disc REL-8RANimp-UplinkEnhState
- Ericsson: if P2 is agreed, then we don't need P1.
- Ericsson: P1 says that if TEBS is <>0, you can send SI
- ALU: is there any value in having P1?
- ALU, Interdigital: Ok with P2.
- QC: we need more time to check P2
- After come back:

IPR2025-00720, OnePlus Ex. 1004

- Ericsson: most companies are fine with P2. Can we agree on that.
- QC: ok
- Panasonic: we are not too happy with proposal 2, however we will not object.
- Chair:

We agree on proposal 2, i.e.:
"For FDD and for CCCH transmission In CELL_FACH state, when the CCCH transmission is completed the UE shall send a SI with TEBS = 0 regardless of the actual TEBS value, and release its common E-DCH resources"
We will see a CR at the next meeting
=> Noted

REL-8 RANimp-EnhState1.28TDD (RAN2):

REL-8 HNB-supp (RAN2):

R2-120673 Clarifictions of CSG to CSG cell reselection rules Qualcomm Incorporated CR 25.304 (0308) - F REL-8HNB-supp
- Renesas: what is the use case? We discussed this before.
- QC: in interfrequency the case is not very clear.
- Renesas: is not ambiguous, the UE uses the cell in the NCL
- Renesas: we think that this is not a clarification, it's a change. The use case should not exist
- QC: we think we need to clarify this.
- Renesas: in Rel-8 operators says that there will be coordination and the use case will not exist.
- Huawei: we discussed this before and we agreed with Renesas.
- ST-Ericsson: we agree with Renesas. What is not written in the spec is left to UE implementation, i.e. autonomous search.
- ALU: sympathy for QC.
- QC: there are separate requirements on autonomous search.
- => Postponed

R2-120674 Clarifictions of CSG to CSG cell reselection rules Qualcomm Incorporated CR 25.304 (0309) - A REL-9HNB-supp
R2-120675 Clarifictions of CSG to CSG cell reselection rules Qualcomm Incorporated CR 25.304 (0310) - A REL-10 HNB-supp
The above 2 documents not treated.

R2-120676 CSG reselection clarification during Inter-RAT Qualcomm Incorporated CR 25.304 (0311) - F REL-8HNB-supp
- ALU: what do LTE specs say on this?
- QC: we need to check
- ALU: this is more for Joint session, not for UMTS only? It depends also on the LTE specs.
- Renesas: LTE specs still talks about frequency. I don't agree with the QC story. The other layers behaviour is already described in the spec.
- NSN: LTE speaks of frequency.
- QC: the two behaviours are not contradicting. We are aiming at more consistent system behaviour.
- Huawei: the existing text is clear.
- Renesas: is too late to add or change requirements to Rel-8.
- Chair: do we agree that "While camped on a suitable CSG cell, the UE shall consider the frequency of the serving cell to be the highest priority among all RAT layers"?
- No support for the CR.
- QC: we think the I-RAT behaviour is ambiguous.

=> Not agreed

- Come back:
- QC: after offline, some companies think that there is an issue that we need to address.
- Renesas: we don't have any concerns. We don't think there is an issue
- Panasonic: can we confirm that " While camped on a suitable CSG cell, the UE shall consider the frequency of the serving cell to be the highest priority among all RAT layers"?
- Renesas: if this is clear in the specs, what do we need to clarify?

IPR2025-00720, OnePlus Ex. 1004

- QC: we think this is not clear and needs to be clarified. We explained that. We think it is up to UE implementation, so it is not clear.
- Huawei: now we are confused about what you said. We think that the current specs is clear.
- QC: we understand that "frequency" should be interpreted as frequencies also in other layes, i.e. other RATs. Can we confirm this?
- Broadcom: we don't agree. What frequencies also in other layers means?
- DT: we are not sure that this change proposed in the CR will make it clear.
- DT: we ask for a discussion paper to explain this, so we understand what the change of the wording that you propose means.
- Renesas: UE on CSG cell in UTRA, reselecting to macro in LTE?
- QC: that's the case.
- QC: it looks like there is no consensus on the topic.

=> CR remains not agreed

R2-120677 CSG reselection clarification during Inter-RAT (0312) - A REL-9HNB-supp Qualcomm Incorporated CR 25.304

R2-120678 CSG reselection clarification during Inter-RAT (0313) - A REL-10 HNB-supp Qualcomm Incorporated CR 25.304

The two documents above not treated.

R2-120679 Reselection Conditions from non-CSG cells to CSG cells 25.304 (0314) - F REL-8HNB-supp Qualcomm Incorporated CR

- ZTE: benefit needs to be clarified
- QC: we will have more predictable UE behaviour
- ZTE: why cannot we rely on autonomous search?
- QC: we prefer UE behavious to be unified
- ZTE: 1 second?
- QC: it's existing text
- Renesas: we deliberately left this to UE implementation, with autonomous search/reselection.
- ST-Ericsson: we agree with Renesas. This clarification would also conflict with existing text and also it is too late for Rel-8.
- QC: we think that there was not sufficient debate before on this.
- DT: same opinion as Renesas and ST-Ericsson.
- QC: an operator should sympathize with this.
- DT: we have some UE testing.
- QC: we don't think this is efficient.
- Chair: any support? No support.

=> The CR is not agreed

R2-120680 Reselection Conditions from non-CSG cells to CSG cells 25.304 (0315) - A REL-9HNB-supp Qualcomm Incorporated CR

R2-120681 Reselection Conditions from non-CSG cells to CSG cells 25.304 (0316) - A REL-10 HNB-supp Qualcomm Incorporated CR

The two documents above not treated

R2-120752 Clarification of inter-RAT CSG cell reselection cat.A CRs missing REL-8HNB-supp LG Electronics Inc. CR 25.304 - - F

Not present in the room when asked for presentation, so not treated.
This might be discussed in the joint session on Friday.

=> revised in R2-121038

R2-121038 Clarification of inter-RAT CSG cell reselection REL-10 EHNB-RAN2, TEI10 LG Electronics Inc. CR 25.304 0318 - F

=> not treated

REL-8 RANimp-DCHSDPA (RAN1):

REL-8 RANimp-LCRCPC (RAN1):

REL-8 RANimp-DRX (RAN2):

IPR2025-00720, OnePlus Ex. 1004

REL-8 RANimp-HSPAVoIP (RAN2):

REL-8 RANimp-ANSS (RAN2):

REL-8 RANimp-HSDSCH (RAN2):

REL-8 MBSFN-DOB (RAN1):

REL-8 RANimp-MIMOLCR (RAN1):

REL-8 ETWS (SA1):

R2-120422 S-CCPCH selection for ETWS Nokia Siemens Networks Disc REL-8ETWS
- Renesas: but then there is the risk that the UE missed the paging
- Renesas: we are not too negative but the reference should be corrected and the risk of missing the paging needs to be clarified.
- ST-E: in principle ok, but maybe we will remove a few parts in legacy releases.
- Chair: we can work on a CR to clarify this for the next meeting.

=> Noted

REL-8 PPACR (SA1):

REL-8 TEI8:

R2-120190 Clarification of the setting of Pre-redirection Info IE Ericsson, ST-Ericsson Disc REL-8TEI8
- NSN: maybe is too late for a Rel-8. What if a UE doesn't read SIB19?
- ZTE: we agree with the principle, but can we use it in a finer manner? Ericsson didn't distinguish TDD from FDD.
- Ericsson: we think our proposal is general and applicable to all cases
- Renesas: it might be useful, but what about backward compatibility with Rel-8 UEs and current network deployed?
- ALU: we would like to understand the use case a bit more. What is the network supposed to do with this?
- DoCoMo: we don't see the use case.
- Ericsson: from Rel-9, the absence of the pre-redirection IE indicates that the UE has been redirected from E-UTRAN.
- Renesas: is more an indication that the UE shouldn't be re-directed to E-UTRAN.
- QC: we don't see a use case. It could be a configuration case, we don't need to change the specs.
- Ericsson: to Renesas: are you talking about Rel9?
- Renesas: in general
- Ericsson: what about shared network cases
- Renesas: this is more interpretation on the network side, there can be different conditions, so we need to be careful on the assumptions.
- NSN: we should check the deferred reading section.

=> Noted

R2-120191 Clarification of the setting of Pre-redirection Info IE Ericsson, ST-Ericsson CR 25.331 (4894) - F REL-8TEI8

R2-120192 Clarification of the setting of Pre-redirection Info IE Ericsson, ST-Ericsson CR 25.331 (4895) - A REL-9TEI8

R2-120193 Clarification of the setting of Pre-redirection Info IE Ericsson, ST-Ericsson CR 25.331 (4896) - A REL-10 TEI8

R2-120194 Clarification of the setting of Pre-redirection Info IE Ericsson, ST-Ericsson CR 25.331 (4897) - A REL-11 TEI8

The above 4 papers have not been treated.

R2-120322 Disabling of default radio configurations in CELL_FACH in Rel-8 Nokia Siemens Networks CR 25.331 - - C CR is actually removing a feature that was introduced under TEI8 in R2-091834 REL-8TEI8
- NSN: we propose to add comment as Renesas suggested instead of Void.
- NSN: CR number need to be changed
- NSN: we will add the reference to the CR that introduced the feature.

=> The CR is revised in R2-120851

IPR2025-00720, OnePlus Ex. 1004

R2-120851 Disabling of default radio configurations in CELL_FACH in Rel-8 Nokia Siemens Networks CR 25.331 4950 - C REL-8 TEI8
⇨ The CR is agreed.

R2-120323 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks CR 25.331 - - C CR is modifying a feature (in contrast to REL-8 CR R2-120322) REL-9 TEI9
=> The CR is revised in R2-120852
R2-120852 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks CR 25.331 4951 -
=> The CR is agreed.

R2-120324 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks CR 25.331 - - A REL-10 TEI9
=> The CR is revised in R2-120853
R2-120853 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks CR 25.331 4952 - A REL-10 TEI9
=> The CR is agreed.

R2-120325 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks CR 25.331 - - A REL-11 TEI9
=> The CR is revised in R2-120854
R2-120854 Correction of default radio configurations in CELL_FACH Nokia Siemens Networks CR 25.331 4953 - A REL-11 TEI9
⇨ The CR is agreed.

REL-9 RANimp-DC_MIMO (RAN1):

REL-9 RANimp-DC_HSUPA (RAN1):

R2-120558 Clarifications on the periodic measurement report for DC-HSUPA (Rel-9) Huawei, HiSilicon CR 25.331 - - F cat.A CRs missing REL-9RANimp-DC_HSUPA
- Huawei: is the configuration of periodical measurement reports the same on both carriers? Measurement configuration? Measurement Reporting?
- NSN: we share the intention to clarify. We prefer to have a separate IE.
- Renesas; do we really need to support periodic measurement for this feature? If yes, we would like a clean approach? For us a clean approach means a separate IE.
- NSN: The network can control the events, so we would like to able to configure the periodical.
- Ericsson: we think that is possible to report periodical measurement, the question is what the UE will report?
- Renesas: what is the intrafrequency measurement on the secondary UL? Because the cells in the virtual active sets are not supposed to be reported for intrafrequency? Tabular 10.3.7.61.
- Huawei: we thought that reporting cell status was only for event triggered
- Renesas: is not for event
- NSN: with Huawei proposal the periodicity of the reporting on the two UL carrier will be the same. We would prefer to have it similar to event triggered measurements, so with ASN.1 change
- ALU: we like for Rel-9 the Huawei proposal. We should not introduce new things.
- Ericsson: we need to change the cell set status section for periodical measurement. We are ok to fix it, but we need to see a working and complete proposal.
- After offline:
- Huawei: there is an issue but there are different views, so next meeting or email discussion?
- Ericsson: we prefer to come back at the next meeting, email discussion looks premature.

=> Postponed

R2-120560 Correction to the secondary uplink frequency activation state after reconfiguration procedure (Rel-9) Huawei, HiSilicon CR 25.331 - - F cat.A CRs missing REL-9RANimp-DC_HSUPA
- NSN: the intention is ok, but in 25.214 RAN1 specified that the second carrier will be deactivated. No strong opinion.

IPR2025-00720, OnePlus Ex. 1004

- Huawei: in 25.331 is not clear.
- Ericsson: 25.214 refers to the reconfiguration of the frequency, not of the cell. So we are not sure about NSN comment.
- NSN: I had in mind 25.214 for the initial configuration, not the reconfiguration
- Ericsson: OK
- Renesas: we are fine with the intention of the CR. We need to re-word the reason for change

=> The paper is revised in R2-120863

R2-120863 Correction to the secondary uplink frequency activation state after reconfiguration procedure (Rel-9) Huawei, HiSilicon CR 25.331 4953 - F cat.A CRs missing REL-9RANimp-DC_HSUPA

- NSN: I did some research. This was discussed in Dublin meeting and then later. R1-111747 from Ericsson. This was discussed in RAN1. Huawei wanted to be sure that RAN2 had the same understanding. LS in R1-111992 was sent to RAN2. RAN2 confirmed that in RAN2 we had the same understanding. The intention of the CR is correct but we don't need to write it in specs, because we discussed this before.
- Huawei: we think RAN1 specs doesn't cover this case. We need to write this in RAN2 specs.
- NSN: which case is not covered? Maybe we need to check.
- ALU: we support Huawei CR, so we avoid confusion.
- NSN: I would like to have time to check
- Huawei: come back later?
- Ericsson: it's ok to have this CR.

=> Postponed

REL-9 EHNB-RAN2 (RAN2):

REL-9 RANimp-TxAA_nonMIMO (RAN1):

REL-9 RANimp-MultiBand_DC_HSDPA (RAN4):

REL-9 TEI9:

R2-120539 Correction to 25.331 on Cell Reselection enhancements (Rel-9) Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo CR 25.331 (4927) - F REL-9TEI9, LTE-L23

- ALU: ok with the intention, but why the first "QqualminEUTRA"?
- Huawei: we tried to make it consistent
- Broadcom:ok, but a question (…)
- Renesas: there are slighty different cases
- ST-Ericsson: ok with the intention. 8.6.7.3a should be updated also?
- Renesas: I think I checked this.

=> Revised in R2-120864

R2-120864 Correction to 25.331 on Cell Reselection enhancements (Rel-9) Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo CR 25.331 4927 - F REL-9TEI9, LTE-L23

⇨ The CR is agreed.

R2-120540 Correction to 25.331 on Cell Reselection enhancements (Rel-10) Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo CR 25.331 (4928) - A REL-10 TEI9, LTE-L23

=> Revised in R2-120865

R2-120865 Correction to 25.331 on Cell Reselection enhancements (Rel-9) Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo CR 25.331 4928 - A REL-10 TEI9, LTE-L23

=> The CR is agreed.

R2-120541 Correction to 25.331 on Cell Reselection enhancements (Rel-11) Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo CR 25.331 (4929) - A REL-11 TEI9, LTE-L23 Revised in R2-120866

R2-120866 Correction to 25.331 on Cell Reselection enhancements (Rel-11) Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo CR 25.331 4929 - A REL-11 TEI9, LTE-L23

=> The CR is agreed.

R2-120583 Clarification to the integrity protection configuration in the UTRAN MOBILITY INFORMATION procedure Research In Motion UK Ltd. CR 25.331 (4930) - F REL-11 TEI11

IPR2025-00720, OnePlus Ex. 1004

- Renesas: is this something that you found looking at the specs or it comes e.g. from testing?
- RIM: it's Rel-11, so not so urgent.
- Ericsson: what would be the impact analysis if this was a Rel-10 CR for example.

=> Revised R2-120884

R2-120884 Clarification to the integrity protection configuration in the UTRAN MOBILITY INFORMATION procedure Research In Motion UK Ltd. CR 25.331 4930 - F REL-11 TEI11

- RIM: Which Release?
- Ericsson: we would like to postpone this to the next meeting.
- NVIDIA: it looks like this is R99
- Renesas: the problem is visible from Release 7 because of the change of algorithm. It is a correction and it is an important one. Call drop is the consequence.
- Ericsson: have you seen any problem in the field? What about impact analysis?
- RIM: we are not aware of any issue in the field and we believe UEs already behave in this way, so we consider this something that was forgotten to be written.
- Renesas: the proposed change is correct.
- We need to decise the release but some companies prefer to have an impact analysis, which means Rel-10 or earlier.

⇨ The CR is postponed

9 UTRA Release 10

9.1 WI: LCR TDD MC-HSUPA (RP-090990)

(TDD_MC_HSUPA; leading WG: RAN1, REL-10, started: Sep. 09, closed: Dec. 10, WID: RP-090990)

No contributions.

9.2 WI: 4C-HSDPA (RP-100991)

(4C_HSDPA-Core; leading WG: RAN1, REL-10, started: Dec. 09, closed: March 11, WID: RP-100991)

R2-120043 Correction to definition of enhanced inter-frequency measurements without CM ZTE CR 25.306 (0344) - F REL-10 4C_HSDPA-Core

- NSN: not clear what is not clear
- ALU: not clear what is the problem
- QC: they might have a point
- Interdigital: in RRC is clear. The two frequencies have to be "within a band combination".

=> The CR is revised in R2-120855

R2-120855 Correction to definition of enhanced inter-frequency measurements without CM ZTE CR 25.306 0344 - F REL-10 4C_HSDPA-Core

⇨ The CR is withdrawn (as it is not available)

- ZTE: after offline companies agreed that we might need more description about this capability. But we still have different wordings, so at end we prefer to select a short wording. The draft is in the inbox.
- ST-Ericsson: the current definition is not clear and we are ok to revise it, but maybe we can continue in the next meeting.

R2-120044 Correction to definition of enhanced inter-frequency measurements without CM ZTE CR 25.306 (0345) - A REL-11 4C_HSDPA-Core

The CR is revised in R2-120856

R2-120856 Correction to definition of enhanced inter-frequency measurements without CM ZTE CR 25.306 (0345) - A REL-11 4C_HSDPA-Core

⇨ The CR is withdrawn (as it is not available)

IPR2025-00720, OnePlus Ex. 1004

9.3 WI: RF pattern matching in UMTS (RP-091427)

(LCS_UMTS_RFPMT-Core; leading WG: RAN2, REL-10, started: Dec. 09, closed: March 11, WID: RP-091427)

No contributions.

9.4 WI: Minimisation of Drive Test (RP-100360)

(MDT_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: RP-100360)

R2-120046 Stage 2 correction of MDT logs avalability indicator ZTE CR 37.320 (0040) - F REL-10 MDT_UMTSLTE-Core
- NSN: the first change should be look at by E-UTRA people. We don't need the need for the second change.
- ALU: we don't need the changes

=> The CR is not agreed

9.5 WI: ANR for UTRA (RP-100688)

(ANR_UTRAN-Core, leading WG: RAN3, REL-10, started: June 10, closed: June 11, WID: RP-100688)

R2-120047 Reconsiderations on some 3G ANR legacy issues ZTE Disc REL-10 ANR_UTRAN-Core

Legacy issue 1:
- Huawei: thanks for the paper. What is the expectation of the UE recording when is Out of service?
- ST-Ericsson: in general, we wanted to keep ARN simple for the UE, but here there are lots of optimizations. On P1 in particular, we are not keen on extending the ARN to Out if Service.
- NSN, Renesas: not in favour.
- ZTE: why not?
- Renesas: if the UE is out of service it doesn't have any suitable cell to record.
- Chair: not support.

Legacy issue 2:
- NSN: we would like to keep the current behaviour.
- ZTE: do we need to align stage 2 with stage 3?
- Huawei: ok to clarify stage 2.

Legacy issue 3:
- Renesas: no need.
- ZTE: how about for Rel-11
- NSN: we should keep it simple.

Legacy issue 4:
- Renesas: Rel-11
- Chair: come back with a TEI11 paper if you want.

⇨ Noted

9.6 WI: Interfrequency detected set measurements (RP-101015)

(Interf_dset_meas_UMTS, leading WG: RAN2, REL-10, started: Sep. 10, closed: Dec. 10, WID: RP-101015)

R2-120551 CSG cell measurement exclusion for inter-frequency detected set Huawei, HiSilicon Disc REL-11 Interf_dset_meas_UMTS, TEI11
- Huawei: this is for Rel-11.
- Renesas: how the UE knows which cells are CGS cells?
- Huawei: from the split in sys info
- Renesas: in CELL DCH the UE is not reading SIBs
- Huawei: the UE uses the information that acquired before

IPR2025-00720, OnePlus Ex. 1004
Page 382 of 700

- QC: we support the proposal. We should limit the use case. This split is not used in CELL DCH in general.
- NSN: we support this, but we need to look at how the UE will know this, we should work on this.
- Renesas: why limiting this to CSG cells, and not to other cells that the network doesn't want to be reported?
- Huawei: we assumed that there could be more and more CSG cells deployed, so that's the use case.
- Renesas: what about a black list like in LTE?
- DT: what if the cell is in the NCL and the UE is not a member?
- DT: do we need to have this differentiation? We are not sure yet.
- DT: it depends on the normal policy. What is the operator do not use dedicated list on DCH and relies only on the list in the SIBs?
- QC: the detected set is everything is not in the NCL.

After offline:

- Huawei: some companies think it is useful to discuss this but companies are not sure if we should consider intra-frequency.
- DT: we understand the merit of introducing this change.

=> Noted

9.7 WI: TEI10

R2-120041 Add up several missing optional capabilities ZTE, Panasonic CR 25.306 (0342) - F REL-10 TEI10

- ST-Ericsson: we need more time to check "P-CPICH is configured on antenna 1, and S-CPICH on antenna 2"
- ST-E: second DRX could be put next to the previous DRX. We change
- ST-E: some of the features have a WI. We change.
- ST-E: Add up -> include. No change.
- Chair: remove hyperlink from cover sheet. We change.
- The CR is revised in R2-120871

R2-120871 Add up several missing optional capabilities ZTE, Panasonic CR 25.306 0342 - F REL-10 TEI10, EDCH-L23, MIMO-L23

=> The CR is agreed.

R2-120042 Add up several missing optional capabilities ZTE, Panasonic CR 25.306 (0343) - A REL-11 TEI10

=> The CR is revised in R2-120872

R2-120872 Add up several missing optional capabilities ZTE, Panasonic CR 25.306 0343 - A REL-11 TEI10, EDCH-L23, MIMO-L23

⇨ The CR is agreed.

R2-120111 Specification Cleanup: removal of DRAC left over Broadcom Corporation CR 25.331 (4890) - F REL-10 TEI10

- ALU: is it necessary to remove the IE from the tabular?
- Chair: cover sheet
- Ericsson: why not Rel-11 CR only?
- Broadcom: OK

=> Rel-10 CR withdrawn

R2-120112 Specification Cleanup: removal of DRAC left over Broadcom Corporation CR 25.331 (4891) - A REL-11 TEI10

=> The CR is revised in R2-120857, cat from A to F:

R2-120857 Specification Cleanup: removal of DRAC left over Broadcom Corporation CR 25.331 4891 - F REL-11 TEI11

=> The CR is agreed

R2-120311 Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery Renesas Mobile Europe Ltd, Alcatel-Lucent CR 25.331 (4899) - C REL-10 TEI10

IPR2025-00720, OnePlus Ex. 1004

R2-120314 Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery. Renesas Mobile Europe Ltd, Alcatel-Lucent CR 25.331 (4900) - A REL-11 TEI10

R2-120312 Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery Renesas Mobile Europe Ltd, Alcatel-Lucent CR 25.306 (0347) - C REL-10 TEI10

R2-120313 Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery Renesas Mobile Europe Ltd, Alcatel-Lucent CR 25.306 (0348) - A REL-11 TEI10

The 4 above documents not treated.

R2-120332 Discussion of UM RLC ciphering error detection and recovery for VoIP Renesas Mobile Europe Ltd. Disc REL-10 TEI10

- Huawei: what if PDCP header is not configured?
- Huawei: technically Renesas solution it can work, no strong opinion.

=> Noted

R2-120339 UM RLC ciphering error detection and recovery enhancement for IMS voice Renesas Mobile Europe Ltd. CR 25.331 (4907) - C REL-10 TEI10

R2-120343 UM RLC ciphering error detection and recovery enhancement for IMS voice Renesas Mobile Europe Ltd. CR 25.331 (4908) - A REL-11 TEI10

R2-120340 UM RLC ciphering error detection and recovery enhancement for IMS voice Renesas Mobile Europe Ltd. CR 25.306 (0349) - C REL-10 TEI10

R2-120341 UM RLC ciphering error detection and recovery enhancement for IMS voice Renesas Mobile Europe Ltd. CR 25.306 (0350) - A REL-11 TEI10

The 4 documents above not treated

R2-120581 Discussion on HFN De-sync Problem for VOIP Huawei, HiSilicon Disc REL-10 TEI10

- Broadcom: does the UE need to know the AMR rate in your solution, in order to apply your solution?
- Huawei: DT had the point of the different service type, so configurable per service type.
- Renesas: this another drawback
- Renesas: we think that the performance are not accurate. Performance of PDCP solution is much better
- DT: in PDCP solution we have a fixed number. We don't like to be forced to configure the PDCP header.

⇨ Noted

Discussion on R2-120581 and R2-120332

- ALU, Broadcom: we support Renesas solution
- DT: the proposal is for Rel-10, but there is no consensus.
- NSN: we have a preference for RLC solution.
- Vodafone: same view as DT.
- Broadcom: we think operators do not need to configure PDCP header, but just a functionality of error detection.
- DT: so how can you detect the error?
- Broadcom: operators do not need to configure "all the things" that come with PDCP.
- DT: what are these things?
- Renesas: RLC solution looks complicated for the UE, the PDCP solution could be extra work for the network, so…
- Renesas: possible compromise:
- The UE performs the error detection in PDCP layer, but the "PDCP" header can be added at RLC level. This will avoid to configure the PDCP header and all the feature that goes with it, if that's the concern from operators.

=> Chair: no majority now for either solutions, several companies interested in having a solution. Companies are invited to look into this issue for the next meeting.

R2-120384 Total RLC AM buffer size Ericsson, ST-Ericsson Disc REL-10 TEI10

- NSN: any particular plan for Rel-11? For example Rel-11 new categories introduced for 8C?
- Ericsson: we could look at those Rel-11 categories one by one and see.

IPR2025-00720, OnePlus Ex. 1004

- NSN: if we acknowledge that the RTT is larger, then this problem should exist across all cases.
- Ericsson: so the question is for cat 36, see if we need a larger value that the one which is now defined for cat. 36. Lower cat UE can still signal for example the buffer for cat 36.
- Ericsson: the values calculated so far are valid, the formula as well. We would like to use the spare value as it can be useful.
- NSN: ok
- QC: one more value for Rel-11?
- Ericsson: yes, if we use the same formula.
- Chair: so for Rel-11 one new value + maybe 3 spare values? (we need to see the ASN.1)
- QC: we need to think about 20ms RTT extra compared to the 70ms that we have now.
- Ericsson: it is around 30%, if we consider 10ms, that will be much lower.

=> Noted

R2-120387 Additional value for Total RLC AM Buffer Size Ericsson, ST-Ericsson CR 25.331 (4910) - C REL-10 TEI10
=> Revised in R2-120867
R2-120867 Additional value for Total RLC AM Buffer Size Ericsson, ST-Ericsson CR 25.331 4910 - C REL-10 TEI10
=> Revised in R2-120880
R2-120880 Additional value for Total RLC AM Buffer Size Ericsson, ST-Ericsson CR 25.331 4910 1 C REL-10 TEI10
=> The CR is agreed

R2-120390 Additional value for Total RLC AM Buffer Size Ericsson, ST-Ericsson CR 25.331 (4911) - A REL-11 TEI10
=> Revised in R2-120868
R2-120868 Additional value for Total RLC AM Buffer Size Ericsson, ST-Ericsson CR 25.331 4911 - A REL-11 TEI10
=> Revised in R2-120881
R2-120881 Additional value for Total RLC AM Buffer Size Ericsson, ST-Ericsson CR 25.331 4911 1 A REL-11 TEI10

- Chair: why not 4C work item? These UE categories were used for the introduction of 4C.
- Ericsson: as long as a UE is Rel-10, it can report this value, regardless of the category, hence the use of TEI10.
- NSN: what about in Rel-11 CR? Do we add additional values?
- Ericsson: we will have a CR at the next meeting.
- NSN: should not we wait the next meeting then and have the whole package?
- Ericsson: we don't have a dependency, so we prefer it now.

⇨ The CR is agreed

R2-120393 Additional value for Total RLC AM Buffer Size value range Ericsson, ST-Ericsson CR 25.306 (0351) - C REL-10 TEI10
=> Revised in R2-120869
R2-120869 Additional value for Total RLC AM Buffer Size value range Ericsson, ST-Ericsson CR 25.306 0351 - C REL-10 TEI10
=> Revised in R2-120882
R2-120882 Additional value for Total RLC AM Buffer Size value range Ericsson, ST-Ericsson CR 25.306 0351 1 C REL-10 TEI10
=> The CR is agreed

R2-120397 Additional value for Total RLC AM Buffer Size value range Ericsson, ST-Ericsson CR 25.306 (0352) - A REL-11 TEI10
=> Revised in R2-120870
R2-120870 Additional value for Total RLC AM Buffer Size value range Ericsson, ST-Ericsson CR 25.306 0352 - A REL-11 TEI10
=> Revised in R2-120883
R2-120883 Additional value for Total RLC AM Buffer Size value range Ericsson, ST-Ericsson CR 25.306 0352 1 A REL-11 TEI10

⇨ The CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-120532 Corrections on the maximum number of frequency bands supported by the UE (R10) Huawei, HiSilicon, Alcatel-Lucent CR 25.331 (4925) - F REL-10 TEI10
- Ericsson: misunderstanding between number of supported bands and number or defined bands in 25.101 (RAN4).
- ALU: this is about signalling
- Renesas: this is more an alignement with other cases, where the UE can already signal up to 86 supported bands.
- Ericsson: the reason for changes might need to be revised.
- Ericsson: why 86 and not for example 16?
- Renesas: we discussed this numbers before for other features.
- QC: we think it is clear and we don't understand the concern.

=> The CR is revised in R2-120878

R2-120878 Corrections on the maximum number of frequency bands signalled by the UE (R10) Huawei, HiSilicon, Alcatel-Lucent, Interdigital, Broadcom Corporation, Renesas Mobile Europe Ltd CR 25.331 4925 - F REL-10 TEI10
- Ericsson: what about reserved bands?
- Ericsson: is the plan to add even more bands that can be supported in the future, depending on what RAN4 decide?
- ALU: can you clarify the first question? Why then we have problem today? What this has to do with this CR?
- Ericsson: there can be more errors
- ALU: not sure about it.
- Ericsson: how many bands do we have in Rel-7?
- ALU: we wanted to be as future proof as possible.
- Renesas: Ericsson is not correct. What RAN4 does it doesn't matter in this context.
- Ericsson: what does it mean future-proof?
- ALU: there are 62 spare values to use.
- Chair: can we agree on the CR?
- Ericsson: no. It is not correct the way it is described in 25.331
- ALU: bands are release independent
- ALU: what is not correct in the CR?
- Renesas: does Ericsson have a concern on the ASN.1 or what?
- QC: it is obvious that something needs to be done and as soon as possible. Email discussion?
- Ericsson: there are procedural text update needed
- ALU: I am not sure about that
- Huawei: the CR was ready months ago so these type of comments would have been welcomed before, not at the last minute.
- => Email discussion
  UMTS Email discussion n.1 [77#09] with the aim of agree on the CR(s). ASN.1 needs to be checked and the procedural text completeness. The intention of the CR is ok for companies in RAN2 and in particular the number of possible supported band is fine.
  Deadline: Thursday 16 Feb midnight
  Rapporteur: Huawei.

R2-120534 Corrections on the maximum number of frequency bands supported by the UE (R11) Huawei, HiSilicon, Alcatel-Lucent CR 25.331 (4926) - A REL-11 TEI10

=> The CR is revised in R2-120879

R2-120879 Corrections on the maximum number of frequency bands supported by the UE (R11) Huawei, HiSilicon, Alcatel-Lucent CR 25.331 4926 - A REL-11 TEI10

⇨ Email discussion [77#09], see above

R2-120567 Discussion on CS AMR type change during relocation Huawei, HiSilicon Disc REL-10 TEI10

R2-120571 Correction of the CS AMR type change during relocation Huawei, HiSilicon CR 25.331 - - F cat.A CR missing REL-10 TEI10

Huawei: no progress in RAN3

The above 2 documents not treated

R2-120576 UM RLC Ciphering Error Detection for VOIP Huawei, HiSilicon CR 25.322 (0398) - F REL-10 TEI10

IPR2025-00720, OnePlus Ex. 1004

R2-120579 Extend UM RLC ciphering error detection and recovery mechanism for VoIP Huawei, HiSilicon CR 25.331 - - F cat.A CR missing REL-10 TEI10
The 2 above documents not treated.

R2-120533 PS RAB unrecoverable error in the multi-RAB configuration Nokia Siemens Networks Disc REL-10 TEI10
- No question
=> Noted

R2-120722 On avoiding PS RAB RLC unrecoverable error during mRAB calls Qualcomm Incorporated Disc REL-10 TEI10
- RIM: is the bad radio condition the only condition that you considered as bringing problems?
- QC: yes
- RIM: we saw also something else in our discussion paper analysis.
- QC: for any other case we think it should be due to poor network implementation
- RIM: but QC said that you saw the field?
- QC: not RLC unrecoverable error, we just saw MRAB call drops, then we investigated them and find out that those drops are caused mainly by RLF and signalling activity.
- RIM: we don't agree with that analysis
- QC: we think that the other solution on the table will not help. The network should use preventive actions.
- NSN: coming back to RIM analysis. In some cases we will not solve much with the proposed solution.
- RIM: you misunderstood some part.
- RIM: we need to be practical and fix the problem
- RIM: Multi RAB is more and more common.
- Chair: operator?
- DT: we don't see the evidence, but we trust the vendor analysis. We have similar view as NSN.
- Chair: it seems that people are happy to look at solutions
- Chair: technical comments and questions on QC proposals?
- Huawei: some clarification is needed.
- QC: the "A UE in a mRAB call will ignore any configured PS RB MaxRST parameter"
- Huawei: we don't think this is fine
- Huawei: 40% performance gain?
- QC: in the lab
- Renesas: so you are expecting some problem on PS RAB and the UE should be quite. What about SRB? Only CS call is fine?
- QC: so what about Renesas proposal then? It uses SRBs
- QC: we don't see how and why the PS RAB should hit the MaxRST parameter.
- Renesas: it's a configurable parameter.
- QC: so it this a network configuration problem?
- Renesas: no
- QC: we invite network vendors to check the parameters, we don't see the point of changing the specs.
- Panasonic: we also agree that the configurations from the network sometimes are not accurate.
- RIM: unfortunately we don't have many operators here.
- RIM: we think that the UE could provide some assistance to the network.

=> Noted

R2-120644 Preservation of CS call during RLC unrecoverable error in multiRAB environment Research In Motion UK Limited CR 25.331 - - F REL-8TEI8
cat.A CRs missing, used cat.B on CR cover
Not treated

R2-120309 Introduction of cell update-less RLC/PDCP unrecoverable error reporting Renesas Mobile Europe Ltd, Alcatel-Lucent CR 25.331 (4898) - C REL-9TEI9
- ALU and Huawei cosign
- RIM: it is similar to our proposal. In our CR we have the condition of only in M RAB case.
- Renesas: the co-signing companies are interested to have this also for not-MRAB case.

IPR2025-00720, OnePlus Ex. 1004

- Broadcom: what about VoIP?
- Huawei: we would like to align with CS over HSPA.
- Chair: this is another paper
- NSN: there is an indication to the network. What about the rest?
- Renesas: more things are only proposed from Rel-10
- QC: why we have PDCP unrecoverable error here? We were talking only about RLC. We should keep the two things separate. We should keep the focus on M RAB.
- Chair: if we keep the CR Rel-9 for MRAB case only and RLC unrecoverable error only?
- Ericsson: we fear that SCRI will cause the problem, rather then solving it. We prefer not to touch the signalling RBs when the problem occurs.
- Renesas: we don't understand this concern.
- Vodafone: there can be different causes.
- Renesas: after offline there was no agreement and companies need more time to check.

=> Postponed

R2-120753 Re-direction to E-UTRA issues Ericsson, ST-Ericsson, NTT Docomo, TeliaSonera Disc REL-10 TEI10, LTE-L23

- Broadcom: P4 why is important to have a UE capability?
- Ericsson: useful for the network
- ZTE: we like P3 and P4. About P5, is the UE supposed to keep searching on one frequency for a second if it is quicker? Different UE have different algoritm, so do you foresee a specification impact?
- Renesas: what is the use case here? We think is the re-direction failure case. If we reduce the UE searching time, we reduce the UE camping chances. If we agree some of the enhancements under discussion for REl-11 the use case will became more rare
- Huawei: we support the intention, but not the proposals. What about P1? P2: forces the network to include all the LTE frequencies. What about UE type fragmentation?
- Renesas: RAN4 LS says that is reasonable 1 second per frequency is there are no problems, but in the case here there are problems. So it is a different case.
- DT: can Huawei clarify its comment? We agree with Renesas about focusing on the use case. Which case we are addressing here? About 1 second from RAN4, if one cell is not suitable, then the UE will not have time to search other cells on the same frequency? We can discuss this 10 second requirement which is left in the specs, but we are not happy with P2.
- NSN: we are not in favour of changing the UE behaviour, expecially if it is not backward compatible. What will be the benefit to reduce the cell search if the UE can stay in LTE after searching anyway? So even P1 alone doesn't make sense.
- QC: there are Rel-11 related proposals. We are in favour of the idea. A configurable search time could be a good idea. A configurable feature. So apart from P1 and P2, we are positive. P3, P4 and P5: this is nothing new.
- Ericsson: we have P3 to compromise, and give the operators the choice to use this tool or not.
- Chair: how the network cope with a mix UE population?
- Ericsson: some UE will have better performance than others.
- DT: we need to be careful with this "one second", because maybe is not enough. Why Rel-10? If anything, Rel-11.
- Renesas: what is the returning to UTRAN? Camping on a cell or come back to the previous configuration?
- Ericsson: coming back to previous configuration is our proposal for Rel-11 Enhanced CELL FACH. For Rel-10 we have in mind something simpler.
- Telecom Italia: about the Release, we might look at Rel-11 first, and then check early implementation in previous releases. Not a good approach to discuss different things in different releases.
- Panasonic: about Renesas question. A previous configuration doesn't make sense for a connection release with redirection.
- NSN: we agree with Telecom Italia.
- Come back:
- NSN: we think this should topic be treated in the joint session
- Ericsson: question for Renesas on the RAN4 LS
- Renesas: we agree with NSN, we should discuss this in joint session

=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-120754 RRC signaling for time to search and return to UTRA in RRC Connection Release Ericsson, ST-Ericsson CR 25.331 (4944) - C REL-9TEI9
R2-120755 RRC signaling for time to search and return to UTRA in RRC Connection Release Ericsson, ST-Ericsson CR 25.331 (4945) - A REL-10 TEI9
R2-120756 RRC signaling for time to search and return to UTRA in RRC Connection Release Ericsson, ST-Ericsson CR 25.331 (4946) - A REL-11 TEI9
R2-120757 Correction in time to search and return to UTRA in RRC Connection Release Ericsson, ST-Ericsson CR 25.331 (4947) - C REL-9TEI9
R2-120758 Correction in time to search and return to UTRA in RRC Connection Release Ericsson, ST-Ericsson CR 25.331 (4948) - A REL-10 TEI9
R2-120759 Correction in time to search and return to UTRA in RRC Connection Release Ericsson, ST-Ericsson CR 25.331 (4949) - A REL-11 TEI9
The above 6 documents not treated

R2-120729 Enhanced RRC redirection to E-UTRAN Qualcomm Incorporated Disc REL-11 TEI11
- NSN: how does it work from E-UTRAN to UTRAN? It will be asymmetrical. Joint session discussion?
- QC: one alternative is to remove the 10 seconds and leave it to UE implementation. But a configurable solution would be the right option.
- DT: not clear what we are trying to enhance. Idle mode behaviour? Then nothing to enhance there. If we are targeting connected, why not Cell Change Order?
- Renesas, Broadcom and NSN agree with DT.
- Renesas: it looks complicated, also increasing the testing.

=> Noted

9.8 Other UTRA Rel-10 WIs/SIs

(MUMIMO_LCR_TDD-Core, leading WG: RAN1, started: March 10, closed: Dec. 10, WID: RP-100347)
(E1900-Core, leading WG: RAN4, REL-10, started: June 10, closed: June 11, WID: RP-100676)

No contributions.

10 UTRA Release 11

10.1 WI: Further enhancements to CELL_FACH (RP-111321)

(Cell_FACH_enh-Core, leading WG: RAN2, REL-11, started: March 11, target: June 12, WID: RP-111321)

10.1.1 Stand-alone HS-DPCCH

Companies to focus on RAN2 aspects

R2-120413 RAN2 related issues on stand-alone HS-DPCCH Ericsson, ST-Ericsson Disc
Proposal 1 *Introduce new IE and timer which control the release of the common E-DCH resources when the UE transmits only HS-DPCCH + DPCCH (stand-alone HS-DPCCH).*
Proposal 2 *The timer is set to the value signaled in the new IE, and started when the HS-DPCCH transmissions start.*
Proposal 3 *The minimum value for this IE should be 1 TTI (or 1 subframe).*
Proposal 4 *When DL data is received, the UE resets and re-starts the timer*
Proposal 5 *When UL data on DCCH/DTCH is to be transmitted, the UE stops the timer*
- ALU: the new timer can be set at a different value as Tb, and if yes how it works?
- Ericsson: Tb stays as Rel-8, this is a new one, independent
- QC: thanks Ericsson, We support the intention. P5: when? When the Ue detect data in buffer or when it starts transmitting? Rel-8 is when it detects the data in the buffer.
- Ericsson: let's try to use the basic mechanisms as in Rel-8
- QC: P4: what about Tb? And stop the new timer without re-starting it?
- Ericsson: P4 and P5 are according to what RAN1 has decided. Tb timer was used when the UE has finished the transmission. We don't want to change this.

IPR2025-00720, OnePlus Ex. 1004
Page 389 of 700

- ZTE: can you clarify P21 and P4?
- ZTE: why 1 TTI in P3?
- Ericsson: the minimum meaningful value.
- Renesas; what was agreed in RAN1?
- Chair: we received an LS from RAN1.
- Ericsson: RAN1 didn't think about the consequences in RAN2, so we are trying to fix this.
- NSN: if the network signals a short timer value, the network is consciously doing this.
- Ericsson: we don't want to couple sub-features and use of IEs.
- NSN: in principle we can survive with one timer only, but you would like to see this working better/properly?
- Ericsson: it can work without but it will limit too much the possibilities of using this.
- Huawei: we tend to agree with NSN.
- Ericsson: we would like to make it working in a clean way, without introducing inter-independency across sub-features.
- After lunch break:
- QC: for us it could be ok to agree on those proposals.
- Renesas: we don't have major concerns but we would like to have more time to think.
- IDT: fine with the proposals
- NSN: intention with the intention but we need to analyse better from our side.
- ALU: fine with the proposal, but we need to think about the range of the values for the timers.
- Huawei: in general fine.
- Chair: There is support for the proposal but some companies asked more time to check the details.

=> Noted

10.1.2 DC-HSDPA Operation in CELL_FACH

Companies to focus on merit provided by this feature

R2-120543 On the benefits of DC-HSDPA operation in CELL_FACH state Huawei, HiSilicon Disc

- Renesas: we find quite difficult to understand the main motivation for this.
- Huawei: if we have bursty traffic there is no need to move the UE to CELL DCH, we can keep it in CELL FACH.
- Renesas: we can do many things, but we wouldn't like to specify this just because we can do it. So is the benefit to reduce the RRC signalling? Or?
- ZTE: the benefits depend on the traffic pattern. We would like to keep open this option.

⇨ Noted

R2-120589 On the merits of DC-HSDPA in CELL_FACH Qualcomm Incorporated Disc

- Huawei: why do you have small burst rate and only a few users? In this case the network will not activate the DC feature
- QC: we think CELL FACH is not suitable for big bursts
- Huawei: what about the negative gains in table 3? Where do they come from?
- QC: this is the result of the simulation using this statistics. With more and more users the scheduling opportunities decrease.

⇨ Noted

Discussion on AI 10.1.2:

Mediatek: we should introduce CELL FACH sub-features in Rel-11only if there is consensus, also due to the timescale.

Renesas: we had a paper a few meetings ago, we have the same opinion as QC.

Broadcom: we don't see the benefit

ALU: as a network vendor we might be interested, but we don't see any UE vendor ready to accept this.

Huawei: can we leave it open?

Renesas: it getting quite late in Rel-11, so if we want to specify this we need time.

Huawei: but this is re-using things in cell DCH, so it will not take much time.

Proposal1: Specify DC-HSDPA operation in CELL_FACH state in Rel-11?

Yes: Huawei, ZTE. HiSilicon,

IPR2025-00720, OnePlus Ex. 1004

No: QC, Renesas, Mediatek, Broadcom

Chair: at the next meeting companies can re-submit documents but there will be no presentation, only decision on the question:
"Specify DC-HSDPA operation in CELL_FACH state in Rel-11?"
And the decision will be quick.

10.1.3 2/10 ms TTI concurrent deployment

The merit was agreed. Companies to focus on progressing on the open issues
We will have a joint session with RAN1 on this sub-feature in RAN2#77, Tuesday 7 February 2012 in RAN2 room, at 18:30, chaired by RAN2 Vice Chairman (UMTS).
The documents on this sub-feature should be submitted to RAN2 and not to RAN1.

Agreements from RAN2#76: (I.E. PAST AGREEMENTS)
-The network can fix the TTI that may be selected for the access (i.e. in practice disabling the UE selection without the need for e.g. NACKs. FFS how).
-The UE makes the decision on which TTI to select based on either the initial preamble power only or also on retransmission. FFS how.
- The network can figure out the UE selection. Signature will be used. If configured, it could be preamble scrambling code + signature. FFS if in addition we have something else.
- The network can indicate (override or not) the TTI and/or the resource using the AICH. Whether we need to modify it or not is FFS.
- The UE maintains the TTI until the E-DCH resource is released.
- CCCH case will be the same as for DCCH and DTCH.

Discussion on the documents in this AI 10.1.3:
- ALU: we would like to avoid a bunch of too many pessimistic UEs (going to 10 ms TTI unnecessarily). So we would like this to be in control of the network.
- Renesas: what's the advantage of the margin? It needs to be simple.
- Renesas: is this a constant or actual power ΔPp-e?
- QC: it should be preamble actual power, which needs to be defined in the specs.
- Ericsson: LS to RAN4 on requirements?
- QC RAN4 will do it if it's reasonable
- Renesas: no LS
- ALU: what do we want to ask RAN4?
- NSN: the feature needs to work whether they tighten the requirements or not.
- Ericsson: in RAN4 we might need something to look at this.
- Renesas: why SIBs?
- QC: what is Renesas proposal?
- Motorola: the main issue is more on the RAN4 area. On the accuracy.
- Ericsson: we think we don't need a per TTI evaluation
- *There will be a single pool of resources (no fixed split between 2ms and 10ms)?*
- *TTI association with a resource is dynamic? How dynamic?*
- *Minutes? Seconds? TTI?*
- *Need to modify the AICH?*
- The partition of the resources (2ms/10ms) is very dynamic (TTI per TTI?): Huawei, ALU, QC, IDT
- The partition is not so dynamic (based on SIBs update): Ericsson, NSN, Renesas

Quick come back session on Feb 8 PM:
- Ericsson: we are not ready to agree on "Overriding 10ms with 2ms is not supported", the network should be able to decide this.
- QC: if companies are not happy we can remove the agreement, but this network freedom comes with a price. If we exclude that case we can save one partition, otherwise we need two partitions.
- Renesas: we agree with QC. We don't see the use case of overriding 10 ms with 2ms. This was agreed last night in joint session with RAN1, and now Ericsson changed their mind.
- Ericsson: There might be lots of UE asking for 10ms when they should chose 2ms.
- Chair: so we don't trust the UE?
- Ericsson: maybe we cannot trust the UE sometimes. We would like to keep this open.
- Renesas: we have a threshold to fix the situation of too many UE uses 10ms.

IPR2025-00720, OnePlus Ex. 1004

- Ericsson: one threshold doesn't fit the whole system
- Renesas: we go back our point of broadcasting in the SIBs the threshold, which we didn't like.
- NSN: if we cannot trust the UE, how this sub-feature work?
- Ericsson: if we don't ask tighter requirements to RAN4, we are sceptical about how this sub-feature can work
- NSN: so if RAN4 says "no changes"?
- Ericsson: we can only trust the UE if the UE is precise, but now we don't know this. Now it is not the case, so we cannot trust the UE.
- Huawei: I can see some point in Ericsson in wanting to keep it open, this is linked also to other issues.
- QC: why the threshold cannot be set on a per-cell basis?
- Ericsson: what does it matter if it is per cell? That doesn't solve the main issue of accuracy.
- Mediatek: in general the UE helps the network and the network then decide.

- Chair: so we remove the agreement from last night:
- "Overriding 10 ms with 2ms is not supported"
- This will be decided at the next meeting.

Agreements:
The UE makes the decision on which TTI to select based on the initial preamble power and also on retransmission.
We will use the headroom as in the equation below.
Headroom = {min (Maximum allowed UL tx power, P_MAX) – (Preamble_Initial_Power + a constant X)}
And then every retransmission we will have preamble retransmission power instead of Preamble_Initial_Power.
Constant X = FFS what it is and if it will be given by the network and not calculated by the UE.
The initial TTI selection for the UE is based on comparing the headroom with a threshold broadcast in SIBs.
If the headroom is less than threshold the UE selects 10 ms TTI, otherwise 2ms TTI.
-"The network can fix the TTI that may be selected for the access (i.e. in practice disabling the UE selection without the need for e.g. NACKs. FFS how)" (old agreement) is still valid.

The UE choice of TTI is due to RF conditions and not other UE implementation freedom (e.g. amount of data, etc.).

R2-120371 Network TTI indication signalling for EUL in CELL_FACH Ericsson, ST-Ericsson Disc
Withdrawn.

R2-120379 Discussion on 2/10 ms TTI concurrent deployment in CELL_FACH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc

Proposal 1: Initial TTI selection considers only the first preamble power
Proposal 2: Allow the NB to indicate the resource index and the TTI to be used for this resource.
Proposal 3: Extend the existing AICH rule to signal the TTI of an E-DCH resource

- NSN: page2 *concurrent is corresponding to*
- IDT: how the network signals the "OK" for the UE choice?
- ALU: we can
- NSN: fig 1 why not the other way around between configured and requested?
- ALU: is more aligned with Rel-8
- Ericsson: P1. We think the power ramping needs to be considered.
- Ericsson: In Rel-8 we can ACK or NACK more UEs simultaneously, now what? It would be more complex for the Node B. It is less efficient and more complex.

=> Noted

R2-120401 Signaling for support concurrent deployment of 2ms and 10ms TTI Ericsson, ST-Ericsson Disc
Withdrawn.

R2-120406 Initial E-DCH TTI selection to support concurrent deployment of 2ms and 10ms TTI in CELL_FACH Ericsson, ST-Ericsson Disc

- QC: max in Eq.1?

IPR2025-00720, OnePlus Ex. 1004

- Ericsson: it's ok to remove it
- Renesas: what happens if RAN4 says that is not possible to have tighter requirements?
- Ericsson: we should have this. This is important.
- ALU: "by 6 or even 11 dBs"? Is it row or filtered.
- Ericsson: this is what RAN4 specs says today
- IDT: Eq.2. We add a few variables. Why? In general these two do not change : "E-DPDCH_Initial_Power + HS-DPCCH_Initial_Power". Cannot the network take them into account instead of the UE? Same for the serving grant.
- Ericsson: on the network side we don't know if the UE is actually using them at that time or not.
- NSN: I didn't get Ericsson answer.
- QC: not so sure either
- Ericsson: there are things that the network doesn't know.

=> Noted

R2-120411 Final selection of E-DCH TTI to support concurrent deployment of 2ms and 10ms TTI in CELL_FACH Ericsson, ST-Ericsson Disc

- Huawei: on P1. How frequently do you think the network need to change the partition? Or it is never changed?
- Ericsson: it depends on the situation.
- Huawei: ok, but hours? Days?
- Ericsson: not on a TTI basis. It really depends on different things. Maybe even minutes.
- ALU: page 2, "the TTI is totally uncertain up to the last indication from E-AI (if configured)" This is always uncertain until the last moment, so what's the difference?
- Ericsson: in certain case the UE has more certainties.

=> Noted

R2-120527 2 / 10 ms TTI design for the enhanced CELL_FACH Nokia Siemens Networks Disc

Proposal 1: The design for simultaneous existence of 2 ms and 10 ms TTI in the Cell_FACH should target for the deployment, where Rel-8 UEs use 10 ms TTI, and the Rel-11 UEs could additionally indicate preference for 2 ms TTI.
Proposal 2: Partition further the E-DCH PRACH preamble space so that there are preambles indicating a preference for the 2ms TTIs in the dual TTI cell configuration.
Proposal 3: Keep the common pool of the E-DCH resources, but introduce a pseudo-partitioning of them for the purpose of supporting Rel-11 UEs.

- Ericsson: on P1. "..where Rel-8 UEs use 10 ms TTI" also for example in a small cell? Why?
- NSN: in small cell maybe everybody uses 2 ms.

=> Noted

R2-120535 TTI selection criteria in CELL-FACH state Huawei, HiSilicon Disc

Proposal 1: The UE power margin is applied as the rule of TTI selection.
Proposal 2: The actual transmission power of preamble is used for the calculation of power margin.
Proposal 3: The power of E-DPDCH is included for the calculation of power margin.
Proposal 4: it is proposed RAN2 to discuss whether E-DPCCH power should also be considered for the calculation of power margin

- Renesas: why power margin instead of just threshold?
- Huawei:we are trying to follow similar rule as legacy, that's the basic intention
- IDT: this looks complicated for the UE, if it has to be done every time: β_d/β_c
- IDT: many input for this equation are not known at this point in time for the UE
- Huawei: it's an estimation

=> Noted

R2-120536 TTI indication for 2ms and 10ms concurrent deployment in CELL FACH state Huawei, HiSilicon Disc

Proposal 1: The joint common E-DCH resource should be supported.
Proposal 2: Node B could override the TTI value by using the reserved bits in AICH.
Proposal 3: Overriding 10ms TTI with 2ms TTI is not supported

- Ericsson: we looked at this in Rel-8. Did you look at this again, in terms of performance?
- Huawei: did we decide in Rel-8 to not use these bits?
- Ericsson: the performance needs to be good. I don't remember the old conclusion. It depends on how much info you carry.

IPR2025-00720, OnePlus Ex. 1004

- => Noted
-

R2-120562 Initial TTI selection for 2ms/10ms concurrent deployment in CELL_FACH Renesas Mobile Europe Ltd Disc

Proposal 1: The UE TTI selection is based on actual preamble transmission/retransmission power. If a transmission or retransmission is above the threshold then the UE selects 10ms TTI, otherwise the UE selects 2ms TTI.
Proposal 1a: Also consider whether the UE should attempt a 10ms TTI selection if the 2ms TTI is not allocated due to reaching the maximum number of preamble retransmissions (even when threshold is not exceeded)
Proposal 1b: Also consider whether the UE is allowed to request a 10ms TTI even if the threshold is not exceeded (for example the UE may request 10ms TTI resource if the UE has only a small amount of data to send). This could be left to UE implementation.
Proposal 2: The UE TTI selection is identified by the network based on the PRACH signature used by the UE. The use of additional scrambling codes can be used to virtually increase the signature space (see ***Error! Reference source not found.****).*
Proposal 3: It's not necessary to override a 10ms resource request with a 2ms resource allocation. This should be treated with a lower priority in the design (however if the design provides this option for free then we should consider whether to disallow it)
Proposal 4: A UE selecting 10ms TTI could use the Rel-8 signatures, and resources. It needs to be discussed whether additional 10ms resources are needed to be provided in Rel-11.
Proposal 5: It should be possible to override 2ms TTI selection by sending NACK or reserved E-AI value to the UE. The UE will then attempt to select a 10ms TTI using the available signatures, codes, etc.
Proposal 6: It should be considered whether R99 fallback can be by achieved sending NACK or reserved E-AI value to the UE.
Proposal 7: Send LS to RAN1 to confirm what we agree is correct and feasible
Proposal 8: We should synchronise the discussions in RAN1 on standalone HS-DPCCH with the 2ms/10ms TTI selection feature discussions in RAN2, the LS should attempt to take care of this.

- ALU: 1b. Maybe complicates the understanding of the network.

=> Noted

R2-120564 Signalling for 2ms/10ms concurrent deployment in CELL_FACH Renesas Mobile Europe Ltd Disc

Proposal 1: The UE indicates support for 2ms common E-DCH in RRC Connection Setup, Cell Update and URA Update.
Proposal 2: Additional common E-DCH resource(s) and PRACH configurations for 2ms TTI operation and 2ms/10ms selection procedure can be signalled by DL DCCH/CCCH RRC messages.

- Not treated

R2-120588 On concurrent deployment of 2ms and 10ms TTI in a cell in CELL_FACH Qualcomm Incorporated Disc

Proposal 1a: At the start of a preamble ramping cycle, if the Headroom based on (3) falls below a threshold broadcasted in the system information, implying that the UE has limited headroom, then the UE selects a common E-DCH TTI value of 10ms. Otherwise, the UE selects a 2ms common E-DCH TTI value.
Proposal 1b: For each preamble re-transmission during a ramping cycle, the Headroom in (3) is recomputed based on preamble re-transmission power and compared with the threshold broadcasted in system information to perform E-DCH TTI selection.
Proposal 1c: The UE performs common E-DCH TTI selection prior to every E-DCH enhanced random access procedure.
Proposal 1d: If the UE exceeded a maximum number of preamble ramping cycles M_{max}, i.e. upon failure of E-DCH enhanced random access procedure, the UE may select a common E-DCH TTI of 10ms (for the next access).
Proposal 2a: RACH access preamble signature and if configured, the RACH access preamble scrambling code are sufficient to inform the NW of the UE's TTI selection/decision and no other RACH access preamble parameters are needed to convey this information.
Proposal 2b: Broadcast only one new set of PRACH access preamble parameters (signatures and scrambling code) in Rel-11 for concurrent deployment of 2ms and 10ms TTI sub-feature. If the UE's selection/decision is the same as the TTI value broadcasted in Rel-8, then the UE would request for an E-DCH resource by (randomly) choosing the access preamble parameters from the set broadcasted in Rel-8. Else, the UE would request for an E-DCH resource with the other (than that broadcasted in Rel-8) TTI value by (randomly) choosing the PRACH access preamble parameters from the set broadcasted in Rel-11.
Proposal 3: Allow flexible partitioning of common E-DCH resources by signaling the TTI value to use in addition to the common E-DCH resource index via the AI/E-AI on AICH as proposed in [5].
Proposal 4: Investigate which of the parameters broadcasted in Rel-8 common E-DCH system info list can be re-used for the concurrent deployment of 2ms and 10ms TTI common E-DCH resources within a cell.

IPR2025-00720, OnePlus Ex. 1004

- ALU: P1d?
- Chair: difference from Renesas?
- Renesas: the difference is the type of threshold. Why not a simple threshold?
- QC: is not sufficient.

=> Noted

10.1.4 Fall-back to R99 PRACH

The merit was agreed. Companies to focus on the different schemes and their relative merits

Discussion on the papers in this AI:

- QC, DT: for the initial access the UE can try always on E-DCH
- Renesas: this is more a rare case, so we think we shouldn't have the same dynamicity as for 2ms /10ms TTI choice
- Ericsson: the fallback is a good thing to have to spread the load. So if the UE make a decision it doesn't make sense.
- Ericsson: some of the conditions (load) are known to the network even before the UE tries the first time.
- Renesas: what's the favourable to fallback?
- ALU: it will not be more likely to not get the E-DCH.
- Renesas: you should reserve resources for UE not capable of fallback
- Ericsson: a dynamic scheme doesn't distinguish the logical channel type
- Renesas: we need to keep the feature simple.
- NSN: we agree with Renesas. What are the benefit of a dynamic solution?
- Ericsson: for us the dynamic scheme is more complex and we don't see the merits.
- QC: from the UE point of view, we don't see the complexity of a dynamic scheme.
- Renesas: is not any particular step. All of them.
- QC: technically the dynamic approach is very easy to implement for the UE.

More static network control scheme? Ericsson, NSN, Renesas, Mediatek,
More dynamic network control scheme? ALU, Interdigital, QC, ZTE, Broadcom, China Unicom,

R2-120320 Fallback to R99 RACH Nokia Siemens Networks Disc

- DT: P1, we are talking about fallback, but this is related to initial access
- ZTE: P1. How dynamic is the change of the new flag?
- NSN: not defined yet, maybe SIB7
- ZTE: P2. Is this autonomous fallback?
- NSN: the UE makes an initial access. It's not a data fallback, there no initial transmission on one type and then continuing transmission on another type channel.
- ZTE: P3. We see some obvious drawbacks. It could add overhead to the system.
- NSN: network at some point need to be in control on a per UE basis.
- ZTE: the network treating UE individually might be against the principle to keep it simple and treat UEs in a common way
- NSN: not much complexity.

⇨ Noted

R2-120385 Way forward for PRACH fallback for enhanced CELL_FACH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, ZTE, Interdigital, Broadcom Corporation Disc
Not treated

R2-120388 Discussion on PRACH fallback for enhanced CELL_FACH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc

- Renesas: control plane messages on RACH. Which ones can be big?
- ALU: some network likes those messages on RACH.
- Renesas: P3 is a bit strange. Can you calrify?
- ALU: "the UE can ignore the fallback, within reason"
- Ericsson: how can the network know which UE gave up and which not? In that sense perhaps it could be better to have a simple backoff timer and re-try on E-DCH? Or do you have more precise things in mind, in order for the network to know?
- ALU: it doesn't matter for the network to know exactly which UE did what.
- NSN: if the UE implement or not P3, for the network it will be the same.

IPR2025-00720, OnePlus Ex. 1004

- Ericsson: it is debatable what is “the most efficient link”. It depends on the network status at that time.
- Huawei: residual RLC PDUs?
- ALU: we heard from UE vendors that this can be a problem.

⇨ Noted

R2-120417 Fallback to R99 PRACH Ericsson, ST-Ericsson Disc
- Renesas:interesting and attractive
- Renesas: CCCH and DCCH one flag for both or two flags?
- Ericsson: probably one is enough
- Renesas: if the UE has for example E-DCH common resources allocated, does the UE check the flag or?
- Ericsson: it should keep it
- Huawei: DTCH?
- Ericsson: no strong opinion on DTCH. We are open
- Huawei: SIB7? UE needs to read always? No default?
- Ericsson: stage 3 detail.
- IDT: on SIB7 we removed the need for the UE to read SIB7, so now we are going back?
- Ericsson: we will study the details later and bring options to RAN2.
- ZTE: SIB7. Why cannot SIB7 indicate the resource type instead of the fallback?
- Ericsson: the SIB will indicate what the UE should use to transmit the CCCH and DCCH.
- DT: will we have a deadlock in ARCH because of this redirection to R99 RACH?
- Ericsson: there will always be R99 RACH resources there, and anyway E-DCH is congested, so?
- Renesas: this approach brings another benefit, which is no impact on the user plane.
- DT: I agree with Ericsson, it depends on the traffic model. But when we introduced the REl-8 feature we said that the UE should use the E-DCH first, are we now going back? Is the traffic type considered?
- Ericsson: we agree with DT. The traffic caractheristics for control plane are very well known, we take that into account, and RACH is efficient for that type of traffic.

=> Noted

R2-120537 Discussions on Solution of Fallback to R99 PRACH Huawei, HiSilicon Disc
- Ericsson: P3. If more data arrive in the buffer after the initial selection then the UE will for example keep the R99?
- Huawei: it could happen that the UE changes channel.
- IDT: but R99 is fast, one TTI, so our understanding is that at the next TTI, if you have data in the buffer, you can select E-DCH.
- ALU: do you prefer P1 or P2?
- Huawei: it depends on the feedback from UE vendors, as they were concerned by the impact of a fully dynamic approach.
- NSN: P3. What is the end of the data transmission?
- Huawei: answered before

=> Noted

R2-120566 E-DCH or PRACH resource selection and fallback Renesas Mobile Europe Ltd Disc
- Renesas: same proposals
- No questions.

=> Noted

R2-120585 On the impact to legacy UEs due to Static Fallback to R99 Scheme Qualcomm Incorporated Disc
- Renesas: what is the assumption on the population of R99 UEs?

=> Noted

R2-120586 A dynamic mechanism for Fallback to Rel-99 PRACH Qualcomm Incorporated Disc
- Renesas: the overall scheme is a possible way forward if we go for a dynamic scheme
- Renesas: Step 4bii? Why not re-establish RLC? It is a very rare case.
- QC: in that case you need cell update

=> Noted

R2-120619 Discussion on solutions for dynamic R99 RACH fallback InterDigital Communications Disc

IPR2025-00720, OnePlus Ex. 1004

- NSN: is the potential threshold in the SIBs
- IDT: it's one possibility
- NSN: is there another partition?
- IDT: if we want to set a new set of preambles? We can keep the same scrambling code and partition the signatures or e.g. introduce a new scrambling code
- Renesas: what is the complexity of doing an RLC reset?
- IDT: the reset resolves in data loss, this is not good, there will be extra delays
- IDT: not desirable. How does the network know?
- Ericsson: if the fallback id based on the buffer content and the buffer is not very full, is the impact on the TCP very big?
- IDT: maybe the impact on TCP is not so big, but there are other system drawbacks

=> Noted

R2-120763 Discussion on the mechanisms of fallback to R99 PRACH China Unicom Disc
- Presented by Huawei on behalf of China Unicom

=> Noted

10.1.5 Per-HARQ process grants

Companies to focus on the merit of the feature with more details on the solutions

Chair: what is the RAN1 status?
ALU (chair of RAN1 session) reports the status. The supporters will come back with arguments to support the introduction of the feature. It is minuted in RAN1 minutes.

R2-120375 Performance evaluation of Per-HARQ grants and E-DCH TTI alignment between CELL_FACH UEs and CELL_DCH UEs Ericsson, ST-Ericsson Disc
Discussed in RAN1
- No RAN2 specific question

⇨ Noted

R2-120382 On the support for per-HARQ-process activation in CELL_FACH and TTI alignment between CELL_FACH and CELL_DCH Ericsson, ST-Ericsson, Orange, AT&T, SOFTBANK MOBILE Disc
Discussed in RAN1 partially
- Telefonica indicated that they would like to co-source
- Huawei: interference cancellation. Fig 1. This is for full buffer status. Full buffer is not the CELL FACH case.
- Huawei: the intention is to justify the TDM like approach?
- Ericsson: per HARQ grant has benefits independent from TTI alignment.
- Huawei: there are benefits and drawbacks. We focused on the TDM approach, we didn't see the benefit of introducing only per HARQ processing
- Ericsson: we would like to use in CELL FACH what we used in CELL DCH from Rel-6.
- Ericsson: the data transmission is not related to the hardware saving that you can have.

=> Noted

R2-120386 Per-HARQ process activation in CELL_FACH and Idle Mode state Ericsson, ST-Ericsson Disc
Not discussed in RAN1
- Huawei: for the moment we focused on the TDM-like operation, so we haven't had the time to study the details of this.
- Ericsson: the proposal was presented before (in previous meetings)
- Huawei: TTI alignment and per-HARQ process have always been coupled. Technically of course they can be separated. We are reluctant to discuss the details of the proposal before we have a decision on the TTI alignment.
- NSN: we always have seen papers showing the gains of these sub-features bundled together, in RAN2 or RAN1.
- Ericsson: we think that was not necessary. The gain is in hardware resources and power consumption.
- Ericsson: this proposal was submitted before.
- QC: P3 and P4?

IPR2025-00720, OnePlus Ex. 1004

- Ericsson: it's a way to control the grant during the contention resolution phase. It is one way of doing it.

=> Noted

R2-120548 Further considerations on TTI alignmentper HARQ scheduling for between CELL_FACH UEs and CELL_DCH Ues Huawei, HiSilicon Disc
Discussed in RAN1.
- No questions

=> Noted

Discussion on AI 10.1.5
- Ericsson: we think that per-HARQ can work without the TTI alignment so we think we should decide here and not wait for RAN1 outcome on TTI alignment
- Mediatek: perhaps we can try to make a decision on this in RAN2 to start with
- Huawei: we think is better to wait for RAN1 conclusions and then decide on this sub-feature in RAN2.
- NSN: same as Huawei.
- Ericsson: we can try to decide.
- DT: if we accept this, then TTI alignment will look more useful.
- Ericsson: TTI alignment without per-HARQ process doesn't bring any benefit, but we think this per-HARQ processing is useful by itself.
- DT: RAN1 has discussed TTI alignment assuming that we have per-HARQ process.
- NSN: we think the two sub-features needs to be discussed together. Joint session?
- Ericsson: we would like to hear technical arguments.
- Chair: not possible to have an agreement today. Companies are invited to work on the details of the proposals. We will take a decision at the next meeting on the introduction of this sub-feature.

10.1.6 Signalling based Interference control

Companies to focus on RAN2 aspects.

No contributions.

10.1.7 UE battery life improvement and signalling reduction

Companies to focus on further analysis for the merit and details of the different proposed mechanisms.

R2-120392 Discussion on 2nd DRX cycle in CELL_FACH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
- Renesas: what the benefit of having first and the second to be long the same?
- Renesas: P2: other values on top?
- ALU: yes
- QC: P3: so even the first DRX can be longer?
- ALU: that was not the intention
- ST-Ericsson: longer inactivity timer than the existing inactivity timer?
- ALU: yes
- ST-Ericsson: we think they are long enough, we are keen on having shorter timers
- ST-E: P7?
- ALU: yes, with orders or dedicated signalling
- DT: adding more values will make it more complex?
- Renesas: we understood that we use the values of CELL PCH only.

⇨ Noted

R2-120450 Further Enhanced UE DRX Ericsson, ST-Ericsson Disc
- Renesas: good contribution. Burst size reduced to a small value, will that cause unreliability?
- ST-E: not sure. It depends on RAN4.
- Renesas: P9?
- ALU: P9? Configured or in use?
- ST-E: we can look at the details later, it was more to agree on the principle

IPR2025-00720, OnePlus Ex. 1004

- ALU: P11?
- ST-E: we wanted to keep it similar to the first DRX.
- Renesas: is the intention that second DRX has to be used instead of CELL PCH or on top? We need to think about the complexity. If we use it instead of CELL-PCH, then we could re-use the signalling.
- DT: we think operator would like to use CELL PCH further
- DT: why in fast dormancy proposal the DRX cycle is compared to Idle mode and not only to CELL PCH?

⇨ Noted

Agreements:
We will introduce a second HS-DSCH DRX cycle in CELL_FACH supporting longer DRX cycle length compared to HS-DSCH DRX cycleFACH.
The second HS-DSCH DRX cycle has the maximum value of 5120 ms.
Other intermediate values (e.g. 640, 1280 and 2560 are FFS)
The UE autonomously switches DRX cycle using a inactivity timer (separate) to enter the second DRX.
Further Enhanced UE DRX info is at least broadcasted in system information, in the same SIBs as the current DRX parameters.

R2-120528 Further enhanced DRX for the CELL_FACH state Nokia Siemens Networks Disc
- Renesas: P2 was discussed in Rel-8 and not agreed
- ST-E: no strong opinion. We can think about it later.

⇨ Noted

R2-120529 Autonomous state transition between the UTRA RRC states Nokia Siemens Networks Disc
=> Revised in R2-120858

R2-120858 Autonomous state transition between the UTRA RRC states Nokia Siemens Networks, Deutsche Telekom Disc
Not treated

R2-120568 UE Battery Life Improvements and Signalling Reduction Renesas Mobile Europe Ltd Disc
- ST-E: do you expect significant difference?
- Renesas: not much difference.
- Broadcom: how can this be easier for the UE?
- Renesas: CELL PCH exist today, so its functionalities are re-usable
- NSN: we think that the power consumption is similar, so what's the gain?

⇨ Noted

R2-120582 The Solutions of UE Battery Life Improvement and Signaling Reduction Huawei, HiSilicon Disc
Not treated

R2-120587 UE battery life improvements and signaling reduction via a 2nd DRX cycle in CELL_FACH Qualcomm Incorporated Disc
- ST-E: On P2, we don't like the "enhanced CELL PCH solution"
- Renesas: we like this, but what's the difference with CELL PCH?
- IDT: the PICH is used to page a group of UEs, what is the benefit?
- QC: what about the legacy feature then? It also works triggered by the PICH.
- IDT: it was to keep the same functionality in the UE.
- ST-E: thank IDT for the comment
- Chair: P3 requires P2 to be agreed first.
- Renesas: so maybe we don't need CELL PCH any more.

⇨ Noted

R2-120764 Consideration on DRX configuration in Cell_FACH China Unicom Disc
Not treated

10.1.8 Mobility from CELL_FACH to EUTRA

The merit was agreed. Companies to focus on the different technical solutions.

IPR2025-00720, OnePlus Ex. 1004

"UE controlled mobility":

R2-120569 Reselection Enhancements in CELL_FACH Renesas Mobile Europe Ltd Disc
- No questions.
- ⇨ Noted

R2-120724 IRAT prioritization for FE-FACH absolute priority cell reselection Qualcomm Incorporated Disc
- Renesas: do we need to consider GERAN or not?
- ALU: we believe we should consider GERAN.
- DT: why?
- ALU: I am not aware of operator positions, but I think it is not safe to exclude it.
- Chair: I will report this question on GEARN in RAN2 status report to plenary.
- Telia Sonera: we are not interested but we don't know about the others.
- => Noted

Agreements:
In CELL_FACH, the UE shall measure all frequency layers and RATs with a priority higher than the serving frequency when the serving cell is above Sprioritysearch.
It shall be possible for the NW to enable/disable the above enhancement.
Below Sprioritysearch is FFS.
GERAN is FFS.

- Chair: do we need an LS to RAN to ask about GERAN or do we ask the question triggered by a bullet point in RAN2 status report?
- NSN: let's an LS
- Renesas: it doesn't help. We haven't seen any operator interest so far, so we can assume that we should focus on LTE and if there are potential consequences to GERAN we shouldn't worry too much
- QC: we prefer an LS. We don't like to implicitly leave out GERAN without conscious decision
- Chair: several companies prefer to send an LS, so we will send one:

R2-120885 Draft LS regarding support for mobility improvements to GERAN in CELL-FACH, Qualcomm, to RAN, Cell_FACH_enh-Core
- Renesas: what if RAN replies? We can be more explicit and say something on the line "all the solutions considered so far by RAN2 do not take into account the support of mobility to GERAN".
- ALU: we should explain to them what the possible consequences can be.
- Renesas: I sent my comment on the draft reflector.
- Chair:" there has been no operator support shown in RAN WG2" we should say "interest" instead of support.
- Telecom Italia: we can remove the first sentence and just use "interest" in this sentence instead: "RAN WG2 would like to inform that in the absence of any operator support in RAN WG2"?
- => The Draft LS is revised in R2-120911

R2-120911 Draft LS regarding support for mobility improvements to GERAN in CELL-FACH, Qualcomm, to RAN, Cell_FACH_enh-Core
- Ericsson: RAN4 should be in CC
- Chair: we add RAN4 in CC and
- => LS is agreed in R2-120913.

R2-120913 LS regarding support for mobility improvements to GERAN in CELL-FACH, Contact: Qualcomm, Source RAN2, to RAN, CC RAN4, Cell_FACH_enh-Core
- => LS is agreed

"Network controlled mobility":

R2-120049 Consideration on Enhanced Redirection from UMTS to LTE in Cell_FACH ZTE Disc

Proposal 1: SRNC should activate the previous LTE measurement, and configure maximum period of Tmeas via dedicated signalling for redirection reference.
Proposal 2: Additional measurement gaps or shorter measurement cycle can be applied for previous LTE measurement.

IPR2025-00720, OnePlus Ex. 1004

Proposal 3: UE should only report those detected LTE frequencies whose qualities are above the configured RSRQ/RSRP threshold, in descending order according to their related measurement quantities, so that SRNC have better reference for U2L redirection.
Proposal 4: Optionally, SRNC can configure maximum allowed LTE searching timer Ts based on UE's LTE searching capability. If not included, some new value other than 10s can be discussed.
Proposal 5: To study the configuration efficiency with current single "E-UTRA Target Info" and single 10s(Ts) settings for U2L redirection.
Proposal 6: UE should be prohibited from searching LTE layers out of either current "E-UTRA Target Info" or other newly indicated LTE target frequencies.
Proposal 7: To consider more efficient and flexible U2L redirection controlling.

- Renesas: "previous"?

⇨ Noted

R2-120316 Network Controlled CELL_FACH mobility Nokia Siemens Networks Disc
Proposal 1: The UE will send an UL message to indicate the availability of LTE network as soon as detected.
Proposal 2: MEASUREMENT CONTROL/REPORT are used for measurement configuration / report.
Proposal 3: In MEASUREMENT CONTROL message, it is possible to signal that UE shall perform the LTE measurement in CELL_FACH and relevant information as LTE frequency to measure.
*Proposal 4: The LTE that UE would measure in LTE are listed in a new variable **E**UTRA_FREQUENCY_INFO_LIST_FACH.*
Proposal 5: Event 3c is used to signal the availability of LTE.

- ALU: how the UE actually measure? FACH measurement occasions? Or?
- NSN: not detailed proposal yet
- ALU: there might be an issue
- Renesas: these mechanism works for coverage liited scenarios, but here is different. So will be configured at the same time as cell re-selection? How do they co-exist?
- NSN: initially this method was alternative to the cell re-selection method.
- NSN: we will have similar issues also if we use measured results on RACH.
- QC: it seems re-using what is there in CELL-DCH. So why not move the UE in CELL DCH in that case, so you can use this tool.
- NSN: we are re-using the signaling. But what about the measured result on RACH type of solution?
- QC: our concerns it applies also to other schemes
- Renesas: CELL DCH type of measurements are in general not active and only activated when a situation occurs. So also the UE power consumption could be a problem is they are on all the time.
- Ericsson: we have similar concerns as other companies. Measurement requirements? Are they relaxed or what?
- RIM: there will also be the cost of the signaling increase.

=> Noted

R2-120407 Measured Results on RACH Alcatel-Lucent Disc
Proposal. For RAN2 to consider including LTE measurements in Measured Results on RACH

- NSN: do you consider measurement report? Which message will be used?
- ALU: those messages that already contain Measured Result on RACH.
- Broadcom: will it fit?
- ALU: if we use Common E-DCH, yes, if we use the R99, we might need to give rules for prioritization
- Renesas: this make sense more than the Measurement Report. Also coming from Idle?
- ALU: yes, we consider also RRC Connect Request
- NSN: how about the timing of the report. As soon as the UE detects the presence of LTE?
- ALU: not much considered but other papers consider other potential triggers.

=> Noted

R2-120408 Mobility in CELL_FACH state Alcatel-Lucent Disc
Proposal: Allow all the alternative schemes for FACH measurement occasion management.
Alternative 1: For CELL_FACH reselection to LTE, Prioritise the FACH measurement occasion per RAT
Alternative 2: For CELL_FACH reselection to LTE, more measurement occasions could be assigned in order to meet the existing performance for identification of new cell and also keep the existing RAT measurements (e.g. GSM and Inter-freq).
Alternative 3: Further FACH measurement occasions are provided to the UE to use under certain circumstances

- QC: what about the FACH in DRX?

IPR2025-00720, OnePlus Ex. 1004

- ALU: that is an optional capability for the UE, so we prefer something more general.
- ALU: nice if the UE can do this also when in DRX
- Huawei: question on Alt3.
- ALU: on the alternatives, we still don't know if we need to consider GSM.
- Renesas: these seem more related to coverage based case, but here we need to think abour service based mobility, so what is your target? Only service based or also coverage based?
- ALU: we don't see a big difference here
- Renesas: if the UE is going out of coverage all these can delay the recovery. So we are wondering the use case, the intention.
- ALU: why only the service based case?
- Renesas: the requirements are different.

=> Noted

R2-120570 Enhanced Network Control of Mobility in CELL_FACH Renesas Mobile Europe Ltd Disc

For performing measurements:

Proposal 1: Measurements for reporting cells and/or frequencies for enhanced NW controlled mobility should use the same measurement rules used for reselection, however cells which are to be reported should not be considered for reselection. Network controlled mobility should not mean that the UE has to perform more measurement activity and it can just report the quantities which are internally used for reselection evaluations.

Proposal 1a: NW indicates to UE a list of cells and/or frequencies which are to be treated as per proposal 1.

Proposal 1b: This should be as part of SIB19 absolute priority configuration, and dedicated measurement control.

Proposal 1c: Enhanced measurement reporting should apply only for higher priority layers (service based mobility). Any layers configured for reporting instead of reselection are treated as higher absolute priority as than the currently camped layer while SrxlevServingCell >= Threshserving,low, regardless of the absolute priority assigned in signalling.

For reporting measurements:

Proposal 2: When measurement results become available according to proposal 1, the UE triggers Cell Update procedure to provide the measurements to the network.

Proposal 2a: This can be done in CELL_FACH, CELL_PCH, URA_PCH states.

Proposal 2b: The measurements can be sent in "Measured Results on RACH" IE.

Proposal 2c: A new Cell Update cause is needed (e.g. "measurement results available").

On the mobility command:

Proposal 3: Redirection procedure shall not be modified.

Proposal 3a: Discuss whether there is any motivation to optimise for the failed redirection case, especially considering that it will be possible to perform measurements in CELL_FACH before redirection.

Proposal 3b: If there is a motivation, then Cell Change Order to EUTRAN should be used.

- QC: P2. How often?
- Renesas; every 60 seconds the measurement is preformed, then the UE sends only if it is in good coverage.
- QC: so the UE will disable cell reselection?
- Renesas: only for those cells that the network ask.
- QC: I agree that reselection is faster and can do the job, but some operators would like to have more control
- Telecom Italia: P1C?
- NSN: so we will have reselection with criterias similar to other proposals/agreements in this WI. Absolute priority reselection.
- Renesas: yes
- NSN: do they live happily together?
- Renesas: no problems if they are used together. They work in the same way, so there is no technical problem.
- Ericsson: coming back on the 60 seconds. Maybe it happens more often than that. How much signalling increase we will have?
- Renesas: it is under the control of the network
- Broadcom: similar to what we have in GSM?
- Renesas: could be.

⇨ Noted

R2-120584 Discussion on CELL_FACH mobility enhancement to LTE Huawei, HiSilicon Disc

- No questions.

=> Noted

R2-120760 RRC Connection Release enhancements Ericsson, ST-Ericsson Disc

IPR2025-00720, OnePlus Ex. 1004

Proposal 1: The UE shall only search in the frequencies provided in the IE "E-UTRA Target Info" in the RRC Connection Release message, and return to UTRA if no suitable E-UTRA cell is found. Upon returning to UTRA, the UE shall enter CELL_FACH state and access the network via a Cell Update message reusing the existing RL failure mechanisms introduced already in rel-99.
Proposal 2: A capability bit should be introduced to indicate to the network the capability to return to UTRA after a failed re-direction by sending a cell update. In this way the network will be prepared to handle UEs coming back to the old configuration.
Proposal 3: A RSRP/RSRQ quality threshold is included in the redirection order. If this threshold is present the UE shall not try to camp on the E-UTRA cell in case the measured RSRP/RSRQ is below the value signalled by UTRAN.
Proposal 4: RAN2 to discuss to extend the proposals 1 to 3 for earlier releases.

- Renesas: what about the NAS? What is the status of the variables ESTABLISHED CONNECTIONS?
- Ericsson: we need to think about the details.
- Renesas: we think the changes might be quite a lot
- Ericsson: we need to study this
- Renesas: for CCO we know that the connection is not released.

=> Noted

R2-120723 Introduction of FE-FACH absolute priority cell reselection in 25.304 Qualcomm Incorporated
CR 25.304 (0317) - B REL-11 Cell_FACH_enh-Core
Not treated

Use cases: service based or also coverage based mobility?
Measurement configuration? Reporting?
Is timing of the report critical? Do we need E.g. Extra Cell Update
During CELL-FACH DRX?
RRC Connection Release enhancements

Discussion:

- QC: Do we need something more than Cell Reselection?
- Renesas: it is a question for operators. The performance for re-direction can be improved
- Telecom Italia: we see many companies including operators interested in this.
- Ericsson: there can be different solutions and some issues have not been addresses. Some questions have been ignored
- Chair: which questions have been ignored?
- Ericsson: for example the question on signalling impact
- Ericsson: nobody showed the benefits compared to what we have already
- Renesas: the benefits are clear.
- Ericsson: there can be some benefits but these benefits are questionable and they come with some costs
- Renesas: failed redirections need to be limited as much as possible
- Ericsson: I think we are stuck now, We don't see a clear picture, and compare benefits with drawbacks, instead of focusing on solutions.
- Telecom Italia: we are a bit surprised that we are comparing measurement reports with enhanced redirection. The use cases can be different. There are different alternative solutions. There are several papers and companies supporting
- Ericsson: we had the impression that some people do not consider these alternatives.
- QC: let's focus on the measurements reports. There were concerns expressed before. We are not convinced to report these measurements as Renesas proposed.
- Renesas: if it difficult to understand what Ericsson wants, and also QC. We didn't add any extra effort to the UE on top of the reselection.
- Ericsson: nobody has shown that there is benefit in having measurement reports compared to other solutions.
- Huawei: we are also confused by Ericsson comments. We would like to improve the redirection success rate. This can be achieved using measurements from the UE.
- Ericsson: our proposal is also a possibility
- Telecom Italia: we would like to know in advance what is the status.That can be achieved by measurement reports from the UE. We could work on measurement report in Measured Result on RACH as a baseline

Questions:

IPR2025-00720, OnePlus Ex. 1004

UE performs measurements on LTE when in the UE is in Cell FACH state
Using what? Measurement Occasions? DRX?
Anything to add to Measurement Occasions?
Including LTE measurements in "Measured Results on RACH" when the UE is in CELL FACH state?
Measurement in Idle state? I.e. report also in RRC Connection Request?

10.1.9 CRs

Stage 2 CRs

R2-120593 Introduction of Further Enhancements to CELL_FACH in 25.308 Qualcomm Incorporated
CR 25.308 (0122) - B REL-11 Cell_FACH_enh-Core
- NSN: thanks for the CRs, no major comments
- NSN: maybe we could remove "stand-alone" from the title
- QC: we prefer to keep it
- Renesas, IDT: let's take it away
- Chair: we take it away.
- NSN: second DRX in this section or next to the existing one?
- Chair: should we live it there?
- NSN: OK. Maybe a reference to the existing one can be useful.
- Ericsson: "In the absense of uplink data, the UE sends an SI with its E-RNTI in the MAC-i header for collision resolution purposes."?
- Broadcom: it's in the RAN1 LS
- Renesas: 22.3 is too detailed, it looks like stage 3, in part not even agreed.
- IDT: some bullet in 2.1 might help readability
- QC: we had bullet point before
- QC: to be presented not for agreement, but for information?
- Renesas: maybe we don't need to present this to plenary.
- QC: we would like to have a short email discussion to capture the agreements from this meeting, and then we can decide if we submit it to ARN plenary for information or we do not submit.
- Ericsson: "Further, if there is no uplink data, the implicit resource release timer is also started when the uplink DPCCH transmission begins. " should be removed as it is not concluded in RAN1.

=> Postponed

R2-120594 Introduction of Further Enhancements to CELL_FACH in 25.319 Qualcomm Incorporated
CR 25.319 (0101) - B REL-11 Cell_FACH_enh-Core
- Renesas: 23.1 needs update
- Renesas: is R99 fallback still a reasonable name? The proposals are different from "fallback" now.
- ALU: we can keep it until we understand better the mechanism
- Ericsson: 23.1 we cannot see that the network can "fix" the TTI as per current agreements. It should be captured

=> Postponed

- Chair: we can progress on the stage 2 CRs over email. See UMTS email discussion n.2 [77#34] in 11.2

10.1.10 Others

R2-120542 Signature partition and sub-feature dependency in FE-FACH Huawei, HiSilicon Disc
revised in R2-120804 due to wrong title
R2-120804 New Blocking and Collision Probability Analysis Huawei, HiSilicon Disc REL-11 Cell_FACH_enh-Core
withdrawn

R2-120591 E-DCH resource analysis Qualcomm Incorporated Disc
R2-120538 Signature partition and sub-feature dependency in FE-FACH Huawei, HiSilicon Disc
Both not treated.

IPR2025-00720, OnePlus Ex. 1004

10.2 WI: 8C-HSDPA (RP-101419)

(8C_HSDPA-Core, leading WG: RAN1, REL-11, started: Dec.10, target: June 12, WID: RP-101419)

No contributions.

10.3 WI: RAN overload control for Machine-Type Communications (RP-111373)

(SIMTC-RAN_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, target: March 12, WID: RP-111373)
EAB stage-3 details for UTRAN (discuss and progress running 25.331 CR)

No contributions.

10.4 WI: HSDPA Multiflow Data Transmission (RP-111375)

(HSDPA_MFTX-Core, leading WG: RAN2, REL-11, started: Sep.11, target: Sep.12, WID: RP-111375)
RAN2 is the prime responsible WG

10.4.1 General considerations/issues

Including terminology/definitions, feature activation/deactivation/configuration.
Excluding mobility aspects (to be discussed under 10.4.3)

R2-120051 Consideration on L1 order (de)activation between various MPT-HSDPA modesZTE Disc
REL-11 HSDPA_MFTX-Core
Proposal 1: To clarify whether Pcell can be changed via L1 order directly.
Proposal 2: To narrow down the practical use cases for intra-NodeB L1 order (de)activation mechanism.
Proposal 3: To study the impacts on UE measurement efforts for proper MPT pre-configurations. What's the upper limit number of MPT pre-configurations for each use case?
Proposal 4: To study global system level gain for L1 order (de)activation mechanism, including inter-NodeB scenario.
Proposal 5: To evaluate whether a dedicated Rel-12 WID for MPT-HSDPA enhancement is possible.

- Renesas: P1. Why? Is there something that doesn't work with the legacy procedures?
- ZTE: we think this is an optimization that might bring the system some kind of gain, on top of the legacy mechanism
- ALU: P1. This is enhancing cell change functionality or it is more general? So something else than that?
- ZTE: generic mobility, not only enhancing cell change functionality
- Ericsson: what is the use case here?
- ZTE: we need to investigate
- Ericsson: we don't see the gain as anyway you need to reconfigure the UE.
- ⇨ Noted

R2-120275 General considerations on the HSDPA Multiflow Nokia Siemens Networks Disc
Proposal 2: Allow to combine the SF-DC Multiflow operation with DC-HSDPA.
Proposal 3: Discuss the combination of DF-4C Multiflow and MC-HSDPA.
Proposal 4: Allow to configure the DF-4C/3C Multiflow operation for the non-adjacent carrier allocation.
Proposal 5: Allow the DF-4C/3C Multiflow operation with the multi-band configuration.
Proposal 6: Discuss whether there is any obstacle to combine the DF-4C/3C Multiflow operation with DC-HSUPA.

- No questions
- NSN: can we agree on P4?
- DT: as operator we would like it.
- ALU: we support P4.
- QC: we would prefer to wait and decide at the next meeting
- DT: what the problem for the UE?

IPR2025-00720, OnePlus Ex. 1004

- QC: we need to check a bit more.
- NSN: what about P6? What is people preference?
- Chair: no feedback yet.

=> Noted

R2-120280 HSDPA Multiflow configuration and dynamic carrier deactivation Nokia Siemens Networks Disc

Proposal 1: The Multiflow primary assisting cell can be configured only if it is in the UE active set.
Proposal 2: Reuse the "Downlink secondary cell info FDD" IE to configure the Multiflow operation.
Proposal 3: Enhance the "Downlink secondary cell info FDD" IE with the "group index" to facilitate the mapping of the HS-DSCH cells to correspondent MAC-ehs entities in the inter-site scenarios.
Proposal 4: Discuss on the practical need for the dynamic carrier activation/deactivation of the primary assisting cell.
Proposal 5: Introduce the dynamic carrier activation/deactivation by means of the HS-SCCH orders for the secondary assisting cells.

- Renesas: P1. DCH active set? Can the same message be used to add the cell to the AS and configure the Mflow operation at the same time?
- NSN: yes
- Renesas: P3. If P1 Is agreed we don't need P3. We can use TPC combination index to do what you propose in P3.
- IDT: we are fine with P1.
- IDT: P4 and P5: In general is nice for the UE not to have many channels to monitor, so if we agree to 5 then 4 is natural extension.
- QC: we share Renesas and IDT position on P1.
- QC: what's your view about inter-Node B vs. intra Node B?
- NSN: we were thinking about both cases.

=> Noted

R2-120398 On HS-SCCH order for cell activation/deactivation in multi-flow transmission Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc

Proposal 1: Introduce HS-SCCH order for activation/deactivation of cell in multi-flow operation.
Proposal 2: Discuss methods to reduce the delay in informing the activation/deactivation status of a cell in multi-flow transmission from one NB to another NB

- NSN: P2 is more for RAN3?

=> Noted

R2-120409 General definitions for Multiflow Ericsson, ST-Ericsson Disc

Proposal 1: The presence of the serving E-DCH cell distinguishes 2 HS-DSCH cell sets
Proposal 2: Maintain the legacy RAN1 and RAN2 definitions for the HS-DSCH cells associated to the serving and secondary serving E-DCH.
Proposal 3: The HS-DSCH cells not associated to the serving and secondary serving E-DCH cells must be identified with an additional name/attribute
Proposal 4: The HS-DSCH cells not associated to the serving and secondary serving E-DCH cells are identified by a suffix, e.g. serving_2 HS-DSCH cell and secondary serving_2 HS-DSCH cell

- Huawei: P1 2, 3.
- Ericsson: We are not talking about the legacy features. These are still valid, And they are valid for both
- Renesas: how do you pronounce that on P4?
- Ericsson: we shouldn't use secondary and assisting. There are all serving.
- Chair: how many assisting cells we can have?
- NSN: we chose "assisting" to enable us to use a common language
- Ericsson: so assisting and serving will be both used? So there will be some cells which will be serving and assisting and other cells will be serving but not assisting?

=> Noted

R2-120621 Mobility considerations for multiflow HSDPA InterDigital Communications Disc

Part on terminology was presented, otherwise see 10.4.3.

⇨ Noted

Agreements:

IPR2025-00720, OnePlus Ex. 1004

The HS-DSCH cells not associated to the serving E-DCH cells must be identified with an additional name/attribute
Assisting serving HS-DSCH Cell: In addition to the serving HS-DSCH cell, a cell in the same frequency, where the UE is configured to simultaneously monitor a HS-SCCH set and receive HS-DSCH if it is scheduled in that cell.

Whether there can be only one assisting serving HS-DSCH cell is FFS.

Assisting secondary serving HS-DSCH Cell: In addition to the secondary serving HS-DSCH cell, a cell in the same secondary downlink frequency, where the UE is configured to simultaneously monitor a HS-SCCH set and receive HS-DSCH if it is scheduled in that cell.

Whether there can be only one assisting secondary serving HS-DSCH cells in each secondary downlink frequency is FFS.

The Multiflow primary assisting cell belongs to the UE active set.

The combination of the SF-DC Multiflow operation with DC-HSDPA is supported.

R2-120726 Earlier implementability of MP-HSDPA Qualcomm Incorporated Disc withdrawn

10.4.2 Interaction and compatibility with other features

Including other "multi-carrier" features, eSCC, CPC

R2-120279 HSDPA Multiflow interaction with DTX/DRX, eSCC, and HS-SCCH-less operation Nokia Siemens Networks Disc

Proposal 1: Agree to introduce DTX/DRX for intra-site Multiflow.
Proposal 2: Agree to introduce UL DTX for the inter-site Multiflow.
Proposal 3: Discuss about the need for the Iub signaling to exchange the UL DTX activation status between NodeB participating in the Multiflow operation.
Proposal 4: Agree to introduce DL DRX for the inter-site Multiflow.
Proposal 5: Discuss about the need for the Iub signaling to exchange the DL DRX activation status between NodeB participating in the Multiflow operation.

Regarding eSCC and HS-SCCH-less operation, the summary is:
Proposal 6: Discuss the usage of eSCC and Multiflow.
Proposal 7: Discuss whether HS-SCCH-less operation is restricted to the primary serving HS-DSCH cell or to the serving and assisting cells on the primary frequency with Multiflow.

- ALU: P3. Is there a need to for other Node B to know? The other Node B needs to know, but Iub is quite slow
- NSN: we also thinks is needed that the other Node B knows.
- ALU: is it ok if the Node B assumes wrongly that the UE is in DRX and in fact is not.
- ALU: But if the Node thinks the UE is not in DRX and the UE is in DRX, then there is a problem.
- IDT: P3? Do we do this already for E-DCH? Not sure about how it works now, but it should be taken care of.
- NSN: we need to check. Maybe something is missing.
- ZTE: what is the real benefit of supporting DRX for the inter-site case? For inter-site it can be done, but the real benefit?
- NSN: one option for the network is to deactivate the second link, but the network can decide to leave it on and use DRX instead.
- ALU: eSCC? We also don't want to exit Mflow operation unnecessarily. But it could be useful to pre-configure some of the cells.
- Renesas: P3 is for another group?
- Renesas: eSCC. Can Mflow be pre-configured?
- NSN: technically possible but we need to see.
- Renesas: the question is more about the use case.
- ALU: we already agree that Mflow is only for the active set, so we can exclude those cells.
- NSN: we don't have a strong opinion. Only small sympathy.

=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-120554 Multiflow and DTX/DRX Huawei, HiSilicon Disc

Proposal 1: It is proposed to agree that DTX/DRX could be configured in Intra-NodeB multiflow.
Proposal 2: For Intra-NodeB multiflow, it is proposed that the DRX status and the scope of orders is common to both serving HS-DSCH cells, and can be sent on any serving cells or secondary serving cells.
Proposal 3: It is proposed to agree that DTX could be configured in Inter-NodeB multiflow.
Proposal 4: It is proposed to agree that DRX could be configured in Inter-NodeB multiflow.
Proposal 5: For Inter-NodeB multiflow, it is proposed that the DRX status and the scope of orders is common to both serving HS-DSCH cells, and orders to control DRX activation status can be sent on any serving cells or secondary serving cells.
Proposal 6: It is proposed that configuration parameters of DRX should be identical on both serving cells in multiflow.

- ZTE: so far are we discussing only SF-DC or more carriers? If more, some of the proposals need to be update
- NSN: for UL DTX, it's the same, the number of cells doesn't matter
- NSN: for DL DRX, it doesn't matter too much because we foreseen to re-use legacy mechanisms
- NSN: can you explain a bit more about the independent command coming from different sites? For inter-site case. Figure 3. There can be unsynchronizations?
- Chair: how can the other Node B know what the first Node B does?
- Huawei: Node B1 need to let Node B2 know.

=> Noted

R2-120622 Considerations on DRX and multiflow HSDPA InterDigital Communications Disc

Proposal 1: Introduce DRX for intra-site MP-HSDPA
Proposal 2: Allow DRX for inter-site operation
Proposal 3: A common state DRX is used in the UE with the same concepts/rules as MC-HSDPA for all multiflow scenarios.
Proposal 4: Agree that DRX activation status has to be coordinated across sites and ask RAN3 if this can be achieved.

=> Noted

Discussion

Intra-site
Ok

Inter-site

- Renesas: the pattern needs to be as aligned as possible
- Ericsson: we prefer to have more time to think about Inter-site DRX. No specific question now.

=> Chair: we decide at the next meeting.

eSSC

- ALU: we want it, both for the primary and for the secondary.
- Ericsson: use cases?
- ALU: Manhattan scenario.
- Huawei: we also want to have it and we think is easy to support.
- NSN: slight preference to have it.
- Ericsson: should we take this decision now?

=> Chair: at the next meeting we decide

Agreements
Intra-site
DTX/DRX could be configured in Intra-NodeB multiflow.
For Intra-NodeB multiflow, the DRX status and the scope of orders is common to both serving HS-DSCH cells, and can be sent on any serving cells or secondary serving cells.
Inter-site
DTX could be configured for inter-site operation

IPR2025-00720, OnePlus Ex. 1004

10.4.3 Mobility aspects

R2-120278 Considerations on the mobility with HSDPA Multiflow Nokia Siemens Networks Disc
Proposal 1: The mobility in Multiflow is based on the legacy mobility procedure.
Proposal 2: It is up to the network to decide which type of mobility cell change procedures – synchronized or unsynchronized – should be used with the Multiflow operation.
Proposal 3: If RAN2 agrees to introduce a new measurement event for the Multiflow operation, it must have the minimum impact to the legacy functioning.
Proposal 4: Discuss whether the Multiflow capable UE should also support the extended measurement capability.

- Renesas: any more details on the simulation?
- Renesas: what about the inter-frequency case?
- NSN: not in this paper
- ALU: table 2. Which scheduling assumption do you have?
- NSN: I need to check, I think absolute priority
- ALU: we had similar observations in our simulations (RAN1). If you change the scheduling, we can have different results.

⇨ Noted

R2-120402 Mobility under multi-flow transmission Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
Proposal 1: Use legacy methods and event triggers for primary serving cell handover when multi-flow transmission is operational at the UE.
Proposal 2: Introduce events for Assisting Serving Cell mobility.
Proposal 3: Discuss methods to enable ESCC for the Assisting Serving Cell.

- ALU: we used different scheduling assumption in the RAN1 paper mentioned
- ALU: we need to re-check our P2.

⇨ Noted

R2-120412 Simulation regarding the selection of the second best cell Ericsson, ST-Ericsson Disc
Proposal 1 In case of multiflow operations it is not needed to introduce new mobility events to report the second best cell in the active set.

- ALU: the number of cells in the active set can depend on the event configuration.
- ALU: which scheduler?
- Ericsson: only one user in the system. We focused on the throughput (full buffer, etc.)
- ALU: what about the other UEs?
- Ericsson: we are not resource limited
- NSN: we agree with Ericsson. They show the right extreme scenario that we need to consider (worst case).
- NSN: on the 3db margin. In real life the operator can chose small margins.
- IDT: ALU is not suggesting to use 6db
- IDT: one of the assumptions of the TR was 6 db range. A number of parameters are different from the TR simulations.
- Ericsson: we think 3db is more realistic scenario to look at
- Ericsson: the curves show the same trends with different channel models.
- Renesas: did you consider the inter-frequency case?
- Ericsson: which scenario is this? Do you mean on different Node Bs?
- Renesas: in general
- Ericsson: like in the multicarrier case
- NSN: we don't understand the question
- Renesas: DL 4C
- NSN: there can be max 2 sites.
- Ericsson: this can also happen in legacy features. There is no difference.
- Renesas: how do you keep a good quality on the secondary in case of for example interfrequency.

⇨ Noted

R2-120553 Multiflow mobility Huawei, HiSilicon Disc

- No questions

⇨ Noted

R2-120592 Multiflow mobility Renesas Mobile Europe Ltd Disc

IPR2025-00720, OnePlus Ex. 1004

Proposal 1: Introduce the terms "HS-DSCH active set", Secondary HS-DSCH active set", "HS-DSCH monitored set"
Proposal 2: Apply the modified event 1a, 1b, 1c for HSDPA multiflow mobility on primary carrier
Proposal 2a: Discuss whether we need to be able to use events 1e, 1f and 1j for for HSDPA multiflow mobility on primary carrier
Proposal 3: Apply the modified event 1a, 1b and 1c for each configured additional frequency for HSDPA multiflow operation

- No questions

⇨ Noted

R2-120621 Mobility considerations for multiflow HSDPA InterDigital Communications Disc
Proposal 1: Adopt the above definitions of primary and secondary downlink frequencies
Proposal 2: Adopt the above definitions of assisting secondary serving cell
Proposal 3: Agree that an assisting secondary serving cell is included in the UE's active set
Proposal 4: Introduce a new intra-frequency event that is triggered when the quality of a cell in the active set becomes better than the quality of an assisting secondary serving cell
Proposal 5: The mobility procedures of multi-frequency multi-flow operation is only based on the measurements on the primary frequency

- Renesas: if the UE is receiving on 2 frequencies why is difficult to measure them?
- IDT: we had this discussion in Rel-8, but in Rel-8 etc, this is a separate UE capability

=> Noted

R2-120727 Event based Virtual Active Set reporting for MP-HSDPA Qualcomm Incorporated Disc
Proposal 1 – Add "virtual" event-1d reporting (i.e. e1d reporting based on secondary carrier RF measurements) for MP-HSDPA.
Proposal 2 – Discuss the need to add other virtual intra-frequency events reporting (based on secondary carrier RF measurements).

- ALU: should not use the existing event 2x events? Is this inter-frequency HO?
- QC: yes, but triggered by a new event that now is not reported
- QC: the UE is still maintaining the VAS as today, so keep measuring also the other frequency
- Renesas: what if the UE is using two cells on the other frequency? What if the second cell is no longer the second best?
- Renesas: you need to configure a VAS size 2 if you want more cell to be able to be reported?
- QC: yes
- QC: is only the best cell that we would like to report.
- Renesas: quite complicated solution for a limited use case.
- QC: fig 2, the assumption is the f1 coverage is smaller than f2
- QC: we thought that this is simpler than what Renesas is proposing.

=> Noted

Discussion

- Renesas: is basing all the mobility on the primary frequency sufficient for all the scenarios?

Any new measurement event?
Anything on configuration/reporting of Additional measurement?
Any other proposals?
Chair: next meeting we will decide on the above points.

Agreements:
It is possible to use legacy methods and event triggers for mobility when multi-flow transmission is operational at the UE.

10.4.4 Intra Node B aggregation

No contributions.

10.4.5 Inter Node B aggregation

Including analysis on RLC data split options and complexity analysis

IPR2025-00720, OnePlus Ex. 1004

R2-120050 Consideration on optimized usage of NACKdelayTimer ZTE Disc

Proposal 1: To conclude that skew fully aware scheme on UE side is not necessarily to be specified.
Proposal 2: To confirm that static NACKDelayTimer tuning via RRC dedicated message is needed.
Proposal 3: To study the necessity and complexity of optimised usage of NACKDelayTimer on UE side.

- No questions.

=> Noted

R2-120276 Skew handling for HSDPA Multiflow Nokia Siemens Networks Disc

Proposal 1: Introduce a timer similar to t-Reordering (as specified in [9]) to enable UE centric skew handling.
Proposal 2: Discuss about potential enhancements to optimize further the functioning of the RLC reordering timer.

- Huawei: Questions on simulation assumptions. Delay of the Iub. Different delay for the primary and secondary. Is this increasing the number of skews?
- NSN: that should take into account the power control
- Huawei: the two Node Bs should be neighbours
- NSN: I agree the difference can be also lower
- Huawei: fig.6 maybe the UE will not report the missing PDU “immediately”. There will be a delay in the status report. There will be different re-transmissions.
- NSN: fig.6 anticipates the situation that we expect with Mflow.
- Huawei: in simulations the UE has an immediate report?
- NSN: no, we used legacy behaviour
- Huawei: how large the status report will be with the network centric solution? We don’t think it will be much.
- NSN: these simulations are done with network centric solutions only.
- Huawei: but the size of the overhead is small.
- NSN: these are approximations based on the statistic of the simulations
- Huawei: if the size of these PDUs is small is not a real problem for the system
- Huawei: the min PDU size is small
- NSN: but multiplied by the number of time you send these it could make a difference
- Huawei: LTE-like timer. We think the system is different. They have the re-ordering in RLC. In UMTS we have it in MAC layer. Why do you want to use the same mechanism?
- NSN: with Mflow inter-site we have two MAC-ehs entities. This is new.

=> Noted

R2-120405 Discussion on inter-NB aggregation under multi-flow transmission Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc

Proposal 1: The NB provides information/indication to the RNC for determining the probability that a packet is lost or skewed.
Proposal 2: Discuss the need for a combined RNC and UE centric solution and how UE transport information to the RNC.

- Ericsson: you are not excluding the use of UE centric solution but not used to the timer, so?
- ALU: yes, no timer
- Chair: which information?
- ALU: new info
- Chair: what?
- ALU: for example the probability that a packet is skew. We need to talk about which information.
- NSN: assume we have a new “statistical info”, how can this help?
- ALU: the RNC can adapt its waiting time based on help from the UE on how reliable is the link
- NSN: we think the channel is going to vary a lot, so this info might not help.
- ALU: it’s a guess, in the end.
- NSN: we would like to not guess, but have clear info to based our system behaviour on.

⇨ Noted

R2-120410 Multiflow UE centric skew handling Ericsson, ST-Ericsson Disc

Proposal 1: Discuss and agree the possibility of introducing the reordering algorithm, based on the t-Reordering timer for LTE RLC AM PDUs, as a skew handling mechanism for multiflow inter-site operations

- Huawei: did Ericsson study the impact to DL throughput?
- Ericsson: this timer can be set by the network, alive so to zero if necessary
- Huawei: our understanding is that there will be a negative impact to DL throughput.
- Ericsson: this can be tuned by the network

IPR2025-00720, OnePlus Ex. 1004

- Huawei: in LTE the re-ordering is in RNC, why cannot do the same in UMTS.
- IDT: in LTE there is no skewing probability
- NSN: we should focus on UMTS. LTE is different.
- Huawei: also the real NACKs will be delayed
- NSN: we don't think that's a problem
- Huawei: it depends. We would like to understand the impact, we would like to see the study on the impact to the DL throughput.
- NSN: what if you don't handle NACKs in the UE?
- Huawei: we have done this before in simulations. From other companies, in the SI phase.
- NSN: so what is the impact to the DL in case of RNC centric solution?
- Huawei: no impact on DL throughput.
- NSN: we think that the RNC cannot distinguish a true NACK from a false NACK.
- Huawei: we think it can do it
- NSN: it doesn't work in all the cases.
- ALU: this is RNC centric on top of this?
- Ericsson: this is in addition and on top
- ALU: can you turn off the RNC centric?
- Ericsson: it depends. Up to the network.
- ALU: is it a shared timer?

=> Noted

R2-120522 Multiflow skew handling Huawei, HiSilicon Disc

Proposal: RNC-centric solution is sufficient for multiflow skew handling, and no other solutions need to be considered further.

- NSN: we don't agree with any of these points
- Ericsson: point n.6 is contradictory. RNC knows everything or something or nothing? We think the network can decide when to switch it on, e,g. when it starts receiving lots of NACKs.
- Huawei: we think having two solutions is redundant
- ALU: point n.6. Still not clear how these two timers work, if used together.
- NSN: point n.6. Any network is free to decide how to use it.

⇨ Noted

R2-120725 Optimizing RNC-based RLC split performance Qualcomm Incorporated Disc

Proposal 1 – Consider the proposed optimizations when defining requirements for an RNC-based inter-NodeB data aggregation operation.

1. *Within each LIST SUFI, the NAKed gaps shall be arranged in the ascending order of the RLC sequence number;*
2. *Within each LIST SUFI, all the packets between the NAKed gaps are considered ACKed;*
3. *In case multiple Status PDUs are generated for the same reporting instant, the LIST SUFI in the subsequent Status PDU shall NAK again at least one packet in the last sequence number gap in the previous Status PDU.*

Proposal 2 – Send a LS to RAN3 to inform them of the identified potential issues on the UTRAN side, and request their feedback on discussed/agreed RAN2 solutions.

- NSN: 2.1
- Ericsson: P1 and P2 do not need any standardization standards
- QC: maybe we can write them down as a rule, so we prefer to standardize them

=> Noted

Discussion:
Any UE centric scheme?

- Yes: NSN, Ericsson, QC, IDT
- No or not yet: Huawei, Renesas, ALU

- Renesas: we showed that the network centric scheme works, so why do we need another solution?
- QC: two schemes are better than one
- Huawei: which type of UE centric solution?
- QC: let's see
- ALU: not ready to agree on this. We need more thinking.
- IDT: fine with a simple scheme.

IPR2025-00720, OnePlus Ex. 1004

- Renesas: based on the last meeting we agreed that the network based works, so we don't want two solutions.
- NSN: we are surprised about this comment.

=> Chair: next meeting we will decide on this.

Other questions:
If yes which one?
Anything else on top?
Node B info to RNC?

10.4.6 CRs

Stage 2 CRs

R2-120115 Introduction of Multiflow in TS 25.302 Nokia Siemens Networks CR 25.302 (0208) - B REL-11 HSDPA_MFTX-Core

- Renesas: definition? Up to two frequencies?
- NSN: it is mentioned in 25.308
- Renesas: physical channel combinations are missing

=> postponed

R2-120116 Introduction of Multiflow in TS 25.306 Nokia Siemens Networks CR 25.306 (0346) - B REL-11 HSDPA_MFTX-Core

- Ericsson: definition. Do you expect a capability bit, together with the category?
- ST-Ericsson: usually we start from 25.331
- ST-Ericsson: sometime we write capabilities that do not have a separate signalling
- Ericsson: maybe we need more than one capability?

=> postponed

R2-120117 Introduction of Multiflow in TS 25.308 Nokia Siemens Networks CR 25.308 (0121) - B REL-11 HSDPA_MFTX-Core

- Chair:
- Table? IDT: less common.
- Figures? IDT: ok
- Approach? We should have the approach that we write what is agreed (only some small details cab be marked as FFS)
- Ericsson: fig 22.2. MAC-d in SRNC?
- NSN: good question.

=> postponed

Chair: UMTS Email discussion n.3 [77#35] to progress on the CRs until next meeting. See below in 11.2.

- NSN: can we send an LS to RAN3 to inform them about the progresses in RAN2?
- Ericsson: why? Anything that they are waiting for? Or actions for them?
- Ericsson: they can look at the minutes.
- Renesas: no need.
- IDT: we haven't agreed on the Inter-Node B DRX, so we can wait.
- Ericsson: anything in particular?
- Ericsson: how does the node B know that is configured for MultiFlow.
- Chair: this is a RAN3 question?
- Ericsson: we can send it
- Huawei: the current RAN2 agreement sdo not have RAN3 impact.
- Vodafone: maybe we can draft something offline and have a look and then decide.

=> Chair: Draft LS and then we decide and then

R2-120891 Draft LS on the RAN2 Multiflow agreements, contact: NSN, to: RAN3, cc RAN1, HSDPA_MFTX-Core

=> Chair: we take away "proposed" and the LS is agreed in R2-120912

R2-120912 LS on the RAN2 Multiflow agreements, contact NSN, Source: R2. to: RAN3, cc RAN1 HSDPA_MFTX-Core

=> LS is agreed

IPR2025-00720, OnePlus Ex. 1004

10.4.7 Others

Including UE categories, possible optimisations and enhancements

R2-120555 Consideration on UE multiflow capabilityHuawei, HiSilicon Disc REL-11 HSDPA_MFTX-Core
- Not treated.

10.5 WI: Other Rel-11 WIs

i.e. for WIs for which RAN2 is not prime responsible WG.

10.5.1 ULTD – CL (RP-110374)

(HSPA_UL_TxDiv-CL-Core, leading WG: RAN1, REL-11, started: Dec.10, target: March 12, WID: RP-110374)

All the 5 documents below, not treated.

R2-120052 Some clarifications for coupling UL OLTD with UL CLTDZTE CR 25.331 (4887) - B REL-11 HSPA_UL_TxDiv-CL-Core
withdrawn

R2-120526 Miscellaneous corrections for UL CLTD Huawei, HiSilicon CR 25.331 (4924) - F REL-11 HSPA_UL_TxDiv-CL-Core
R2-120590 CLTD activation/deactivation Renesas Mobile Europe Ltd Disc
R2-120596 Signaling design to Enable and Disable CLTD Qualcomm Incorporated Disc
R2-120598 Enabling Closed Loop Antenna Switching Qualcomm Incorporated Disc
All 4 Tdocs above not treated

10.5.2 ULTD – OL (RP-110374)

(HSPA_UL_TxDiv-OL-Core, leading WG: RAN4, REL-11, started: Dec.10, target: March 12, WID: RP-110374)

No contributions.

10.5.3 Extending 850 MHz Upper Band (RP-111396)

(e850_UB-Core, leading WG: RAN4, REL-11, started: Dec.10, target: Dec.11, WID: RP-111396)

R2-120374 Addition of new band XXVI (Extending 850 MHz Upper Band (814 - 849 MHz) Alcatel-Lucent, Samsung, Sprint CR 25.331 (4909) - B REL-11 e850_UB-Core
- Cover sheet needs update.
- With the cover sheet updates, the CR is revised in R2-120XX0
=> Revised in R2-120892
R2-120892 Addition of new band XXVI (Extending 850 MHz Upper Band (814 - 849 MHz) Alcatel-Lucent, Samsung, Sprint CR 25.331 4909 - B REL-11 e850_UB-Core
⇨ The CR is agreed

R2-120376 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint CR 25.307 (0162) - B REL-4e850_UB-Core
- Ericsson: SIB5bis is missing?
- ALU: I need to check.
=> Revised in R2-120893
R2-120893 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint CR 25.307 0162 - B REL-4e850_UB-Core
Chair: after checking we confirm that we don't need SIB5 bis.
=> The CR is agreed.

IPR2025-00720, OnePlus Ex. 1004

R2-120377 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 (0163) - B REL-5e850_UB-Core
=> Revised in R2-120894
R2-120894 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 0163 - B REL-5e850_UB-Core
=> The CR is agreed

R2-120378 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 (0164) - B REL-6e850_UB-Core
=> Revised in R2-120895
R2-120895 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 0164 - B REL-6e850_UB-Core
=> The CR is agreed

R2-120380 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 (0165) - B REL-7e850_UB-Core
Revised in R2-120896
R2-120896 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 0165 - B REL-7e850_UB-Core
=> The CR is agreed

R2-120381 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 (0166) - B REL-8e850_UB-Core
=> Revised in R2-120897
R2-120897 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 0166 - B REL-8e850_UB-Core
⇨ The CR is agreed

R2-120383 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 (0167) - B REL-9e850_UB-Core
=> Revised in R2-120898
R2-120898 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 0167 - B REL-9e850_UB-Core
⇨ The CR is agreed

R2-120389 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 (0168) - B REL-10 e850_UB-Core
Revised in R2-120899
R2-120899 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 0168 - B REL-10 e850_UB-Core
⇨ The CR is agreed

R2-120391 Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307 Alcatel-Lucent, Sprint
CR 25.307 (0169) - B REL-11 e850_UB-Core
Withdrawn
- ALU: this is what we would look like to have after REl-11 will be created.
- ALU might bring this clean up CR after Rel-11 has been created.

10.5.4 Others

(SONenh2_LTE_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, target: Sep.12, WID: RP-111629)

(NC_4C_HSDPA-Core, leading WG: RAN4, REL-11, started: March 11, target: June 12, WID: RP-110416)

(MIMO_64QAM_HSUPA-Core, leading WG: RAN1, REL-11, started: Dec. 11, target: Dec. 12, WID: RP-111642)
R2-120597 MAC Layer aspects of UL MIMO Qualcomm Incorporated Disc REL-11
MIMO_64QAM_HSUPA-Core
Not treated

(Sec11, leading WG: SA3, REL-11, started: June 09, target: Sep.12, WID: none)

IPR2025-00720, OnePlus Ex. 1004

R2-120329 Modification of security context storage rate on the UICC Nokia Siemens Networks CR 25.331 (4906) - F REL-11 Sec11
not treated

R2-120342 Draft Reply LS on stage 3 for modification of security context storage rate on the UICC Nokia Siemens Networks LSout LS07 draft reply LS to C1-114945 = R2-120006 REL-11 Sec11
Chair: status on the two papers above (not presented this meeting)?
NSN: CT1 finished their job. They sent an LS and we haven't received yet.
NSN: some company said that they need more time.
ST-Ericsson: 24.008?
Chair: people need to check.
⇨ Postponed

(4Tx_HSDPA-Core, leading WG: RAN1, REL-11, started: Sep.11, target: Sep.12, WID: RP-111393)

R2-120491 UE categories for Four Branch MIMO Ericsson, ST-Ericsson Disc REL-11 4Tx_HSDPA-Core
Withdrawn

R2-120494 Selection of transport blocks with 2 codeword in four branch MIMO Ericsson, ST-Ericsson Disc REL-11 4Tx_HSDPA-Core
=> Revised in R2-120798

R2-120798 Selection of transport blocks with 2 codeword in four branch MIMO Ericsson Disc REL-11 4Tx_HSDPA-Core

Proposal: Stream (Rank) based transport blocks with 2 codeword MIMO is proposed

- NSN: is this a RAN1 discussion or RAN2. I understand this has been discussed in RAN1
- Ericsson: there was a RAN1 agreement to use 2 codewords.
- NSN: figure 1?
- Ericsson: in practice we need the two transport block to be equal in size.
- Huawei: we need to check RAN1 chairman notes.
- Huawei: this is the first time we see this. We need more time.
- Ericsson: the two codewords have been agreed. We don't want to touch the table.
- Ericsson: we need to prepare CRs and documents for the next meeting.
- Ericsson: we think this is the only possible solution.
- IDT: if this is the only solution you can maybe propose the change, or we can see an LS from RAN1.

=> Noted

10.6 SI: Other Rel-11 SIs

i.e. for SIs for which RAN2 is not prime responsible WG.
(FS_EHNB_enh, leading WG: RAN3, REL-11, started: March 11, target: March 12, WID: RP-111623)

R2-120403 RAN2 input for TR37.803 on Enhanced HNB mobility in CELL_FACH Alcatel-Lucent Disc
R2-120404 Solutions for CELL_FACH mobility to/from HNB cells Alcatel-Lucent Disc
The two documents above not treated

R2-120452 Autonomous search in CELL_FACH state Ericsson, ST-Ericsson Disc

Proposal 1: Do not introduce autonomous search in CELL_FACH that relies on FACH measurement occasions

- Huawei: we understand the intention, but this is a Rel-11 SI. We think it is too early to decide to NOT introduce something. We think it needs to be discussed further.
- ST-Ericsson: the key point is "based on measurement occasion"
- Huawei: legacy measurement occasion? And what about the second DRX? Maybe we can still meet the requirement
- ST-Ericsson: Huawei in another paper is suggesting having CSG special measurement occasion. We would like to keep it simple.
- Huawei: we are talking about autonomous search. This is up to the UE implementation now. So we don't see the point of forbidding this.
- QC: we agree with ST-Ericsson/Ericsson. It is not clear to me that we can keep the same requirements. We invite Huawei to look at RAN4 requirements, that are quite loose.

IPR2025-00720, OnePlus Ex. 1004

- Renesas: we agree with QC and ST-Ericsson. It will be challenging for the UE. We should not deviate too much from the assumptions that we have so far. This was not supposed to be too different.
- ALU: the use of the second DRX is a viable solution. Do we write something in the TR?
- NSN: we think we don't have to treat this now and we can wait.
- ST-Ericsson: is too early to say something.

=> Noted

R2-120557 Discussion on CELL_FACH enhancement Huawei, HiSilicon Disc
R2-120595 CSG reselection in CELL_FACH Renesas Mobile Europe Ltd Disc
The two documents above not treated

10.7 WI: TEI11

R2-120849 LS on extended S-RNTI REL-11 TEI11
(R3-120348; contact: Ericsson) RAN3
This LSin was received on Tue of RAN2 #77

- ALU: in RAN3 there was supposed to be a related document. Has it been produced?
- Ericsson: which document? NSN produced a CR.
- Chair: are we able to reply?
- NSN: we need more time to analyse this.
- Ericsson: why? The CR was available before.
- ALU: we need to look into this.
- Chair: we try to reply at the next meeting, companies should check and we should be able to answer RAN3 questions.

⇨ Noted

R2-120173 Introduction of Extended S-RNTI Ericsson, ST-Ericsson CR 25.331 (4892) - B REL-11 TEI11

- Presented but not discussed yet.

=> Postponed

R2-121027 LS on CSFB awareness in UMTS and GERAN REL-11 TEI11
(R3-120373; contact: Vodafone) RAN3

- Renesas: is this needed in RRC Connection Request or other messages, like Setup Complete?
- Vodafone: we can introduce it in 3 ways.
- Chair: where these solutions have been presented?
- Vodafone: they have not been presented. There might be also other ways.
- Panasonic: this type of discussion should be done in the main session
- Vodafone: I received this comment already. OK.
- Panasonic: this is not so related to UTRAN. LTE people should look at this.
- Vodafone: the spec impact could be UTRAN only.
- Vodafone: can we take a working assumption that we will introduce a UE indication via RRC?
- Vodafone: we have quite a lot of supporting companies
- RIM: there are existing functionalities to detect redirections. CSFB is your focus?
- Vodafone: we would like to have a specific counter based on UE info
- Panasonic: so this is a NAS issue?
- DoCoMo: if we use establishment cause there is impact in NAS.
- Vodafone: we don't ask to agree on a particular mechanism
- Chair: "can we take a working assumption that we will introduce a UE indication via RRC?"
- Panasonic: we tried to provide a solution for this some years ago, for exactly the same case. That was not agreed.
- Vodafone: I am aware of this.
- QC: we co-sign this document
- Vodafone: no need to answer the LS now.

=> Noted

Working assumption:

IPR2025-00720, OnePlus Ex. 1004

- We will introduce a UE explicit indication via RRC.
- The details are FFS.

R2-120457 CR to 25.331 on new establishment cause CSFB callVodafone CR 25.331 (4922) - B REL-11 TEI11
Chair: Quickly presented but not discussed
⇨ Not agreed

R2-120045 Consideration on frequency band specific AG operation ZTE Disc REL-10 TEI10
R2-120048 Some scenarios potentially requiring new UE indicationsZTE Disc REL-10 TEI10
R2-120091 New information in SCRI message for UMTS Fast dormancy Nokia Siemens Networks Disc REL-11 TEI11
R2-120092 New information in SCRI message for UMTS Fast dormancy Nokia Siemens Networks CR 25.331 (4889) - F REL-11 TEI11
R2-120531 Frequency specific compressed mode for the non-adjacent carrier allocation Nokia Siemens Networks Disc REL-11 TEI11
The above 5 documents not treated

11 Outgoing LSs and email discussions from UTRA session

11.1 Agreed outgoing LSs from UTRA session

R2-120913 LS regarding support for mobility improvements to GERAN in CELL-FACH, Contact: Qualcomm, Source RAN2, to RAN, CC RAN4, Cell_FACH_enh-Core
agreed

R2-120912 LS on the RAN2 Multiflow agreements, Contact NSN, Source: RAN2. to: RAN3, cc RAN1 HSDPA_MFTX-Core
agreed

11.2 Email discussions from UTRA

UMTS Email discussion n.1 [77#09] with the aim of agree on the CR(s). ASN.1 needs to be checked and the procedural text completeness. The intention of the CR is ok for companies in RAN2 and in particular the number of possible supported band is fine. Deadline: Thursday 16 Feb midnight. Rapporteur: Huawei.

UMTS Email discussion n.2 [77#34] on Stage 2 CRs (25.308/25.319) for FE-FACH WI. Deadline: submission deadline for next meeting. Rapporteur: QC. Purpose: progress on the running CRs.

UMTS Email discussion n.3 [77#35] on CRs for Multiflow WI. Deadline: submission deadline for next meeting. Rapporteur: NSN. Purpose: progress on the running CRs.

12 Left-overs and Comebacks

12.1 LTE adhoc session

R2-121010 Report from LTE UP session
- no comments
=> report is noted, agreements of the UP session are confirmed

R2-121011 Introduction of CA Enhancements in MAC Rapporteur (Ericsson) CR 36.321 (0534) - B REL-11 LTE_CA_enh-Core

IPR2025-00720, OnePlus Ex. 1004

- Capture agreements from this meeting

✉ **LTE – CA: One week email discussion [77#05] to agree on an update of the running stage-3 CR as baseline for further work (will not be sent to plenary) (Ericsson)**

12.2 UMTS

Nothing to report.

12.3 Main session

- CBF: Approval of report from previous meeting (MCC)
- => CBF: Will send a response to "LS on H(e)NB air interface activation" indicating that this is not in the scope of RAN2 work or specifications and that we think that SA3 should be consulted for this matter. Can include SA3 in the response LS. Draft response LS can on H(e)NB air interface activation can be provided in R2-120807 (Huawei)
- => CBF: Will send a response "related to Final Submission to ITU-R" including comments/corrections to the documents. A draft response can be provided in R2-120808 (Telecom Italia)
- => We will send an LS on „the handling of RRC container during the inter-RAT handover" to GERAN asking them to clarify also 48.018 accodingly. A draft LS can be provided in R2-120815 (ZTE)
- => An updated Rel-10 CR can be provided in R2-120833 CR0895 (Samsung)
- => We will send an LS to RAN1 informing them about all agreements made on carrier aggregation so far. We will primarily attach the running stage-2 CR to the LS. (Nokia)

12.4 Email Discussions from main session

Note: This is a draft list of Email discussions. The final list including detailed content, responsible company and email discussion number will be distributed on the RAN2 reflector after the meeting (see Annex F).

✉ Joint UMTS/LTE – EAB: Email discussion until next meeting on special access class (AC11-15) (what happens when these special access classes are barred?) (Huawei)

✉ Joint UMTS/LTE – EAB: Email discussion until next meeting on SIB design for RAN sharing solutions (Huawei)

✉ LTE/UMTS – MDT: One week email discussion to agree on updated running stage-2 CR (MediaTek) (R2-121032)

✉ LTE/UMTS – MDT: Email discussion until next meeting on location information (when can location information be considered being available; also related to battery consumption) (LG)

✉ LTE/UMTS – MDT: Email discussion until next meeting on Accessibility Measurements (failed RRC Connection Establishment?; details on why it failed?) (Ericsson)

✉ LTE/UMTS – MDT: Email discussion until next meeting on Latency Measurements (use case?; packet delay?; packet delay budget?; GBR/Non-GBR?) (MediaTek)

✉ LTE – FGI FDD/TDD: One week email discussion to technically endorse the 36.331 CRs introducing split FDD/TDD capabilities. The final CRs will include RAN2 and RAN1 related FGIs and capabilities. (Samsung)

✉ LTE – FGI25: One week email discussion to check and agree the inter-mode measurements (FGI25) issue. If agreed, the CRs will be sent to RAN for approval. (Intel)

✉ LTE - CA: Email discussion until next meeting to develop complete realizations for b1 and b3 that should be simple and working. There should be only one solution on each side! This should preferably include draft MAC CRs for both solutions. (IDT)

✉ LTE – CA: Email discussion until next meeting on how to solve the error cases related to timing reference. (Ericsson)

IPR2025-00720, OnePlus Ex. 1004

- LTE – CA: One week email discussion to agree on updated running stage-2 CR
- LTE – EDDA: Will have an email discussion until next meeting to prepare a text proposal capturing simulation results on power consumption with DRX. (RIM)
- LTE – MBMS: One week email discussion to capture the agreements in the running stage-2 CR (will not be provided to plenary) (Huawei)
- LTE – MBMS: Email discussion until next meeting whether the frequency information needs to be provided in USD given the decision to broadcast SAI in the RAN (Huawei)
- LTE – MBMS: Email discussion until next meeting on congestion handling for MBMS based on the decisions from this meeting (Samsung)
- LTE – MBMS: Email discussion until next meeting on details of MBMSInterestIndication (LG)
- IDC: One week email approval for update of running stage-2 CR capturing the agreements from this meeting (CMCC).
- One week email approval to capture agreements from this meeting in the TR (ALU). Can be provided in R2-121028 36.839 v0.4.1
- Email discussion until next meeting on inter-frequency small cell detection. Should investigate performance of existing functionality. Can discuss potential enhancements. (DOCOMO)
- Email discussion until next meeting on the impact of DRX on HetNet mobility performance. (Nokia)
- Email discussion until next meeting on the need for mobility state estimation enhancements. (Renesas)
- LTE – CA: One week email discussion to agree on an update of the running stage-3 CR as baseline for further work (will not be sent to plenary) (Ericsson)

13 Outgoing LS and output to other groups from LTE/joint

R2-120157 [Draft] reply LS on Usage of speed criterion for MDT data collection; NEC; LSout; LS08; draft reply LS to S5-113887 = R2-120034; REL-11; eMDT_UMTSLTE-Core;

R2-120848 LS on the introduction of extended UE capabilities for dual mode (QC)
=> Remove RAN2 from CC line
- Samsung thinks we should reflect the agreement from RAN2 that we think that with this decision there should be no impact to other groups.
- ALU thinks the LS could be much simpler and the action should clearly say that we don't expect more work for SA2.

=> Remove c) and d) and replace by a sentence "RAN-55 is expected to decide which capabilities are allowed to be different between FDD and TDD and to agree on the final CR."
=> Change Actions to: "RAN2 assumes based on the above that there is no further action for SA2 regarding capabilities/FGI settings for FDD/TDD dual mode LTE terminals"
=> With these changes the LS is approved in R2-121009

R2-120806 LS on "speed criterion for MDT" to SA5 (NEC)
=> The LS is approved in R2-121043

R2-120807 Reply LS on H(e)NB air interface activation to CT6 (cc SA3) (Huawei)
=> Include RAN3 in CC
=> The LS is approved in R2-121050

R2-120809 Reply LS on MBMS assistance information for service continuity to SA4 (QC)
=> correct "attached CR it is pleased" to "attached CR and is pleased"

IPR2025-00720, OnePlus Ex. 1004
Page 420 of 700

- Samsung wonders whether we are still sure that we really need the frequency information in USD. QC points out that there are cases where frequency information is still needed. NSN agrees with Samsung and would like to postpone the LS until we have discussed it in RAN2. ALU points out that we said in the morning that the UE may also prioritize based on the frequency in the USD. Samsung wonders whether this temporary solution for Rel-9. Samsung thinks that without the SAI we would not have a full solution in Rel-11. ALU thinks that there are Rel-9 UEs. Ericsson thinks there is no size issue in USD and assumes that it will be optional in USD. Orange agrees with Ericsson that it would be a fall-back mechanism. Verizon agrees with Orange and Ericsson that having the frequency information will solve a lot of problems. LG agrees.

a) frequency info in USD: 13
b) no need for frequency info in USD: 4
=> We will stick to the previous agreement of having the frequency info in USD.
- Huawei thinks that some companies intend to not send one of the two which is currently not supported according to our agreements.
- NSN thinks we anyway need to discuss whether there is a desire to send only one or the other information. That we should discuss before replying to SA4.
- Huawei does not think that SA4 expects an LS now.
=> Will discuss the issue via email and decide next meeting what to reply.

R2-120808 Reply LS response related to Final Submission to ITU-R (Telecom Italia)
=> The LS is approved in R2-121052

R2-120810 LS on Capability handling of LTE TDD and FDD to RAN (QC)
=> We will incorporate the RAN1 suggestions on which capabilities/FGIs to split (once received from RAN1)
=> We will discuss the final LS together with the 36.331 CRs.
- Samsung clarifies that the Rel-10 CR covering the Rel-10 features would also cover all Rel-8/9 capabilities.
=> The final LS can be provided in R2-121035 (pending email discussion [77#02])

R2-120811 Reply LS on DTX detection of PUCCH format 2 (DOCOMO).
=> Replace “sensitive” by “sensible”
=> With this change the LS is approved in R2-121046

R2-120815 LS on the handling of the RRC container during the inter-RAT handover to GERAN (ZTE)
=> LS is approved in R2-121051

R2-121025 Draft LS on network-based positioning to RAN1, 3 and 4 (Ericsson)
=> Apply changes agreed in section 7.4
=> Attach agreed CR R2-121030
=> With these changes the LS is approved in R2-121029

R2-12xxxx LS to RAN1 about all RAN agreements on the CA Multiple Timing Advance made so far to RAN1 (Nokia)

R2-121049 LS on MBMS service continuity to RAN3
- Ericsson supports sending this LS
- NEC and NSN do not see a need for the LS

14 Any other business

Meeting schedule 2012/2013:

MEETING	DATES	LOCATION	HOST	CO-LOCATION
RAN2 #77	6 Feb – 10 Feb 2012	Dresden, Germany	EF3	RAN 1/2/3/4/5
RAN #55	28 Feb – 2 March 2012	Xiamen, China	ZTE, CMCC	
RAN2 #77bis	26 March – 30 March 2012	Jeju, Korea	Samsung	RAN 1/2/4

IPR2025-00720, OnePlus Ex. 1004

MEETING	DATES	LOCATION	HOST	CO-LOCATION
RAN2 #78	21 May – 25 May 2012	Prague, Czech Republik	EF3	RAN 1/2/3/4
workshop RAN #56	11 June – 12 June 2012 13 June – 15 June 2012	Ljubljana, Slovenia Ljubljana, Slovenia	EF3 EF3	
RAN2 #79	13 Aug. – 17 Aug. 2012	Tsing Dao, China	Huawei	RAN 1/2/3/4/5
RAN #57	4 Sep. – 7 Sep. 2012	?, USA	NAF3	
RAN2 #79bis	8 Oct. – 12 Oct. 2012	Bratislava, Slovakia	EF3	RAN2 only
RAN2 #80	12 Nov. – 16 Nov. 2012	?, USA	NAF3	RAN 1/2/3/4, other
RAN #58	4 Dec. – 7 Dec. 2012	Barcelona, Spain	EF3	
RAN2 #81	28 Jan – 1 Feb 2013	Europe	EF3	RAN 1/2/3/4/5
RAN #59	26 Feb – 1 March 2013	Vienna, Austria	EF3	
RAN2 #81bis	15 April – 19 April 2013			RAN2 only
RAN2 #82	20 May – 24 May 2013	?, Japan	JF3	RAN 1/2/3/4/5
RAN #60	11 June – 14 June 2013			
RAN2 #83	19 Aug. – 23 Aug. 2013	Europe	EF3	RAN 1/2/3/4
RAN #61	3 Sep. – 6 Sep. 2013	Porto (tbc)	Portugal	EF3
RAN2 #83bis	7 Oct. – 11 Oct. 2013			RAN2 only
RAN2 #84	11 Nov. – 15 Nov. 2013			RAN 1/2/3/4/5
RAN #62	3 Dec. – 6 Dec. 2013			

EF3: European Friends of 3GPP
NAF3: North American Friends of 3GPP
JF3: Japanese Friends of 3GPP

15 Closing of the meeting

The TSG RAN WG2 chairman Henning Wiemann thanked the delegates for participating and contributing to RAN WG2 meeting #76. He thanked the European Friends of 3GPP (EF3) for hosting this meeting and closed the meeting on Friday February 10th, 2012 at about 17:00.

IPR2025-00720, OnePlus Ex. 1004
Page 422 of 700

Annex A:
List of participants

The list of participants of this RAN WG2 meeting #77 is attached to this report.

Total number of participants: 203 (registered just before the meeting: 264).

Annex B:
List of Tdocs

The list of Tdocs of this RAN WG2 meeting #77 is attached to this report.

Total number of Tdocs: 1055 (R2-120001 - R2-121055) of which 922 Tdocs are available, i.e. 133 are not provided.

Annex C:
Incoming liaison statements for TSG RAN WG2 #77

RAN2 Tdoc	title (original Tdoc, contact)	source	status	LS answer	additional comments
R2-120003	Response LS to R2-115646 on physical-layer measurement for network-based positioning (R1-114454; contact: Ericsson)	RAN1	noted	no	LS was not treated at RAN2 #76 in R2-115715
R2-120004	Reply LS to R2-115649 on Physical Layer Measurement for network positioning (R1-114456; contact: Alcatel-Lucent)	RAN1	noted	no	LS was not treated at RAN2 #76 in R2-115716
R2-120005	LS response to R2-115646 on Physical Layer measurement for network-based positioning (R4-116300; contact: Ericsson)	RAN4	noted	no	LS was not treated at RAN2 #76 in R2-115717
R2-120006	Reply LS to R2-115643 on stage 3 for modification of security context storage rate on the UICC (C1-114945; contact: NSN)	CT1	noted	no	draft LS reply in R2-120342; finally no LS answer
R2-120007	Reply LS to S3-111225 = R2-115677 on length of security in PWS (C1-115323; contact: RIM)	CT1	noted	no	note: RAN2 answered S3-111225 in R2-116558 at RAN2 #76

IPR2025-00720, OnePlus Ex. 1004
Page 423 of 700

RAN2 Tdoc	title (original Tdoc, contact)	source	status	LS answer	additional comments
R2-120008	Reply LS to S3-111225 = R2-115677 on length of security in PWS (GP-111882; contact: RIM)	GERAN2	noted	no	note: RAN2 answered S3-111225 in R2-116558 at RAN2 #76
R2-120009	LS on issues on inbound CSG mobility failure (GP-111889; contact: Huawei)	GERAN2	noted	no	
R2-120010	LS reply to R2-115635 on RACH procedure on SCell (R1-114459; contact: Alcatel-Lucent)	RAN1	noted	no	
R2-120011	Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-114461; contact: ETRI)	RAN1	noted	no	note: RAN2 answered S4-111114 in R2-116515 at RAN2 #76
R2-120012	LS on RAN1 agreements on uplink Closed Loop Transmit Diversity for HSPA (R1-114463; contact: Huawei)	RAN1	noted	no	
R2-120013	LS on Summary of RAN1 agreements on Further Enhancements to CELL_FACH (R1-114464; contact: Qualcomm)	RAN1	noted	no	
R2-120014	LS on feICIC (R1-114468; contact: NTT DOCOMO)	RAN1	noted	no	no LS answer (will wait for RAN1)
R2-120015	LS on additional special subframe configuration for E-UTRA TDD in Rel-11 (R1-114469; contact: CMCC)	RAN1	noted	no	note: RAN #54 agreed to consider a WI at RAN #55 (since topic was described as small issue)
R2-120016	Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-114475; contact: Huawei)	RAN1	noted	no	note: RAN2 answered S4-111114 in R2-116515 at RAN2 #76
R2-120017	LS on CELL_FACH mobility for 3G home access (R3-113129; contact: Alcatel-Lucent)	RAN3	noted	postponed	LS answer will be drafted in UTRA session
R2-120018	LS on MME/eNB behaviour in case of broken SCTP connection (R3-113152; contact: Vodafone)	RAN3	noted	no	includes 36.300 CR from RAN3; SA2 reply LS in R2-110038
R2-120019	LS Reply to R2-115520 on time to continue attempting to search for a suitable E-UTRA cell (R4-116146; contact: Ericsson)	RAN4	noted	no	
R2-120020	LS on DTX detection of PUCCH format 2 (R4-116249; contact: NTT DOCOMO)	RAN4	noted	R2-121046	
R2-120021	Reply LS to R2-114813 on signalling of additional frequency band indicators (R4-116291; contact: Ericsson)	RAN4	noted	no	
R2-120022	LS on CSG proximity indicator testing (R5-115775; contact: NTT DOCOMO)	RAN5	noted	no	note: This LS was treated at RAN #54 in RP-111417 and RAN requested to provide this RAN5 LS also to RAN2 #77
R2-120023	LS on FGI 27 in LTE and Single Radio VCC (RP-111769; contact: Qualcomm)	RAN	noted	no	no LS answer (will wait for SA2)

IPR2025-00720, OnePlus Ex. 1004
Page 424 of 700

RAN2 Tdoc	title (original Tdoc, contact)	source	status	LS answer	additional comments
R2-120024	Reply LS to R2-116557 on Capability handling of LTE TDD and FDD modes (RP-111770; contact: Qualcomm)	RAN	noted	R2-121035 (agreed by email discussion)	Qualcomm will draft LS reply in R2-120810
R2-120025	LS on FGI handling for inter-RAT ANR (RP-111772; contact: TeliaSonera)	RAN	noted	no	
R2-120026	Response LS to S5-112706 = R2-114870 on including Wi-Fi / LTE RAT combination for Inter-RAT (S1-113178; contact: Intel)	SA1	noted	no	
R2-120027	Reply LS R2-114804, S2-114698 = R2-115673 and C1-114451 = R2-115663 on EAB Requirements (S1-113383; contact: Huawei)	SA1	noted	no	
R2-120028	Reply LS to R2-115644 on EAB Requirement for RAN Sharing (S1-113385; contact: ZTE)	SA1	noted	no	
R2-120029	Reply LS to R2-115636 on MBMS reception from non-RPLMN (S1-113454; contact: Huawei)	SA1	noted	no	
R2-120030	Reply LS to S3-111225 = R2-115677 on length of security in PWS (S1-113459; contact: RIM)	SA1	noted	no	note: RAN2 answered S3-111225 in R2-116558 at RAN2 #76
R2-120031	Reply LS to R2-115644 "EAB Requirement for RAN Sharing" (S2-115475; contact: Vodafone)	SA2	noted	no	
R2-120032	Reply LS to S5-112706 = R2-114870 on Wifi offload for energy saving purpose (S2-115477; contact: Huawei)	SA2	noted	no	
R2-120033	Response LS to R3-112292 = R2-114864 on error scenarios and signalling impacts (S5-113886; contact: Huawei)	SA5	noted	no	
R2-120034	LS on Usage of speed criterion for MDT data collection (S5-113887; contact: NEC)	SA5	noted	R2-121047	
R2-120035	LS on H(e)NB air interface activation (C6-110601; contact: Gemalto)	CT6	noted	R2-121050	pCR=pseudo CR, 31.104 is not yet under CR control
R2-120036	Reply LS to R2-116553 on Limitation on PS voice RAB for Intra UMTS SRVCC (S2-120402; contact: ZTE)	SA2	noted	no	
R2-120037	Reply LS to R2-115636 on MBMS reception from non-RPLMN (S2-120403; contact: NSN)	SA2	noted	no	
R2-120038	Reply LS to R3-113152 = R2-120018 on MME/eNB behaviour in case of broken SCTP connection (S2-120404; contact: Huawei)	SA2	noted	no	
R2-120039	Preparation Work in 3GPP for ITU related to Final Submission to ITU-R towards Rev.11 of Rec. ITU-R M.1457 (RT-120017; contact: Telecom Italia)	3GPP ITU-R ad hoc	noted	R2-121052	
R2-120040	Reply LS to R2-115679 on MBMS assistance information for service continuity (S4-120283; contact: Qualcomm)	SA4	noted	postponed	
R2-120823	Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-120831; contact: Huawei)	RAN1	noted	no	received on Monday of RAN2 #77

IPR2025-00720, OnePlus Ex. 1004
Page 425 of 700

RAN2 Tdoc	title (original Tdoc, contact)	source	status	LS answer	additional comments
R2-120829	Reply LS to R2-116552 on parallel transmissions of PRACH and PUSCH/PUCCH/SRS (R1-120841; contact: Huawei)	RAN1	noted	no	received on Tue of RAN2 #77; no LS answer
R2-120849	LS on extended S-RNTI (R3-120348; contact: Ericsson)	RAN3	noted	no	received on Tue of RAN2 #77; treated in UTRA session; no LS answer
R2-121026	LS on VoHSPA capability indication (S2-121016; contact: Ericsson)	SA2	noted	no	received on Thu morning of RAN2 #77; no LS answer but related Qualcomm CRs for "VoIP continuity" will be updated accordingly
R2-121027	LS on CSFB awareness in UMTS and GERAN (R3-120373; contact: Vodafone)	RAN3	noted	no	received on Wed evening of RAN2 #77; treated in UTRA session and main session; topic will be discussed in joint session in the future
R2-121048	Reply LS to RP-111770 on Capability handling of LTE TDD and FDD modes (R1-120928; contact: Qualcomm)	RAN1	noted	no	received on Fri afternoon of RAN2 #77; will be taken into account in LS from RAN2 to RAN

postponed: LS answer was postponed to next RAN2 meeting (note: incoming LS will not be presented again at the next meeting and involved parties are requested to submit proposal for draft outgoing LS answer to next meeting).

Summary:

- In total: 44 LSs received for RAN2 #77: 7 related to UTRA, 17 related to LTE/E-UTRA, 20 related to joint aspects
- 3 resubmission from RAN2 #76:
  - R2-120003 = R2-115715 = R1-114454
  - R2-120004 = R2-115716 = R1-114456
  - R2-120005 = R2-115717 = R4-116300
- 6 of the 44 LSs were received during RAN2 #77 meeting:
  - R2-120823 = R1-120831
  - R2-120829 = R1-120841
  - R2-120849 = R3-120348
  - R2-121026 = S2-121016
  - R2-121027 = R3-120373
  - R2-121048 = R1-120928
- all 44 LSs noted; no LSs need to be resubmitted to RAN2 #77bis

IPR2025-00720, OnePlus Ex. 1004
Page 426 of 700

Annex D:
Outgoing liaison statements of TSG RAN WG2 #77

Only final outgoing LSs are listed here.

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
R2-120912	RAN2 Multiflow agreements	RAN3	RAN1	NSN	-	REL-11	HSDPA_MFTX-Core	agreed in UTRA session
R2-120913	Support for mobility improvements to GERAN in CELL_FACH	RAN	RAN4	Qualcomm	-	REL-11	Cell_FACH_enh-Core	agreed in UTRA session
R2-120930	CA enhancement status in RAN2	RAN1	-	Nokia	-	REL-11	LTE_CA_enh-Core	R2-120930 was agreed by email [77#04]
R2-121009	Introduction of extended UE capabilities for dual mode UEs	SA2	SA, RAN1, CT1	Qualcomm	-	REL-9	TEI9, LTE-L23	sent out on Wed evening of RAN2 #77
R2-121029	Network-based positioning	RAN1, RAN3, RAN4	-	Ericsson	-	REL-11	LCS_LTE-NBPS-Core	
R2-121035	Capability handling of LTE TDD and FDD modes	RAN	SA, RAN1, SA2, CT1	Qualcomm	RP-111770 = R2-120024	REL-9	TEI9, LTE-L23	R2-121035 was agreed by email [77#02]
R2-121046	DTX detection of PUCCH format 2	RAN4	RAN1	NTT DOCOMO	R4-116249 = R2-120020	REL-11	TEI11, LTE-L23	
R2-121047	Usage of speed criterion for MDT data collection	SA5	-	NEC	S5-113887 = R2-120034	REL-11	eMDT_UMTSLTE-Core	
R2-121050	H(e)NB air interface activation	CT6	SA3, RAN3	Huawei	C6-110601 = R2-120035	REL-11	HPM_UICC	
R2-121051	Clarification to the handling of the RRC container during inter-RAT handover	GERAN2	-	ZTE	-	REL-10	TEI10	
R2-121052	Preparation Work in 3GPP for ITU related to Final Submission to ITU-R towards Rev.11 of Rec. ITU-R M.1457	3GPP ITU-R ad hoc	-	Telecom Italia	RT-120017 = R2-120039	REL-10	-	

Summary:

In total 11 outgoing LSs of RAN2 #77 (including 2 LS agreed by email): 6 related to LTE/E-UTRA, 2 related to UTRA, 3 related to joint aspects.

IPR2025-00720, OnePlus Ex. 1004
Page 427 of 700

Annex E:
List of agreed CRs for RAN #55

Overview of 64 agreed and 3 technically endorsed RAN2 CRs submitted to RAN #55 (Xiamen): see also RP-120024:

spec	REL-4	REL-5	REL-6	REL-7	REL-8	REL-9	REL-10	REL-11	CRs	specs
25.304	0	0	0	0	0	0	1	-	**1**	**1**
25.306	0	0	0	0	0	0	2	2	**4**	**2**
25.307	1	1	1	1	1	1	1	-	**7**	**7**
25.319	0	0	0	0	0	0	0	1	**1**	**1**
25.331	0	0	0	2	3	4	5	7	**21**	**5**
36.300	0	0	0	0	0	0	3	6	**9**	**2**
36.302	0	0	0	0	0	0	1	-	**1**	**1**
36.304	0	0	0	0	0	1	1	-	**2**	**2**
36.306	0	0	0	0	0	0	3	-	**3**	**1**
36.321	0	0	0	0	1	1	1	-	**3**	**3**
36.331	0	0	0	0	0+2*	3+2*+ 1**	12+3*+ 2**	-	**15+7*+ 3****	**2+1***
UTRA	1	1	1	3	4	5	9	10	**34**	**16**
LTE	0	0	0	0	1+2*	5+2*+ 1**	21+3* +2**	6	**33+7* +3****	**11+1***
total	1	1	1	3	5+2*	10+2*+1 **	30+3*+ 2**	16	**67+7* +3****	**27+1***

*: company CRs provided to RAN #55; **: company CRs provided during RAN #55

IPR2025-00720, OnePlus Ex. 1004
Page 428 of 700

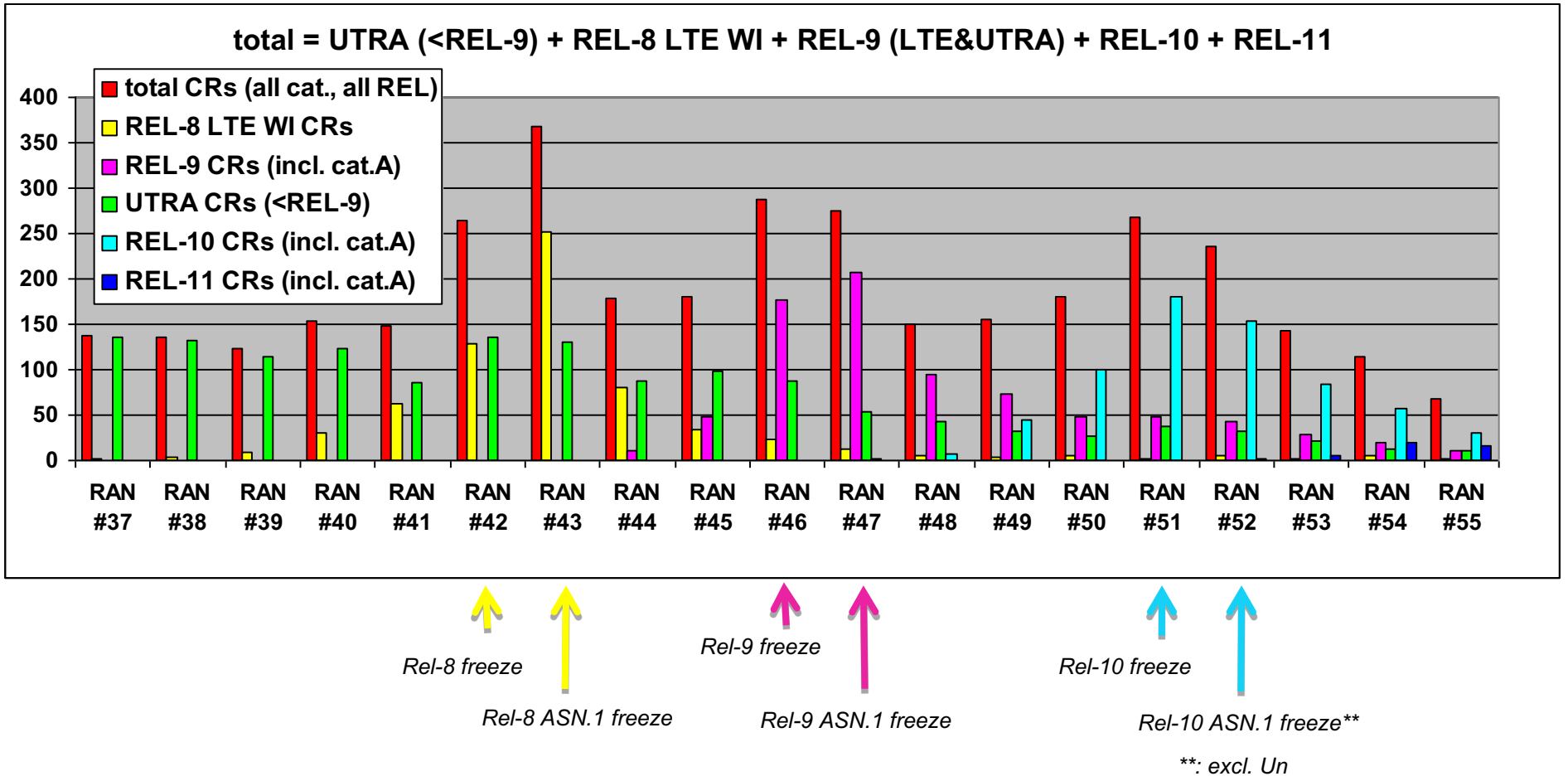


Figure E-1: RAN2 CRs submitted to the previous and the following RAN plenary #55

IPR2025-00720, OnePlus Ex. 1004
Page 429 of 700

The following table includes the RAN2 CRs submitted to RAN #55 in Xiamen:

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #55	RAN #55 status	Remarks
25.304	0307	-	F	REL-10	R2-120850	Clarification on the black listed cells for cell reselection to E-UTRA (Rel-10)	LTE-L23, TEI10	Huawei, HiSilicon, NTT Docomo	RP-120321	approved	
25.306	0342	-	F	REL-10	R2-120871	Add up several missing optional capabilities	TEI10, EDCH-L23, MIMO-L23	ZTE, Panasonic	RP-120327	approved	
25.306	0343	-	A	REL-11	R2-120872	Add up several missing optional capabilities	TEI10, EDCH-L23, MIMO-L23	ZTE, Panasonic	RP-120327	approved	
25.306	0351	1	C	REL-10	R2-120882	Additional value for Total RLC AM Buffer Size value range	TEI10	Ericsson, ST-Ericsson	RP-120327	approved	
25.306	0352	1	A	REL-11	R2-120883	Additional value for Total RLC AM Buffer Size value range	TEI10	Ericsson, ST-Ericsson	RP-120327	approved	
25.307	0162	-	B	REL-4	R2-120893	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	e850_UB-Core	Alcatel-Lucent, Sprint	RP-120328	approved	
25.307	0163	-	B	REL-5	R2-120894	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	e850_UB-Core	Alcatel-Lucent, Sprint	RP-120328	approved	
25.307	0164	-	B	REL-6	R2-120895	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	e850_UB-Core	Alcatel-Lucent, Sprint	RP-120328	approved	
25.307	0165	-	B	REL-7	R2-120896	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	e850_UB-Core	Alcatel-Lucent, Sprint	RP-120328	approved	
25.307	0166	-	B	REL-8	R2-120897	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	e850_UB-Core	Alcatel-Lucent, Sprint	RP-120328	approved	
25.307	0167	-	B	REL-9	R2-120898	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	e850_UB-Core	Alcatel-Lucent, Sprint	RP-120328	approved	
25.307	0168	-	B	REL-10	R2-120899	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	e850_UB-Core	Alcatel-Lucent, Sprint	RP-120328	approved	
25.319	0102	-	F	REL-11	R2-120914	Clarification of F-DPCH with STTD in CELL_FACH	RANimp-UplinkEnhState, TEI11	Panasonic	RP-120322	approved	
25.331	4891	-	F	REL-11	R2-120857	Specification Cleanup: removal of DRAC left over	TEI11	Broadcom Corporation	RP-120329	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 430 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #55	RAN #55 status	Remarks
25.331	4909	-	B	REL-11	R2-120892	Addition of new band XXVI (Extending 850 MHz Upper Band (814 - 849 MHz)	e850_UB-Core	Alcatel-Lucent, Samsung, Sprint	RP-120328	approved	
25.331	4910	1	C	REL-10	R2-120880	Additional value for Total RLC AM Buffer Size	TEI10	Ericsson, ST-Ericsson	RP-120327	approved	
25.331	4911	1	A	REL-11	R2-120881	Additional value for Total RLC AM Buffer Size	TEI10	Ericsson, ST-Ericsson	RP-120327	approved	
25.331	4917	2	F	REL-7	R2-120906	Clarification on stored HARQ info when HS-DSCH reception is not supported	RANimp-EnhState, TEI7	Ericsson, ST-Ericsson, Renesas	RP-120320	approved	
25.331	4918	2	F	REL-8	R2-120907	Clarification on stored HARQ info when HS-DSCH reception is not supported	RANimp-EnhState, TEI8	Ericsson, ST-Ericsson, Renesas	RP-120320	approved	
25.331	4919	2	A	REL-9	R2-120908	Clarification on stored HARQ info when HS-DSCH reception is not supported	RANimp-EnhState, TEI8	Ericsson, ST-Ericsson, Renesas	RP-120320	approved	
25.331	4920	2	A	REL-10	R2-120909	Clarification on stored HARQ info when HS-DSCH reception is not supported	RANimp-EnhState, TEI8	Ericsson, ST-Ericsson, Renesas	RP-120320	approved	
25.331	4921	2	A	REL-11	R2-120910	Clarification on stored HARQ info when HS-DSCH reception is not supported	RANimp-EnhState, TEI8	Ericsson, ST-Ericsson, Renesas	RP-120320	approved	
25.331	4927	-	F	REL-9	R2-120864	Correction to 25.331 on Cell Reselection enhancements (Rel-9)	TEI9, LTE-L23	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo	RP-120321	approved	
25.331	4928	-	A	REL-10	R2-120865	Correction to 25.331 on Cell Reselection enhancements (Rel-10)	TEI9, LTE-L23	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo	RP-120321	approved	
25.331	4929	-	A	REL-11	R2-120866	Correction to 25.331 on Cell Reselection enhancements (Rel-11)	TEI9, LTE-L23	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo	RP-120321	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 431 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #55	RAN #55 status	Remarks
25.331	4931	-	F	REL-7	R2-120873	Clarifications of the UE behaviours when initiating a cell update procedure	RANimp-EnhState	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications	RP-120320	approved	
25.331	4932	-	F	REL-8	R2-120874	Clarifications of the UE behaviours when initiating a cell update procedure	RANimp-EnhState, RANimp-UplinkEnhState	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications	RP-120320	approved	
25.331	4933	-	A	REL-9	R2-120875	Clarifications of the UE behaviours when initiating a cell update procedure	RANimp-EnhState, RANimp-UplinkEnhState	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications	RP-120320	approved	
25.331	4934	-	A	REL-10	R2-120876	Clarifications of the UE behaviours when initiating a cell update procedure	RANimp-EnhState, RANimp-UplinkEnhState	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications	RP-120320	approved	
25.331	4935	-	A	REL-11	R2-120877	Clarifications of the UE behaviours when initiating a cell update procedure	RANimp-EnhState, RANimp-UplinkEnhState	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications	RP-120320	approved	
25.331	4950	-	C	REL-8	R2-120851	Disabling of default radio configurations in CELL_FACH in Rel-8	TEI8	Nokia Siemens Networks	RP-120322	approved	
25.331	4951	-	C	REL-9	R2-120852	Correction of default radio configurations in CELL_FACH	TEI9	Nokia Siemens Networks	RP-120322	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 432 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #55	RAN #55 status	Remarks
25.331	4952	-	A	REL-10	R2-120853	Correction of default radio configurations in CELL_FACH	TEI9	Nokia Siemens Networks	RP-120322	approved	
25.331	4953	-	A	REL-11	R2-120854	Correction of default radio configurations in CELL_FACH	TEI9	Nokia Siemens Networks	RP-120322	approved	
36.300	0424	-	F	REL-10	R2-120813	Correction to the handling of RRC container during the inter-RAT handover	TEI10	ZTE Corporation	RP-120327	approved	
36.300	0425	-	A	REL-11	R2-120814	Correction to the handling of RRC container during the inter-RAT handover	TEI10	ZTE Corporation	RP-120327	approved	
36.300	0431	-	F	REL-11	R2-120920	Correction on MME/eNB behaviour in case of broken SCTP connection	TEI11	RAN3	RP-120329	approved	
36.300	0432	-	F	REL-11	R2-120921	Correction of Emergency Call	TEI11	RAN3	RP-120329	approved	
36.300	0433	-	F	REL-10	R2-120922	Correction on unnecessary HO	SONenh_LTE-Core	RAN3	RP-120232	approved	
36.300	0434	-	A	REL-11	R2-120923	Correction on unnecessary HO	SONenh_LTE-Core	RAN3	RP-120232	approved	
36.300	0435	-	F	REL-11	R2-120924	CR for clarification of eMBMS architecture description	MBMS_LTE_enh-Core, TEI11	RAN3	RP-120326	approved	
36.300	0436	-	F	REL-10	R2-120925	Restriction on Rel-10 X2-based handover between HeNBs	HNB_HENB_mob_enh-Core	RAN3	RP-120326	approved	
36.300	0437	-	A	REL-11	R2-120926	Restriction on Rel-10 X2-based handover between HeNBs	HNB_HENB_mob_enh-Core	RAN3	RP-120326	approved	
36.302	0030	1	F	REL-10	R2-121055	Correction to the combination of physical uplink channels	LTE_CA-Core	NTT DOCOMO, INC	RP-120326	approved	
36.304	0174	-	F	REL-9	R2-120841	MBMS Multibands Cell Selection and Reselection	MBMS_LTE	Verizon Wireless	RP-120325	approved	
36.304	0175	-	A	REL-10	R2-120842	MBMS Multibands Cell Selection and Reselection	MBMS_LTE	Verizon Wireless	RP-120325	approved	
36.306	0078	-	F	REL-10	R2-121005	Clarification on physical layer parameter values requirement	TEI10, LTE-L23	Samsung, Qualcomm Incorporated	RP-120321	approved	
36.306	0080	1	F	REL-10	R2-121019	Clarification on number of PDCP SDUs for categories 6-7 UEs	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core	HTC	RP-120326	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 433 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #55	RAN #55 status	Remarks
36.306	0082	-	F	REL-10	R2-120828	UE processing requirement in the presence of MCH transmission	MBMS_LTE_enh-Core	Qualcomm Incorporated, NSN	RP-120326	approved	
36.321	0537	-	F	REL-8	R2-120817	Correction to multiplexing and assembly	LTE-L23	NTT DOCOMO, INC	RP-120321	approved	
36.321	0538	-	A	REL-9	R2-120818	Correction to multiplexing and assembly	LTE-L23	NTT DOCOMO, INC	RP-120321	approved	
36.321	0539	-	F	REL-10	R2-120819	Correction to multiplexing and assembly	LTE-L23, TEI10	NTT DOCOMO, INC	RP-120321	approved	
36.331	0855	1	F	REL-10	R2-121017	Limiting MBMS counting responses to within the PLMN	MBMS_LTE_enh-Core	Nokia Corporation, Nokia Siemens Networks, LG Electronics, Ericsson, ST-Ericsson, Huawei, HiSilicon	RP-120326	approved	
36.331	0856	-	F	REL-9	R2-121001	CR to 36.331 on cdma2000 band classes and references	TEI9, LTE-L23	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated	RP-120321	approved	
36.331	0857	-	A	REL-10	R2-121002	CR to 36.331 on cdma2000 band classes and references	TEI9, LTE-L23	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated	RP-120321	approved	
36.331	0862	1	F	REL-10	R2-121036	Clarification on MBSFN and measurement resource restrictions	eICIC_LTE-Core	Samsung, Qualcomm Incorporated, NTT DOCOMO, Huawei, Renesas Mobile Europe Ltd, LG Electronics, Intel Corporation, Pantech, RIM, Nokia Corporation	RP-120326	approved	
36.331	0871	-	F	REL-10	R2-120840	On SIB10/11 Reception Timing	TEI10, PWS-RAN	NTT DOCOMO, INC.	RP-120325	approved	
36.331	0875	1	F	REL-10	R2-121020	Clarification on MBMS counting for uncipherable services	MBMS_LTE_enh-Core	Samsung	RP-120326	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 434 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #55	RAN #55 status	Remarks
36.331	0876	-	F	REL-10	R2-120839	Minor correction regarding limited service access on non-CSG-member cell	EHNB-RAN2, TEI10	Samsung	RP-120325	approved	
36.331	0890	2	F	REL-8	-	Clarification on the setting of FGI bit 25	LTE-L23	-	RP-120262	revised	company contribution; note: RAN2 email discussion [77#03] did not achieve consensus about R2-120838; revised in RP-120330
36.331	0890	3	F	REL-8	-	Clarification on the setting of FGI bit 25	LTE-L23	-	RP-120330	rejected	company contribution; revision of RP-120262
36.331	0891	2	A	REL-9	-	Clarification on the setting of FGI bit 25	LTE-L23	-	RP-120263	revised	company contribution; note: RAN2 email discussion [77#03] did not achieve consensus about R2-111039; revised in RP-120331
36.331	0891	3	A	REL-9	-	Clarification on the setting of FGI bit 25	LTE-L23	-	RP-120331	rejected	company contribution; revision of RP-120263
36.331	0892	2	A	REL-10	-	Clarification on the setting of FGI bit 25	LTE-L23	-	RP-120264	revised	company contribution; note: RAN2 email discussion [77#03] did not achieve consensus about R2-111040; revised in RP-120332
36.331	0892	3	A	REL-10	-	Clarification on the setting of FGI bit 25	LTE-L23	-	RP-120332	rejected	company contribution; revision of RP-120264
36.331	0894	-	F	REL-10	R2-120820	Time to keep RLF Reporting logs	SONenh_LTE-Core	Qualcomm Incorporated	RP-120326	approved	
36.331	0895	-	F	REL-10	R2-120833	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	LTE-L23, TEI10	Samsung	RP-120323	revised	revised in RP-120356
36.331	0895	1	F	REL-10	-	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	LTE-L23, TEI9	-	RP-120356	approved	revision of R2-120833 of RP-120323
36.331	0896	1	F	REL-9	R2-121044	FGI bit related to ANR and inter-RAT measurement	TEI9, LTE-L23	ZTE Corporation, China Telecom	RP-120324	withdrawn	

IPR2025-00720, OnePlus Ex. 1004
Page 435 of 700

Spec	CR #	rev	cat	Rel	RAN2 Tdoc	Title	SI/WI	RAN2 Source	Tdoc RAN #55	RAN #55 status	Remarks
36.331	0897	1	F	REL-10	R2-121045	FGI bit related to ANR and inter-RAT measurement	TEI10, LTE-L23	ZTE Corporation, China Telecom	RP-120324	withdrawn	
36.331	0899	-	F	REL-10	R2-120845	Clarification on SRB2 resumption upon connection re-establishment (parallel message transmission)	LTE-L23, TEI10	Samsung	RP-120321	approved	
36.331	0900	1	F	REL-10	R2-121018	Duplicated ASN.1 naming correction	TEI10, LTE-L23	Nokia Siemens Networks, Nokia Corporation	RP-120321	approved	
36.331	0901	-	F	REL-9	R2-121014	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	LTE-L23, TEI9	Samsung	RP-120323	revised	revised in RP-120355
36.331	0901	1	F	REL-9	-	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	LTE-L23, TEI9	-	RP-120355	approved	revision of R2-121014 of RP-120323
36.331	0902	-	F	REL-10	R2-121015	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	LTE-L23, TEI10	Samsung	RP-120323	withdrawn	
36.331	0903	-	F	REL-10	-	Clarification of the meaning of FGI bit 1 and bit 2 for Rel-10	TEI10, LTE-L23	-	RP-120313	revised	
36.331	0903	1	F	REL-10	-	Clarification of the meaning of FGI bit 1 and bit 2 for Rel-10	TEI10, LTE-L23	-	RP-120348	postponed	

Rows highlighted in yellow indicate company contributions treated at RAN #55 for which no Tdoc was submitted to RAN2.

The table above has 77 entries (rows excl. header row):

- 64 CRs agreed by RAN2 of which then 62 CRs were approved by RAN #55, 2 were withdrawn at RAN #55.
- 3 CR technically endorsed by RAN2 #77 of which 1 was finally withdrawn at RAN #55 and the other 2 were revised in company contributions (which were approved by RAN #55).
- 10 company contributions (highlighted in yellow) of which then 2 were approved, 4 were revised, 1 was postponed and 3 were rejected at RAN #55.

IPR2025-00720, OnePlus Ex. 1004
Page 436 of 700

So finally: Approved RAN2 CRs after RAN #55: 64.

spec	REL-4	REL-5	REL-6	REL-7	REL-8	REL-9	REL-10	REL-11	CRs	specs	rapporteur	email
25.304	0	0	0	0	0	0	1	-	**1**	**1**	Brian Martin (Renesas)	brian.martin@renesasmobile.com
25.306	0	0	0	0	0	0	2	2	**4**	**2**	Anders Berggren (ST Ericsson)	anders.y.berggren@stericsson.com
25.307	1	1	1	1	1	1	1	-	**7**	**7**	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com
25.319	0	0	0	0	0	0	0	1	**1**	**1**	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.331	0	0	0	2	3	4	5	7	**21**	**5**	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
36.300	0	0	0	0	0	0	3	6	**9**	**2**	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.302	0	0	0	0	0	0	1	-	**1**	**1**	Seau Sian Lim (Alcatel-Lucent)	seaulim@alcatel-lucent.com
36.304	0	0	0	0	0	1	1	-	**2**	**2**	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.306	0	0	0	0	0	0	3	-	**3**	**1**	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.321	0	0	0	0	1	1	1	-	**3**	**3**	Magnus Stattin (Ericsson) **	magnus.stattin@ericsson.com
36.331	0	0	0	0	0	2	10	-	**12**	**2**	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
UTRA	1	1	1	3	4	5	9	10	**34**	**16**		
LTE	0	0	0	0	1	4	19	6	**30**	**11**		
total	1	1	1	3	5	9	28	16	**64**	**27**		

**: Mikael Wittberg (Ericsson) standing in for the rapporteur

IPR2025-00720, OnePlus Ex. 1004
Page 437 of 700

Annex F:
RAN WG2 meeting #77 post processing

Email discussions/approvals

Rapporteur companies are requested to kick-off email discussions as soon as possible via the RAN2 email reflector. Important: In the beginning of the subject of each email the corresponding identifier [...] of the email discussion has to be used in order to allow sorting of the different email discussions.

RAN2 chairman: Note that in order to meet the deadline for an email discussion, documents should be provided with sufficient time to review the final version.
I.e. an "almost final version" should be available 24 hours before the deadline.

Up to Thursday, Feb. 16, 2012, midnight Pacific time, i.e. Fri Feb. 17, 2012 9am CET:

[77#00] Joint: Minutes of RAN2-76 San Francisco [MCC]
- One week email discussion to agree the minutes of the previous meeting (see R2-120002)

=> Intended outcome: Agreed minutes of RAN2 #76

conclusion: Email discussion was kicked off by Joern Krause (MCC) on 13.02.2012.
The RAN #76 report was agreed in R2-120915 on 19.02.2012.

[77#01] Joint: MDT: Updated running stage-2 CR [MediaTek]
- Capture agreements on MDT from this meeting in running stage-2 CR
- Will not be provided to plenary

=> Intended outcome: Updated running stage-2 CR provided in R2-121032

conclusion: Email discussion was kicked off by Johan Johansson (Mediatek) on 13.02.2012.
The running 37.320 REL-11 CR R2-121032 was endorsed on 17.02.2012.

[77#02] LTE: FDD/TDD capabilities and FGIs [Samsung]
- Technically endorse the 36.331 CRs introducing split FDD/TDD capabilities
- The final CRs will include RAN2 and RAN1 related FGIs and capabilities
- TDoc number will be provided by MCC
- Also the corresponding LS to RAN plenary will be discussed and approved in this email discussion. The final LS can be provided in R2-121035 (pending email discussion) [Qualcomm]

=> Intended outcome: Technically endorsed 36.331 CRs (R2-121014 REL-9, R2-120833 REL-10; R2-121015 REL-10)

conclusion: Email discussion was kicked off by Himke van der Velde (Samsung) on 13.02.2012.

R2-120833 Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE
Samsung CR 36.331 0895 - F REL-10 LTE-L23, TEI10

R2-121014 Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE
Samsung CR 36.331 0901 - F REL-9LTE-L23, TEI9

R2-121015 Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE
Samsung CR 36.331 0902 - F REL-10 LTE-L23, TEI10

Note: R2-120833 is an almost shadow REL-10 CR to R2-121014. In contrast to R2-121014 the CR R2-121015 includes additional REL-10 capabilities & FGIs.

The 3 CRs were endorsed on 21.02.2012 and they will be provided to RAN #55 for final decision.

Email discussion about the LS was kicked off by Aziz Golmieh (Qualcomm) on 14.02.2012 and LSout R2-121035 was agreed on 21.02.2012.

[77#03] LTE: FGI 25 inter-mode measurements [Intel]
- One week email discussion to check and agree the changes to FGI25
- Check correctness of the changes and the impact on legacy

=> Intended outcome: If agreed, the CRs will be sent to RAN for approval.

conclusion: Email discussion was kicked off by Mo-han Fong (Intel) on 13.02.2012.
As no consensus was achieved the 36.331 CRs R2-120838 (REL-8),

IPR2025-00720, OnePlus Ex. 1004

R2-121039 (REL-9) and R2-121040 (REL-10) are not agreed and company contributions for RAN #55 were provided instead (RP-120262, RP-120263, RP-120264).

[77#04] LTE: CA enh.: Updated running stage-2 CR [Nokia]
- Capture agreements on CA enhancements from this meeting in running stage-2 CR
- Will not be provided to plenary
- TDoc number will be provided by MCC

=> Intended outcome: Updated running stage-2 CR, also LSout to RAN1 informing them about all agreements made on carrier aggregation so far

conclusion: Email discussion was kicked off by Jarkko Koskela (Nokia) on 13.02.2012.
The running 36.300 REL-11 CR R2-120928 was endorsed on 21.02.2012.
A first draft LS including 36.300 CR R2-120928 and 36.321 CR R2-121053 (of email discussion [77#05] was provided on 21.02.2012.
LSout R2-120930 was agreed on 22.02.2012.

[77#05] LTE: CA enh.: Updated running stage-3 CR [Ericsson]
- Capture agreements on CA enhancements from this meeting in running stage-3 CR
- Will be used as baseline for further stage-3 work
- Will not be provided to plenary
- TDoc number will be provided by MCC

=> Intended outcome: Updated running stage-3 CR

conclusion: Email discussion was kicked off by Mikael Wittberg (Ericsson) on 13.02.2012.
The running 36.321 REL-11 CR R2-121053 was endorsed on 20.02.2012.

[77#06] LTE: MBMS: Updated running stage-2 CR [Huawei]
- Capture the agreements on MBMS from this meeting in running stage-2 CR
- Will not be provided to plenary
- TDoc number will be provided by MCC

=> Intended outcome: Updated running stage-2 CR

conclusion: Email discussion was kicked off by David Lecompte (Huawei) on 14.02.2012.
The running 36.300 REL-11 CR R2-120927 was endorsed on 21.02.2012.

[77#07] LTE: IDC: Updated running stage-2 CR [CMCC]
- Capture the agreements on IDC from this meeting in running stage-2 CR
- Will not be provided to plenary
- TDoc number will be provided by MCC

=> Intended outcome: Updated running stage-2 CR

conclusion: Email discussion was kicked off by Zhenping Hu (CMCC) on 14.02.2012.
The running 36.300 REL-11 CR R2-120929 was endorsed on 20.02.2012.

[77#08] LTE: HetNet mobility: Updated TR [ALU]
- Capture agreements from this meeting in TR 36.839
- Will not be provided to plenary

=> Intended outcome: Updated TR in R2-121028 36.839 v0.4.1 R2-121028

conclusion: Email discussion was kicked off by Sudeep Palat (Alcatel-Lucent) on 14.02.2012. TR 36.893 v0.4.1 R2-121028 was provided on 19.02.2012 and the agreed version TR 36.893 v0.5.0 was provided in R2-121054 on 20.02.2012.

[77#09] UMTS: Maximum number of frequency bands [Huawei]
- Discuss CRs on the maximum number of frequency bands (R2-120878 and R2-120879).
- ASN.1 needs to be checked.
- Check procedural text for completeness
- The intention of the CR is ok for companies in RAN2 and in particular the number of possible supported bands is fine
- TDoc numbers will be provided by MCC

=> Intended outcome: Agreed CRs to be provided to plenary

conclusion: Email discussion was kicked off by Jeff Gao (Huawei) on 14.02.2012.
After concerns raised from Ericsson the 25.331 CRs R2-120878 (Rel-10) and R2-120879 (Rel-11) are postponed and the topic will be discussed again at RAN2 #77bis.

IPR2025-00720, OnePlus Ex. 1004
Page 439 of 700

Up to Monday, March 19, 2012, midnight Pacific time, i.e. Tuesday March 20, 2012 9am CET:
(corresponds to submission deadline of RAN2 #77bis)

[77#20] Joint: EAB: Handling of special access class (AC11-15) for EAB [Huawei]
- E.g., what happens when these special access classes are barred? Follow ACB or EAB mechanism?

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Jeff Gao (Huawei) on 01.03.2012.
Email discussion report is provided to RAN2 #77bis in R2-121356.

[77#21] Joint: EAB: SIB design for RAN sharing [Huawei]
- Discuss details of SIB content for EAB in particular with respect to RAN sharing

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Jeff Gao (Huawei) on 01.03.2012.
Email discussion report is provided to RAN2 #77bis in R2-121357.

[77#22] Joint: MDT: Location Information [LG]
- When can location information be considered as being available? Prerequisites for being able to consider location information available (GNSS coverage? GNSS enabled/allows in OS settings? other application currently requesting position from operating system? …)
- Relation to on-demand location information and prerequisites for being able to request UE to provide location information for MDT (GNSS coverage? GNSS enabled/allowed in OS settings? …)
- Implementation aspects
- Impact on battery consumption

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Sung Hoon Jung (LG) on 24.02.2012.
Email discussion report is provided to RAN2 #77bis in R2-121852.

[77#23] Joint: MDT: Accessibility Measurements [Ericsson]
- Log failed RRC Connection Establishment? Log details on why it failed? Detailed RA related information?

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Hakan Persson (Ericsson) on 27.02.2012.
Email discussion report is provided to RAN2 #77bis in R2-121598.

[77#24] Joint: MDT: Latency Measurements [MediaTek]
- Use case? What could this information be useful for? GBR/Non-GBR? Per QCI?
- What to measure? Packet delay? Packet delay budget? Per packet? Average? CDF? Percentiles? What information is required from the UE? What does the eNB provide to Q&M?

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Johan Johansson (MediaTek) on 27.02.2012.
Email discussion report is provided to RAN2 #77bis in R2-121331.

[77#25] LTE: CAenh: Msg2 location for SCell RA [IDT]
- Develop complete realizations for b1 and b3 that should be simple and working. There should be only one solution on each side! This should preferably include draft MAC CRs for both solutions.

=> Intended outcome: Email discussion report and draft MAC CRs for solutions b1 and b3
conclusion: Email discussion was kicked off by Ghyslain Pelletier (Interdigital) on 22.02.2012.
Email discussion report is provided to RAN2 #77bis in R2-121635 and 36.321 REL-11 CRs are provided in R2-121463 for solution b1 (from Ericsson) and R2-121638 (from MediaTek) for solution b3.

[77#26] LTE: CAenh: Timing reference for SCell-only TA groups [Ericsson]
- How to solve the error cases related to timing reference, e.g. when the current timing reference is deactivated.

=> Intended outcome: Email discussion report

IPR2025-00720, OnePlus Ex. 1004
Page 440 of 700

conclusion: Email discussion was kicked off by Mattias Bergström (Ericsson) on 20.02.2012.
Email discussion report is provided to RAN2 #77bis in R2-121557.

[77#27] LTE: EDDA: TP for TR on power consumption and DRX [RIM]
- Prepare a text proposal capturing simulation results on power consumption with DRX
- Based on contributions provided to RAN2-77

=> Intended outcome: TP for TR 36.822
conclusion: Email discussion was kicked off by Eswar Vutukuri (RIM) on 29.02.2012.
A TP to TR 36.822 is provided to RAN2 #77bis in R2-121610.

[77#28] LTE: MBMS frequency information in USD (user service description) [Huawei]
- Discuss whether the frequency information needs to be provided in USD given the decision to broadcast SAI in the RAN

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by David Lecompte (Huawei) on 07.03.2012.
Email discussion report is provided to RAN2 #77bis in R2-121856.

[77#29] LTE: MBMS congestion handling [Samsung]
- Discuss the need for congestion handling for MBMS. Take into account the decisions from this meeting and the previous email discussions (Samsung)

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Himke van der Velde (Samsung) on 23.02.03.2012.
Email discussion report is provided to RAN2 #77bis in R2-121673.
Note: By mistake the title of R2-121673 is referring to [77#30].

[77#30] LTE: MBMS interest indication [LG]
- Details of MBMSInterestIndication (see contributions provided to RAN2-77)
- Earliest time to send the indication (after RRCConnectionSetupComplete or SecurityModeComplete)?
- eNB indicates that UE is supposed/allowed to send MBMSInterestIndication?
- Need to suppress indications (always? only if current configuration prevents MBMS reception?)
- Forward MBMSInterestIndication during handover?

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Youngdae Lee (LG) on 06.03.2012.
Email discussion report is provided to RAN2 #77bis in R2-121385.

[77#31] LTE: HetNet Mobility: inter-frequency small cell detection [DOCOMO]
- Discuss how to perform inter-frequency small cell detection. Investigate performance of existing functionality. Discuss potential enhancements.

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Hideaki Takahashi (NTT DOCOMO) on 24.02.2012.
Email discussion report is provided to RAN2 #77bis in R2-121487.

[77#32] LTE: HetNet Mobility: Impact of DRX on mobility performance [Nokia]
- Discuss impact of DRX on HetNet mobility performance.
- Distinguish intra- and inter-frequency deployments? Focus on intra-frequency HetNet cells?

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Jarkko Koskela (Nokia) on 01.03.2012.
Email discussion report is provided to RAN2 #77bis in R2-121162.

[77#33] LTE: HetNet Mobility: MSE enhancements [Renesas]
- Discuss the need for mobility state estimation enhancements

=> Intended outcome: Email discussion report
conclusion: Email discussion was kicked off by Tero Henttonen (Renesas) on 29.02.2012.
Email discussion report is provided to RAN2 #77bis in R2-121850.

[77#34] UMTS: FE-FACH stage-2 25.308/25.319 REL-11[QC]

IPR2025-00720, OnePlus Ex. 1004

- Progress the running stage-2 CRs for FE-FACH
- Will not be provided to plenary

=> Intended outcome: Updated running stage-2 CRs as baseline for next RAN2 meeting

conclusion: Email discussion was kicked off by Ravi Argaval (Qualcomm) on 09.03.2012. An updated running 25.308 & 25.319 REL-11 CR is provided to RAN2 #77bis in R2-121671 & R2-121672, respectively.

[77#35] UMTS: Multiflow data transmission CRs (25.302, 25.306, 25.308 REL-11) [NSN]

- Discuss and progress running CRs for multi-flow data transmission

=> Intended outcome: Updated running CRs as baseline for next RAN2 meeting

conclusion: Email discussion was kicked off by Alexander Sayenko (NSN) on 10.03.2012. Updated running CRs for 25.302, 25.306, 25.308 REL-11 were provided to RAN2 #77bis in R2-121156, R2-121157 and R2-121158, respectively.

CRs from other WGs to be agreed/reviewed by RAN2 before RAN #55:

The following 7 RAN3 CRs to RAN2 TS 36.300 were provided by MCC (on 15.02.2012 afternoon) for review until Fri 17.02.2012 2pm CET:

- R2-120920 Correction on MME/eNB behaviour in case of broken SCTP connection RAN3 CR 36.300 0431 F contact: Huawei REL-11 TEI11 R3-120194
  CR is agreed
- R2-120921 Correction of Emergency Call RAN3 CR 36.300 0432 F contact: Samsung REL-11 TEI11 R3-120403
  CR is agreed
- R2-120922 Correction on unnecessary HO RAN3 CR 36.300 0433 F contact: CATT REL-10 SONenh_LTE-Core R3-120419
  CR is agreed
- R2-120923 Correction on unnecessary HO RAN3 CR 36.300 0434 A contact: CATT REL-11 SONenh_LTE-Core R3-120420
  CR is agreed
- R2-120924 CR for clarification of eMBMS architecture description RAN3 CR 36.300 0435 F contact: CMCC REL-11 MBMS_LTE_enh-Core, TEI11 R3-120427
  CR is agreed
- R2-120925 Restriction on Rel-10 X2-based handover between HeNBs RAN3 CR 36.300 0436 F contact: ZTEREL-10 HNB_HENB_mob_enh-Core R3-120454
  CR is agreed
- R2-120926 Restriction on Rel-10 X2-based handover between HeNBs RAN3 CR 36.300 0437 A contact: ZTEREL-11 HNB_HENB_mob_enh-Core R3-120455
  CR is agreed

Preparation of status reports for SIs and WIs under RAN2 leadership for RAN #55:

Rapporteurs were asked to make draft status reports available for review on the RAN2 reflector (without Tdoc number) asap after RAN2 #77, below the results of RAN #55 are summarized (including new WIs/SIs):
Note: Below the percentage complete/target completion date/status report are listed.

- REL-11 WI Core part: Network-Based Positioning Support for LTE, rapporteur: Terri Brooks (TruePosition) acronym: LCS_LTE-NBPS, WID: RP-090354 revised in RP-100135 at RAN #47 and revised in RP-101446 at RAN #50
  history: RAN #43: New: 0%/Dec. 09 (RAN #46)/- WI started in REL-9
  RAN #44: 5%/Dec. 09/RP-090402
  RAN #45: 25%/Dec. 09/RP-090700
  RAN #46: 30%/March 10/RP-091043 exception request sheet: RP-091391
  RAN #47: 30%/Dec. 10/RP-100032 WI moved to REL-10
  RAN #48: 30%/Dec. 10/RP-100459
  RAN #49: 30%/March 11/RP-100769
  RAN #50: 50%/Dec. 11/RP-101102 WI moved to REL-11
  RAN #51: 50%/Dec. 11/RP-110092
  RAN #52: 55%/Dec.11/RP-110563

IPR2025-00720, OnePlus Ex. 1004

RAN #53: 70%/March 12/RP-111009
RAN #54: 75%/March 12/RP-111481
now: RAN #55: 75%/June 12/RP-120082

- REL-11 WI Core part: Service continuity for MBMS for LTE, rapporteur: David Lecompte (Huawei)
  acronym: MBMS_LTE_SC-Core, WID: RP-100690 revised in RP-110452 at RAN #51 and revised in RP-111374 at RAN #53 and revised in RP-120258 at RAN #55
  history: RAN #48: New: 0%/June 11 (RAN #52)/- WI started in REL-10 (WI on hold until Dec.10)
  RAN #49: 0%/June 11/RP-100792 (WI on hold until Dec.10)
  RAN #50: 0%/June 11/RP-101123 (WI on hold until March 11)
  RAN #51: 0%/March 12/RP-110084 WI moved to REL-11
  RAN #52: 5%/March 12/RP-110769
  RAN #53: 20%/March 12/RP-111011
  RAN #54: 50%/March 12/RP-111483
  now: RAN #55: 60%/June 12/RP-120084

- REL-11 WI Core part: LTE RAN Enhancements for Diverse Data Applications, rapporteur: Gordon Young (RIM)
  acronym: LTE_eDDA-Core, WID: RP-110454 revised in RP-111372 at RAN #53 and revised in R2-120256 at RAN #55
  RAN #51: New: 0%/June 12 (RAN #56)/-
  RAN #52: 5%/June 12/RP-110590
  RAN #53: 10%/Sep. 12/RP-111016
  RAN #54: 20%/Sep. 12/RP-111488
  now: RAN #55: 30%/Sep. 12/RP-120089

- REL-11 WI Core part: Further Enhancements to CELL_FACH, rapporteur: Ravi Agarwal (Qualcomm)
  acronym: Cell_FACH_enh-Core, WID: RP-110436 revised in RP-110913 at RAN #52 and revised in RP-111321 at RAN #53
  RAN #51: New: 0%/June 12 (RAN #56)/-
  RAN #52: 2%/June 12/RP-110774
  RAN #53: 13%/June 12/RP-111007
  RAN #54: 34%/June 12/RP-111467
  now: RAN #55: 44%/June 12/RP-120064

- REL-11 SI Study on HetNet mobility enhancements for LTE, rapporteur: Sudeep Palat (Alcatel-Lucent)
  acronym: FS_HetNet_eMOB_LTE, SID: RP-110438 revised in RP-110709 at RAN #52
  RAN #51: New: 0%/June 12 (RAN #56)/-
  RAN #52: 10%/Dec.11/RP-110604
  RAN #53: 20%/Dec.11/RP-111059
  RAN #54: 40%/Sep. 12/RP-111548
  now: RAN #55: 45%/Sep. 12/RP-120160

- REL-11 WI Core part: HSDPA Multiflow Data Transmission, rapporteur: Alexander Sayenko (NSN)
  acronym: HSDPA_MFTX-Core, WID: RP-111375
  RAN #53: New: 0%/Sep.12 (RAN #57)/-
  RAN #54: 10%/Sep.12/RP-111471
  now: RAN #55: 50%/Sep. 12/RP-120068

- REL-11 WI Core part: Enhancement of Minimization of Drive Tests for E-UTRAN and UTRAN, rapporteur: Johan Johansson (MediaTek)
  acronym: eMDT_UMTSLTE-Core, WID: RP-111361 revised in R2-120277 at RAN #55
  RAN #53: New: 0%/Sep.12 (RAN #57)/-
  RAN #54: 10%/Sep.12/RP-111476
  now: RAN #55: 20%/Sep. 12/RP-120077

- REL-11 WI Core part: RAN overload control for Machine-Type Communications, rapporteur: Jeff Gao (Huawei)
  acronym: SIMTC-RAN_OC-Core, WID: RP-111373
  RAN #53: New: 0%/March 12 (RAN #55)/-

IPR2025-00720, OnePlus Ex. 1004
Page 443 of 700

RAN #54: 50%/March 12/RP-111477
now: RAN #55: 65%/June 12/RP-120078

- REL-11 WI Core part: Signalling and procedure for interference avoidance for in-device coexistence, rapporteur: Zhenping Hu (CMCC)
  acronym: SPIA_IDC_LTE-Core, WID: RP-111355
  RAN #53: New: 0%/June 12 (RAN #56)/-
  RAN #54: 10%/June 12/RP-111492
  now: RAN #55: 20%/June 12/RP-120093

IPR2025-00720, OnePlus Ex. 1004
Page 444 of 700

Annex G:
Report of LTE User Plane ad hoc on Carrier Aggregation enhancements

For convenience the summary R2-121010 of the LTE user plane ad hoc chaired by RAN2 vice-chairman SeungJune Yi (LG) on Carrier Aggregation enhancements (agenda items 7.1.2.4) is copied into this annex.
Note: The report of this session was treated separately under agenda item 12.1.
Additional information/corrections added in italic notes or indicated in red text.

7.1.2.4 Stage-3 UP details

Agreements in Stage-2
1. We will not support contention based random access on SCells
2. MAC will not inform RRC about reaching PREAMBLE_TRAN_MAX and consequently, RRC will not trigger RLF.
3. The UE does not report to the eNB that it has reached PREAMBLE_TRANS_MAX on an SCell.
4. Agree that only PDCCH order triggers a RA procedure on SCell.

Stage-3 CR
Trying to capture agreements so far.

R2-120470 Introduction of CA Enhancements in MAC Ericsson, Nokia Corporation CR 36.321 (0534) - B REL-11 LTE_CA_enh-Core
Section 3.1
- LG: abbreviation of pTAG or sTAG can be used.
- Ericsson: Full name could be more comprehensible
- Samsung: Respect to the rapporteur

Section 5.2
- HTmobile: “clear any uplink grant” is not correct because it is configured on PCell
- Nokia: Propose to remove this bullet. Samsung agrees.
- DoCoMo: If TAT expires, is SRS maintained?
- Fujitsu: MAC could keep the SRS
- NSN: in RRC it is clear.
- Renesas: “release SRS” is not clear. Could add “for sTAG”. Samsung agrees.
- Ericsson: it’s clear that the “release SRS” is only for sTAG.
- Huawei: does SRS means both periodical and aperiodical?
- Ericsson: it’s already covered in RRC.

=> The bullet “clear any uplink grant” will be removed.
=> Take this CR as a baseline for further discussion.
=> Rapporteur(Ericsson) will provide the updated running stage-3 CR in R2-121011 capturing agreements in this meeting. E-mail approval for 1 week [77#05].

TAC MAC CE
R2-120067 TA value adjustment for TAG Huawei, HiSilicon Disc
- Ericsson: Why do you want to send 1 TA at a time.
- Huawei: Different TAT could expire differently.
- ALU: Why do you restrict the TAC to the concerned TAG?

noted

R2-120200 TA command in Rel-11 Potevio Disc
- noted

R2-120606 TA Maintenance in MTAAlcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
- noted

IPR2025-00720, OnePlus Ex. 1004

TAC transmission on which TAG?
a) Only on specific TAG → TAG ID is not needed [7]
b) Any TAG → TAG ID is needed [21]

- IDT: “any TAG” should be easier for the scheduler
- Huawei: update of TAC of TAG would be infrequent. Fujitsu agrees.
- NSN: why do we restrict eNB.
- Samsung: the restriction is already in Rel-10. Support Huawei.
- QC: allow only specific TAG may be the big architecture change.
- HTmobile: may be more than 4 TAG will be supported.
- LG: we are concerned about UE complexity if we support specific TAG.
- Ericsson: agree to QC
- Huawei: “any TAG” is not the current architecture.

=> Go for option b. TAC can be transmitted on any TAG.

If TAC is transmitted on any TAG
a) One TAC value per TAC MAC CE
  - New LCID for TAC MAC CE is not needed
  - Multiple TAC MAC CEs can be included in a MAC PDU
b) Multiple TAC values per TAC MAC CE
  - New LCID for TAC MAC CE is needed
  - Only one TAC MAC CE is included in a MAC PDU

- Ericsson: we don’t need to create a new MAC CE
- NSN: overhead is not an issue, and can include more than 1 TAC MAC CE in a MAC PDU

=> Go for option a. One TAC per TAC MAC CE. Rel-10 TAC MAC CE format will be reused.

How many TAGs?
a) 2 → one R bit is used for TAG ID
b) 4 → two R bits are used for TAG ID
c) More than 4 → BITMAP is used

- NSN: we have 2 R bits, so 4 TAG should be natural.
- Samsung: more than 2 TAG will not be used in a near future.
- ALU: to give flexibility to eNB, 4 is preferred. New TAG ID can be allocated in reconfiguration. Ericsson supports ALU for reconfiguration.
- IDT: we can start from 1 R bit.
- Acer: wondering whether we need any extension bit. NSN there are 14 LCID values reserved.
- Huawei: support 4.
- LG: support 4.
- Samsung: why we start from 4.
- CATT: similar to cell index.
- Pantech: during reconfiguration, we don’t need a temporary TAG ID.
- ZTE: Can TA same for different TAG? Samsung it’s possible.

=> 2 or 4 TAG IDs will be supported. (1 or 2) R bits will be used to indicate the TAG ID.

R2-120483 Timing Advance Maintenance for SCells Ericsson, ST-Ericsson Disc
noted

TAG ID

=> 0 for PCell

Cell without TAG assignment belongs to pTAG
- Huawei: Cell without TAG assignment is RRC configuration issue.
- Nokia: it is premature to decide now.

R2-120053 MAC Downlink Signalling for Multiple TA Nokia Siemens Networks, Nokia Corporation Disc
R2-120129 Design of TA command for multiple timing advance Renesas Mobile Europe Disc

IPR2025-00720, OnePlus Ex. 1004
Page 446 of 700

R2-120212 Timing Advance Command MAC CE Samsung Disc
R2-120218 TA group handling Sharp Disc (moved from 7.1.2.3)
R2-120256 Discussion on TA MAC CE CATT Disc
R2-120636 MAC Timing Advance Control Element for SCells InterDigital Communications Disc
R2-120661 New TAC MAC CE format to support Multiple TA Pantech Disc
R2-120701 TAC MAC CE and multiple timing advances LG Electronics Inc. Disc
=> all contributions not treated as already covered by previous discussion ~~noted without presentation~~.

PHR

PHR related parameters
=> dl-PathlossChange: per UE
=> periodicPHR-Timer: per UE

prohibitPHR-Timer
- IDT: not so sure we need per UE prohibitPHR-Timer
- Nokia: take per UE timer as a working assumption.

=> prohibitPHR-Timer: per UE

R2-120607 PHR triggers for MTA Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
- IDT: only delay triggering of PHR? ALU confirms.

noted

R2-120090 PHR triggers and reporting in the context of multiple TA Nokia Siemens Networks, Nokia Corporation Disc
not treated

R2-120629 PHR When SCell TAT Expired InterDigital Communications Disc
- Fujitsu: Msg2 with UL grant trigger PHR?
- Renesas: activated but UL unsynch is similar to deactivated

PHR for activated but UL unsynchronized SCell
a) Restrict PHR reporting to activated and UL synchronized SCell
  - New PHR trigger “unsync to sync” is needed?
b) Stick to Rel-10 → all activated SCells are reported

- Ericsson: don’t see any gains to deviate from Rel-10.
- ZTE: virtual PHR would be useful for simultaneous transmission.
- IDT: DL transmission without UL case should be considered. Huawei in this case you will deconfigure the UL.
- LG: virtual PHR should not impact normal PHR. Could delay the PHR for normal cell.

=> Stick to Rel-10. All activated SCells are reported regardless of UL synchronization state. No new triggers will be supported.

- Fujitsu: new trigger from unsync to sync may be needed even if we stick to rel-10.
- HTC: we have new state now, so stick to Rel-10 does not valid any more.
- NSN: stick to rel-10 means stick to rel-10 procedures in the MAC specification.
- Ericsson: the benefit of new trigger is very limited.
- Intel: even in Rel-10 we support inter-band CA.
- IDT: PCMAX,c in virtual PHR has no meaning. PCMAX,c in PCell may not indicate PCMAX,c in sTAG. Samsung has some sympathy. Intel there should be no big problem even if virtual PHR is transmitted.

R2-120443 PHR triggering for MTA HTC Disc
R2-120702 PHR and multiple timing advances LG Electronics Inc. Disc
R2-120732 Discussions on PHR for SCell in Rel-11 Fujitsu Disc
R2-120066 PHR considerations for MTA Huawei, HiSilicon Disc
R2-120128 Discussion on PHR in multiple TA Renesas Mobile Europe Disc
R2-120257 PHR for MTA CATT Disc
R2-120478 PHR Issues for Carrier Aggregation Ericsson, ST-Ericsson Disc

IPR2025-00720, OnePlus Ex. 1004
Page 447 of 700

=> all contributions not treated as already covered by previous discussion ~~noted without presentation~~.

Random access problem

R2-120154 Handling of deactivation timer for multiple TA ASUSTeK Disc
noted

R2-120482 Random Access Failure Handling on SCell Ericsson, ST-Ericsson Disc
noted

R2-120201 Discussion on SCell RA problems Potevio Disc (moved from 7.1.2.1)
noted

SCell deactivation during random access procedure
a) No implicit deactivation for SCell in sTAG.
b) Rely on network control
c) Rely on UE behavior
- No implicit deactivation by sCellDeactivationTimer during RA procedure?
- No start of sCellDeactivationTimer at reception of AD MAC CE if TAT is not running?
- Restart sCellDeactivationTimer at the initiation of RA procedure?

- NSN: Assume that deactivation time is normally long, so this error case will not happen frequently. Ericsson we need something to cover this case even if it is rare. Deactivation timer can be 20ms. Huawei even if deactivation timer is short, eNB can reactivate. NSN with short deactivation timer, RA procedure will never succeed.
- Samsung: what is the benefit of option C. HTmobile agrees.
- Huawei: option B is enough.
- Ericsson: option C gives deterministic UE behavior. Samsung option B also gives deterministic UE behavior.
- Fujitsu: option B is enough. But open for other options if network vendors see some problems.
- CATT: if RA procedure is performed, the SCell should not be deactivated. HTC agrees.
- Huawei: if SCell is deactivated during RA procedure, preamble transmission should also be prohibited.
- NSN: we already agreed in stage-2 that RA procedure is only allowed for activated SCell. Huawei agrees.

=> If SCell is deactivated during RA procedure, the ongoing RA procedure is aborted.

- Ericsson: support restart of sCellDeactivationTimer at the initiation of RA procedure. HTC supports. NSN accept this proposal. MediaTek support. Samsung propose that gain of the proposal should be shown.
- Huawei: sCellDeactivationTimer is an error case, so we don't need additional mechanism.
- CATT: support no implicit deactivation by sCellDeactivationTimer during RA procedure.

Is option B enough for this case?
- yes: no other mechanism is needed. [21]
- no: additional UE mechanism is needed. [8]

=> Rely on the eNB implementation. FFS for additional mechanism.

- HTC: if UE aborts RA procedure, we have to specify something more than aborting.
- NSN: we need somehow this option in the MAC specification.
- HTC: we need something to ensure that SCell that performs RA procedure is never deactivated.

PCell TAT expiry during random access procedure
- Abort ongoing RA procedure when PCell TAT expires?

- Fujitsu: we have similar discussion in Rel-8. No need to capture something in the MAC specification.

IPR2025-00720, OnePlus Ex. 1004

- NSN: more rare case to consider. Why eNB sends PDCCH order to SCell if PCell is about to expire.
- HTC: it may be rare but not impossible.
- Ericsson: it still can happen. So we need to specify UE behavior.
- Samsung: if nothing specified, what is the UE behavior. NSN if it happens, the UE gets TAC from the RAR, and starts the SCell TAT, but after RA procedure, it realizes PCell expiry, and expire SCell TAT as well.
- Samsung: What is wrong with PCell TAT expiry and SCell TAT running. SRS configuration will be released. HTmobile UE cannot receive control information on PCell, so the system could be broken.

=> This is a rare error case, and nothing needs to be captured.

TAT and HARQ feedback

DL HARQ feedback

- If pTAG TAT expires, do not indicate ACK/NACK

- If sTAG TAT expires, indicate ACK/NACK

R2-120120 DL HARQ feedback handling when TAT is not running HT mMobile Inc, Huawei Disc

- not treated, Already covered by R2-120470.

RAR format

RAR format can be discussed only after Msg2 location for SCell is decided.

R2-120215 RACH MSG2 format SamsungDisc

R2-120445 Random Access Response Control Element details NEC Disc

=> all contributions not treated, could be discussed after Msg2 location for SCell is decided ~~noted without presentation~~.

Subframe overlap

Propose to discuss in RAN1.

R2-120485 PHR for Multi-TA Motorola Mobility Disc

R2-120623 Handling Timing Advance Differences InterDigital Communications Disc

=> all contributions not treated, could be discussed in RAN1 ~~noted without presentation~~.

IPR2025-00720, OnePlus Ex. 1004

CB Friday

R2-121011 Introduction of CA Enhancements in MAC Rapporteur (Ericsson) CR 36.321 (0534) - B REL-11 LTE_CA_enh-Core
- Capture agreements from this meeting.

IPR2025-00720, OnePlus Ex. 1004
Page 450 of 700

Annex H:
History

Document history		
Date	**TSG RAN WG2 Tdoc**	**Subject**
29.01.2012	-	Skeleton report for RAN WG2 #77 provided before the meeting.
29.01.2012	-	Updated skeleton report for RAN WG2 #77 provided before the meeting. (revision marks compared to first skeleton)
30.01.2012	-	Update 2 of skeleton report for RAN WG2 #77 provided before the meeting. (revision marks compared to update 1)
31.01.2012		Update 3 of skeleton report for RAN WG2 #77 provided before the meeting. (revision marks compared to update 2)
02.02.2012	-	Update 4 of skeleton report for RAN WG2 #77 provided before the meeting. (revision marks compared to update 3)
06.02.2012	-	Update 5 of skeleton report for RAN WG2 #77 provided before the meeting. (revision marks compared to update 4)
17.02.2012	-	Draft report of RAN2 #77 (v0.1) provided after RAN WG2 #77
23.02.2012	-	Draft report of RAN2 #77 (v1.0) provided after RAN WG2 #77 (revision marks compared to v0.1)
23.03.2012	R2-121061	Draft report of RAN2 #77 (v2.0) provided after RAN WG2 #77 (revision marks compared to v1.0)
30.03.2012	R2-121973	Report of RAN2 #77 as agreed at RAN2 #77bis

Contact: **Dr. Joern Krause (3GPP TSG RAN WG2 MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33-492-94 4261
email: Joern.Krause@etsi.org

IPR2025-00720, OnePlus Ex. 1004
Page 451 of 700

Appendix F

Uploaded	status	Late	Tdoc	Title	Source
Yes, No	withdrawn, not treated, noted, revised, endorsed, agreed, postponed	Late: submitted after 31.01.12 10:35 am CET	R2-12xxxx	-	-
Yes	agreed		R2-120001	Proposed agenda for RAN2 #77, Dresden, Germany, 06.02.-10.02.2012	Ericsson (RAN2 chairman)
Yes	revised	Late	R2-120002	Draft report of RAN2 #76, San Francisco, USA, 14.11.-18.11.2011	ETSI MCC
Yes	noted		R2-120003	Response LS to R2-115646 on physical-layer measurement for network-based positioning (R1-114454; contact: Ericsson)	RAN1
Yes	noted		R2-120004	Reply LS to R2-115649 on Physical Layer Measurement for network positioning (R1-114456; contact: Alcatel-Lucent)	RAN1
Yes	noted		R2-120005	LS response to R2-115646 on Physical Layer measurement for network-based positioning (R4-116300; contact: Ericsson)	RAN4
Yes	noted		R2-120006	Reply LS to R2-115643 on stage 3 for modification of security context storage rate on the UICC (C1-114945; contact: NSN)	CT1
Yes	noted		R2-120007	Reply LS to S3-111225 = R2-115677 on length of security in PWS (C1-115323; contact: RIM)	CT1
Yes	noted		R2-120008	Reply LS to S3-111225 = R2-115677 on length of security in PWS (GP-111882; contact: RIM)	GERAN2
Yes	noted		R2-120009	LS on issues on inbound CSG mobility failure (GP-111889; contact: Huawei)	GERAN2

IPR2025-00720, OnePlus Ex. 1004
Page 453 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120010	LS reply to R2-115635 on RACH procedure on SCell (R1-114459; contact: Alcatel-Lucent)	RAN1
Yes	noted		R2-120011	Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-114461; contact: ETRI)	RAN1
Yes	noted		R2-120012	LS on RAN1 agreements on uplink Closed Loop Transmit Diversity for HSPA (R1-114463; contact: Huawei)	RAN1
Yes	noted		R2-120013	LS on Summary of RAN1 agreements on Further Enhancements to CELL_FACH (R1-114464; contact: Qualcomm)	RAN1
Yes	noted		R2-120014	LS on feICIC (R1-114468; contact: NTT DOCOMO)	RAN1
Yes	noted		R2-120015	LS on additional special subframe configuration for E-UTRA TDD in Rel-11 (R1-114469; contact: CMCC)	RAN1
Yes	noted		R2-120016	Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-114475; contact: Huawei)	RAN1
Yes	noted		R2-120017	LS on CELL_FACH mobility for 3G home access (R3-113129; contact: Alcatel-Lucent)	RAN3
Yes	noted		R2-120018	LS on MME/eNB behaviour in case of broken SCTP connection (R3-113152; contact: Vodafone)	RAN3
Yes	noted		R2-120019	LS Reply to R2-115520 on time to continue attempting to search for a suitable E-UTRA cell (R4-116146; contact: Ericsson)	RAN4
Yes	noted		R2-120020	LS on DTX detection of PUCCH format 2 (R4-116249; contact: NTT DOCOMO)	RAN4
Yes	noted		R2-120021	Reply LS to R2-114813 on signalling of additional frequency band indicators (R4-116291; contact: Ericsson)	RAN4
Yes	noted		R2-120022	LS on CSG proximity indicator testing (R5-115775; contact: NTT DOCOMO)	RAN5

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120023	LS on FGI 27 in LTE and Single Radio VCC (RP-111769; contact: Qualcomm)	RAN
Yes	noted		R2-120024	Reply LS to R2-116557 on Capability handling of LTE TDD and FDD modes (RP-111770; contact: Qualcomm)	RAN
Yes	noted		R2-120025	LS on FGI handling for inter-RAT ANR (RP-111772; contact: TeliaSonera)	RAN
Yes	noted		R2-120026	Response LS to S5-112706 = R2-114870 on including Wi-Fi / LTE RAT combination for Inter-RAT (S1-113178; contact: Intel)	SA1
Yes	noted		R2-120027	Reply LS R2-114804, S2-114698 = R2-115673 and C1-114451 = R2-115663 on EAB Requirements (S1-113383; contact: Huawei)	SA1
Yes	noted		R2-120028	Reply LS to R2-115644 on EAB Requirement for RAN Sharing (S1-113385; contact: ZTE)	SA1
Yes	noted		R2-120029	Reply LS to R2-115636 on MBMS reception from non-RPLMN (S1-113454; contact: Huawei)	SA1
Yes	noted		R2-120030	Reply LS to S3-111225 = R2-115677 on length of security in PWS (S1-113459; contact: RIM)	SA1
Yes	noted		R2-120031	Reply LS to R2-115644 "EAB Requirement for RAN Sharing" (S2-115475; contact: Vodafone)	SA2
Yes	noted		R2-120032	Reply LS to S5-112706 = R2-114870 on Wifi offload for energy saving purpose (S2-115477; contact: Huawei)	SA2
Yes	noted		R2-120033	Response LS to R3-112292 = R2-114864 on error scenarios and signalling impacts (S5-113886; contact: Huawei)	SA5
Yes	noted		R2-120034	LS on Usage of speed criterion for MDT data collection (S5-113887; contact: NEC)	SA5
Yes	noted		R2-120035	LS on H(e)NB air interface activation (C6-110601; contact: Gemalto)	CT6

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120036	Reply LS to R2-116553 on Limitation on PS voice RAB for Intra UMTS SRVCC (S2-120402; contact: ZTE)	SA2
Yes	noted		R2-120037	Reply LS to R2-115636 on MBMS reception from non-RPLMN (S2-120403; contact: NSN)	SA2
Yes	noted		R2-120038	Reply LS to R3-113152 = R2-120018 on MME/eNB behaviour in case of broken SCTP connection (S2-120404; contact: Huawei)	SA2
Yes	noted	Late	R2-120039	Preparation Work in 3GPP for ITU related to Final Submission to ITU-R towards Rev.11 of Rec. ITU-R M.1457 (RT-120017; contact: Telecom Italia)	3GPP ITU-R ad hoc
Yes	noted	Late	R2-120040	Reply LS to R2-115679 on MBMS assistance information for service continuity (S4-120283; contact: Qualcomm)	SA4
Yes	revised		R2-120041	Add up several missing optional capabilities	ZTE, Panasonic
Yes	revised		R2-120042	Add up several missing optional capabilities	ZTE, Panasonic
Yes	revised		R2-120043	Correction to definition of enhanced inter-frequency measurements without CM	ZTE Corporation
Yes	revised		R2-120044	Correction to definition of enhanced inter-frequency measurements without CM	ZTE Corporation
Yes	not treated		R2-120045	Consideration on frequency band specific AG operation	ZTE Corporation
Yes	rejected		R2-120046	Stage 2 correction of MDT logs avalability indicator	ZTE Corporation
Yes	noted		R2-120047	Reconsiderations on some 3G ANR legacy issues	ZTE Corporation
Yes	not treated		R2-120048	Some scenarios potentially requiring new UE indications	ZTE Corporation
Yes	noted		R2-120049	Consideration on Enhanced Redirection from UMTS to LTE in Cell_FACH	ZTE Corporation
Yes	noted		R2-120050	Consideration on optimized usage of NACKdelayTimer	ZTE Corporation
Yes	noted		R2-120051	Consideration on L1 order (de)activation between various MPT-HSDPA modes	ZTE Corporation
No	withdrawn	Late	R2-120052	Some clarifications for coupling UL OLTD with UL CLTD	ZTE Corporation
Yes	not treated		R2-120053	MAC Downlink Signalling for Multiple TA	Nokia Siemens Networks, Nokia Corporation

IPR2025-00720, OnePlus Ex. 1004
Page 456 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120054	Limitations of a DRX based scheme	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-120055	Gaps for IDC Interference	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120056	IDC Considerations for MDT	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120057	IDC Signalling to Target eNB	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120058	Inter-eNB Communication for IDC	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120059	RACH failure handling on SCell	Huawei, HiSilicon
Yes	noted		R2-120060	Consideration on error cases handling for timing reference	Huawei, HiSilicon
Yes	not treated		R2-120061	Scheduling timing design for TDD inter-band CA with different UL-DL configurations	Huawei, HiSilicon
Yes	endorsed		R2-120062	Introduction of a new security algorithm ZUC	Huawei, CATR, CATT, CMCC, China Telecom, China Unicom, ZTE, Potevio, New Postcom, HiSilicon, Ericsson, ST-Ericsson, Alcatel-
Yes	not treated		R2-120063	Consideration on dual mode (FDD&TDD) UE capability handling	Huawei, HiSilicon
Yes	not treated		R2-120064	Signalling procedure for IDC	Huawei, HiSilicon
Yes	not treated		R2-120065	Assistance information handling concerning the FDM and TDM solutions	Huawei, HiSilicon
Yes	not treated		R2-120066	PHR considerations for MTA	Huawei, HiSilicon
Yes	noted		R2-120067	TA value adjustment for TAG	Huawei, HiSilicon
Yes	not treated		R2-120068	Solutions for Cross-Scheduled Msg-2	Huawei, HiSilicon
Yes	not treated		R2-120069	DRX operation for different TDD DL/UL configuration	Huawei, HiSilicon
Yes	noted		R2-120070	On PSC/PCI range for CSG in shared networks	TeliaSonera
Yes	noted		R2-120071	On absolute priorities cell reselection and UTRAN measures	TeliaSonera
Yes	not treated		R2-120072	25.305 Correction to absolute priority cell reselection	TeliaSonera
Yes	not treated		R2-120073	25.331 Correction to absolute priority cell reselection	TeliaSonera

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120074	36.304 Correction to absolute priority cell reselection	TeliaSonera
Yes	not treated		R2-120075	36.331 Correction to absolute priority cell reselection	TeliaSonera
Yes	not treated		R2-120076	further consideration on timing reference of sTAG	ASUSTeK
Yes	postponed		R2-120077	miscellaneous corrections on measurement	ASUSTeK
No	withdrawn		R2-120078	Clarification on sCell index removal	HTC
No	withdrawn		R2-120079	Clarification on mobile originating CS fallback access barring	HTC
No	withdrawn		R2-120080	Clarification on cell selection procedure while T311 is running	HTC
Yes	rejected		R2-120081	Clarification on sCell index removal	HTC
No	withdrawn	Late	R2-120082	Clarification on mobile originating CS fallback access barring	HTC
Yes	rejected		R2-120083	Clarification on cell selection procedure while T311 is running	HTC
Yes	noted		R2-120084	RA procedure on SCell	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-120085	RA triggers	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-120086	Remaining issues on Timing Reference	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120087	Draft LS to RAN4 on timing reference for sTAG	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120088	Open issues on pathloss reference for sTAG	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120089	RLM on SCell	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120090	PHR triggers and reporting in the context of multiple TA	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120091	New information in SCRI message for UMTS Fast dormancy	Nokia Siemens Networks
Yes	not treated		R2-120092	New information in SCRI message for UMTS Fast dormancy	Nokia Siemens Networks
Yes	revised		R2-120093	Correction to inter-RAT measurement reporting with reportQuantityUTRA-FDD set to EcNo and RSCP	Deutsche Telekom
Yes	noted		R2-120094	Enhanced RRM by taking terminals PLMN selection mode setting into account.	Deutsche Telekom
Yes	not treated		R2-120095	Small Cell Discovery in HetNet	Huawei, HiSilicon
Yes	not treated		R2-120096	Further evaluation on enhancements of mobility state estimation in HetNet	Huawei, HiSilicon

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120097	MBMS Service continuity and CSG cells	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120098	Frequency Information in USD	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120099	On the procedure of interference avoidance for IDC	CMCC
Yes	not treated		R2-120100	Consideration on A3/A5 event as reporting triggers for Immediate MDT	CMCC, ZTE
Yes	not treated		R2-120101	Simulation results for instant message traffic	CMCC
Yes	noted		R2-120102	Multiple Band Indicator handling	Nokia Corporation, Nokia Siemens Networks
Yes	revised		R2-120103	Limiting MBMS counting responses to within the PLMN	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120104	Cell reselection rules for UEs active in MBMS	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120105	UE capability and MBMS	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120106	MBMS in different PLMNs and MBMSInterestIndication	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120107	Discussion of HetNet Mobility	Nokia Corporation, Nokia Siemens Networks
Yes	not treated		R2-120108	HetNet mobility and DRX	Nokia Corporation, Nokia Siemens Networks
Yes	not treated	Late	R2-120109	[76#39] - LTE: MBMS Congestion Handling	Nokia Corporation, Nokia Siemens Networks
No	withdrawn		R2-120110	EAB information in SIB	Institute for Information Industry (III)
Yes	withdrawn		R2-120111	Specification Cleanup: removal of DRAC left over	Broadcom Corporation
Yes	revised		R2-120112	Specification Cleanup: removal of DRAC left over	Broadcom Corporation
Yes	not treated		R2-120113	Consideration on MDT Throughput Measurement	CHINA UNICOM
Yes	not treated		R2-120114	UE prioritization between MBMS cell and CSG cell in RRC_IDLE	CHINA UNICOM
Yes	postponed		R2-120115	Introduction of Multiflow in TS 25.302	Nokia Siemens Networks

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	postponed		R2-120116	Introduction of Multiflow in TS 25.306	Nokia Siemens Networks
Yes	postponed		R2-120117	Introduction of Multiflow in TS 25.308	Nokia Siemens Networks
Yes	noted		R2-120118	Initiating RA procedure on SCell	HT mMobile Inc.
Yes	noted		R2-120119	RA procedure on SCell	HT mMobile Inc.
Yes	not treated		R2-120120	DL HARQ feedback handling when TAT is not running	HT mMobile Inc, Huawei
No	withdrawn		R2-120121	Discussion on EAB SIB design	HT mMobile Inc.
Yes	postponed		R2-120122	Clarification of MAC-i PDU format when SI is sent alone before contention resolution	Broadcom Corporation
Yes	not treated		R2-120123	Clarification of MAC-i PDU format when SI is sent alone before contention resolution	Broadcom Corporation
Yes	not treated		R2-120124	Clarification of MAC-i PDU format when SI is sent alone before contention resolution	Broadcom Corporation
Yes	not treated		R2-120125	Clarification of MAC-i PDU format when SI is sent alone before contention resolution	Broadcom Corporation
Yes	not treated		R2-120126	Discussion on the Msg2 position for RA on SCell	Renesas Mobile Europe Ltd.
Yes	noted		R2-120127	Further analysis on timing reference for sTAG	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120128	Discussion on PHR in multiple TA	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120129	Design of TA command for multiple timing advance	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120130	Discussion on DRX for CC specific TDD configuration	Renesas Mobile Europe Ltd.
Yes	noted		R2-120131	RRC connection re-establishment during SMC procedure	Qualcomm Incorporated
Yes	noted	Late	R2-120132	Email discussion summary: [76#35] - LTE: UE category in presence of MCH reception	Qualcomm Incorporated
Yes	revised		R2-120133	UE processing requirement in the presence of MCH transmission	Qualcomm Incorporated
Yes	rejected		R2-120134	DRAFT LS on UE processing requirement in the presence of MCH transmission	Qualcomm Incorporated
Yes	not treated	Late	R2-120135	Consideration on HetNet mobility problem	Qualcomm Incorporated
No	withdrawn	Late	R2-120136	HetNet mobility simulation with eICIC	Qualcomm Incorporated
Yes	not treated		R2-120137	Performance Analysis on ABS in HetNet	ZTE Corporation
Yes	not treated		R2-120138	MSG2 addressing for MTA RA	ZTE Corporation

IPR2025-00720, OnePlus Ex. 1004
Page 460 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120139	SCell RACH collision with other UL transmission	ZTE Corporation
Yes	not treated		R2-120140	Signaling Procedure of FDM solution for IDC	ZTE Corporation
Yes	not treated		R2-120141	Discussion on TDD/FDD Capability Handling	ZTE Corporation
Yes	rejected		R2-120142	FGI for PUSCH frequency hopping (R8)	ZTE Corporation
Yes	not treated		R2-120143	Discussion on FGI bit related to ANR and inter-RAT measurement	ZTE Corporation, China Telecom
Yes	not treated		R2-120144	Left Issues in DRX solution for IDC	ZTE Corporation
Yes	rejected		R2-120145	FGI for PUSCH frequency hopping	ZTE Corporation
Yes	rejected		R2-120146	FGI for PUSCH frequency hopping	ZTE Corporation
Yes	revised		R2-120147	FGI bit related to ANR and inter-RAT measurement	ZTE Corporation, China Telecom
Yes	revised		R2-120148	FGI bit related to ANR and inter-RAT measurement	ZTE Corporation, China Telecom
Yes	noted		R2-120149	Discussion on the handling of RRC container during the inter-RAT handover	ZTE Corporation
Yes	revised		R2-120150	Correction to the handling of RRC container during the inter-RAT handover	ZTE Corporation
Yes	revised		R2-120151	Correction to the handling of RRC container during the inter-RAT handover	ZTE Corporation
Yes	noted		R2-120152	Impact of mobility in MDT QoS verification	Huawei, HiSilicon
Yes	not treated		R2-120153	The applicability of mutiple PLMNs to MDT and RLF report	Huawei, HiSilicon
Yes	noted		R2-120154	Handling of deactivation timer for multiple TA	ASUSTeK
Yes	not treated		R2-120155	MBMS service continuity for connection re-establishment	ASUSTeK
Yes	not treated		R2-120156	Limitation of MBMS interest transmission	ASUSTeK
Yes	revised		R2-120157	[Draft] reply LS on Usage of speed criterion for MDT data collection	NEC
Yes	not treated		R2-120158	RLF reporting across PLMNs	Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120159	Logged MDT continuity across PLMNs	Nokia Siemens Networks, Nokia Corporation, MediaTek, TeliaSonera
Yes	not treated		R2-120160	Evaluation of A2 trigger for Immediate MDT	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120161	CR to 37.320 on event triggered periodic reporting for Immediate MDT	Nokia Siemens Networks, Nokia Corporation
Yes	revised		R2-120162	CR to 36.331 on cdma2000 band classes and references	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated
Yes	revised		R2-120163	CR to 36.331 on cdma2000 band classes and references	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated
Yes	rejected		R2-120164	Correction on SystemInformationBlockType12 Acquistion	ITRI
Yes	rejected		R2-120165	Correction on SystemInformationBlockType12 Acquistion	ITRI
Yes	not treated		R2-120166	Deactivation of DL Timing Reference in sTAG	ITRI
No	withdrawn		R2-120167	Discussion on the need for RLM on SCells	ITRI
Yes	not treated		R2-120168	Consideration on FFS of pathloss reference configuration	ITRI
No	withdrawn		R2-120169	AC barring for delay tolerant access	ITRI
Yes	not treated		R2-120170	EAB SIB Optimization	ITRI
Yes	not treated		R2-120171	Further discussion on ETWS-like notification for fast EAB update mechanism	ITRI
Yes	rejected		R2-120172	Change on notation of HARQ ACK/NACK	ITRI
Yes	postponed		R2-120173	Introduction of Extended S-RNTI	Ericsson, ST-Ericsson
Yes	not treated		R2-120174	Supporting Procedures for Uplink Positioning	Andrew Corp
Yes	not treated		R2-120175	Pico cell discovery in a Heterogeneous Network	Research In Motion UK Ltd.
Yes	not treated		R2-120176	Random Access Response in multiple TA	Research In Motion UK Ltd.
No	withdrawn		R2-120177	Timing and Pathloss Reference for SCell	Research In Motion UK Ltd.

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120178	Enabling MBMS Service Continuity in connected mode	Research In Motion UK Ltd.
Yes	postponed		R2-120179	Multiple frequency band indicators per cell	Ericsson, ST-Ericsson
Yes	rejected		R2-120180	Selection of an AMD PDU upon expiry of t-PollRetransmit	Research In Motion UK Ltd.
Yes	revised		R2-120181	Clarification on the transport block size change in an adaptive retransmit order for UL HARQ	Research In Motion UK Ltd.
Yes	not treated		R2-120182	Measurement and UE internal coordination for triggering	Research In Motion UK Ltd.
Yes	not treated		R2-120183	Interference measurement for BT	Research In Motion UK Ltd.
Yes	not treated		R2-120184	MTC Traffic Modeling	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120185	EAB/ACB interaction	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120186	Necessity of ACB enhancements for EAB UEs	Nokia Siemens Networks, Nokia Corporation
Yes	revised		R2-120187	Duplicated ASN.1 naming correction	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-120188	FGI handling for inter-RAT ANR	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120189	PUCCH analysis for EDDA	Nokia Siemens Networks, Nokia Corporation
Yes	noted		R2-120190	Clarification of the setting of Pre-redirection Info IE	Ericsson, ST-Ericsson
Yes	not treated		R2-120191	Clarification of the setting of Pre-redirection Info IE	Ericsson, ST-Ericsson
Yes	not treated		R2-120192	Clarification of the setting of Pre-redirection Info IE	Ericsson, ST-Ericsson
Yes	not treated		R2-120193	Clarification of the setting of Pre-redirection Info IE	Ericsson, ST-Ericsson
Yes	not treated		R2-120194	Clarification of the setting of Pre-redirection Info IE	Ericsson, ST-Ericsson
Yes	noted		R2-120195	EAB information update procedure	ZTE Corporation
Yes	noted		R2-120196	Triggers for EAB activation	ZTE Corporation
Yes	not treated		R2-120197	Additional considerations on EAB application	ZTE Corporation
No	withdrawn	Late	R2-120198	Further considerations on Timing and Pathloss Reference	ZTE Corporation
Yes	revised		R2-120199	Email discussion: [76#20] - LTE: HetNet mobility calibration simulations	Alcatel-Lucent (Rapporteur)
Yes	noted		R2-120200	TA command in Rel-11	Potevio
Yes	noted		R2-120201	Discussion on SCell RA problems	Potevio

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120202	Considerations on CBRA and Msg2 transmission for SCell	Potevio
Yes	noted		R2-120203	Support for NBPS in LTE	TruePosition
Yes	not treated		R2-120204	SRS Update/Reset for NBPS	TruePosition
Yes	noted		R2-120205	HFN/SN handling at HO failure	Samsung
Yes	revised		R2-120206	36.331 CR on HFN/SN handling at HO failure	Samsung
Yes	revised		R2-120207	36.331 CR on HFN/SN handling at HO failure	Samsung
Yes	revised		R2-120208	Clarification on MBSFN and measurement resource restrictions	Samsung
Yes	not treated		R2-120209	Contention-based RACH on SCell	Samsung
Yes	not treated		R2-120210	Different max power level in different PAs?	Samsung
Yes	not treated		R2-120211	Draft LS on Tx architecture	Samsung
Yes	not treated		R2-120212	Timing Advance Command MAC CE	Samsung
Yes	not treated		R2-120213	Random access failure for SCell	Samsung
Yes	noted		R2-120214	Number of SCells with RACH in a STAG	Samsung
Yes	not treated		R2-120215	RACH MSG2 format	Samsung
No	withdrawn		R2-120216	Detection of system information modification	Samsung
Yes	rejected		R2-120217	36.331 CR on detection of system information modification	Samsung
Yes	not treated		R2-120218	TA group handling	Sharp
Yes	not treated		R2-120219	Msg2 PDCCH location of Scell RACH	MediaTek
Yes	not treated		R2-120220	Uplink transmission upon RACH failure	MediaTek
Yes	not treated		R2-120221	Discussion on timing reference in sTAG	MediaTek
Yes	revised		R2-120222	TTT configuration for HetNet mobility	MediaTek
Yes	rejected		R2-120223	CR on fullconfig condition	MediaTek
Yes	not treated		R2-120224	MBMS UE Capability	Mediatek
Yes	not treated		R2-120225	Congestion and admission control for MBMS cell	MediaTek
Yes	noted	Late	R2-120226	Output of Email Discussion on IDC Trigger	MediaTek
Yes	not treated		R2-120227	IDC Information Forwarding at Handover	MediaTek
Yes	noted		R2-120228	Handling of RA Failures on SCells	Acer Incorporated
Yes	not treated		R2-120229	Changing of DL Timing Reference	Acer Incorporated
Yes	not treated		R2-120230	Camping of CA-capable UE	LG Electronics Inc.

IPR2025-00720, OnePlus Ex. 1004
Page 464 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120231	Behaviour of RRC Idle UE	LG Electronics Inc.
Yes	not treated		R2-120232	Further discussion on priority information	LG Electronics Inc
Yes	not treated		R2-120233	Discussion on measurement of different service types	LG Electronics Inc.
Yes	noted		R2-120234	Assessing User QoS Experience in different location	Samsung
Yes	not treated		R2-120235	Discussion on traffic hot spot discovery	Samsung
Yes	noted		R2-120236	UE soft buffer management in case of more than 8 HARQ processes	Samsung
Yes	rejected		R2-120237	UE soft buffer management in case of more than 8 HARQ processes	Samsung
Yes	revised		R2-120238	Clarification on physical layer parameter values requirement	Samsung, Qualcomm Incorporated
Yes	revised		R2-120239	Discussion on ROHC context transfer	Samsung, Alcatel-Lucent
Yes	not treated		R2-120240	ROHC context transfer: Overall procedure and impact on RAN3 specification	Samsung
Yes	not treated		R2-120241	Draft CR to 36.300 for ROHC context transfer support	Samsung
Yes	not treated		R2-120242	Draft CR to 36.306 for ROHC context transfer support	Samsung
Yes	not treated		R2-120243	Draft CR to 36.323 for ROHC context transfer support	Samsung
Yes	not treated		R2-120244	Draft CR to 36.331 for ROHC context transfer support	Samsung
Yes	not treated		R2-120245	TB size mismatch problem with ePHR in combination with Semi-Persistent Scheduling	Panasonic
Yes	not treated		R2-120246	Issues on exceeding maximum timing difference of aggregated cells	Panasonic
Yes	not treated		R2-120247	The error case handling of timing/pathloss reference cell	Panasonic
Yes	noted		R2-120248	SCell configuration for HeNB with carrier aggregation	Panasonic, NTT DOCOMO, INC.
Yes	not treated		R2-120249	CR on SCell configuration for HeNB with carrier aggregation	Panasonic
Yes	not treated		R2-120250	CBRA on SCell	CATT
Yes	not treated		R2-120251	CFRA on SCell	CATT
Yes	revised		R2-120252	Timing Reference Change	CATT
Yes	not treated		R2-120253	Deactivation Timer Handling for Timing Reference Cell	CATT
Yes	noted		R2-120254	RACH Configuration in sTAG	CATT
Yes	not treated		R2-120255	SCell RA Failure	CATT
Yes	not treated		R2-120256	Discussion on TA MAC CE	CATT
Yes	not treated		R2-120257	PHR for MTA	CATT

IPR2025-00720, OnePlus Ex. 1004
Page 465 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120258	Signaling Overhead for IM traffic and Background traffic	CATT
Yes	not treated		R2-120259	MBMS Assistance Information from E-UTRAN	CATT
Yes	not treated		R2-120260	MBMS CA Capability	CATT
Yes	not treated		R2-120261	MBMS Service Continuity in RRC-Connected Mode	CATT
Yes	not treated		R2-120262	Analysis of Skype background traffic	CEWiT, Samsung
No	withdrawn		R2-120263	Draft LS on DTX detection of PUCCH format 2	Samsung
Yes	revised		R2-120264	Remaining open issues on timing and pathloss reference for sTAG	Intel Corporation
Yes	not treated		R2-120265	Discussion on the open issues of RACH on SCell	Intel Corporation
Yes	not treated		R2-120266	CA Signaling Enhancement for Hetnet Type Deployments	Intel Corporation
Yes	not treated		R2-120267	Triggering for in-device coexistence	Intel Corporation
Yes	not treated		R2-120268	Signaling procedure for in-device coexistence	Intel Corporation
Yes	not treated		R2-120269	Mobility performance in HetNet deployment	Intel Corporation
Yes	noted		R2-120270	Further performance evaluation of EAB information update mechanism	Intel Corporation
Yes	rejected		R2-120271	Clarification on network sharing for MBMS	HTC
Yes	revised		R2-120272	Clarification on number of PDCP SDUs for categories 6-8 UEs	HTC
Yes	noted		R2-120273	Network assistance information for CRS interference cancellation	Samsung
Yes	rejected		R2-120274	Clarification on network sharing for MBMS	HTC
Yes	noted		R2-120275	General considerations on the HSDPA Multiflow	Nokia Siemens Networks
Yes	noted		R2-120276	Skew handling for HSDPA Multiflow	Nokia Siemens Networks
Yes	noted		R2-120277	Enhanced cell identification and measurements for CA	NTT DOCOMO, INC.
Yes	noted		R2-120278	Considerations on the mobility with HSDPA Multiflow	Nokia Siemens Networks
Yes	noted		R2-120279	HSDPA Multiflow interaction with DTX/DRX, eSCC, and HS-SCCH-less operation	Nokia Siemens Networks
Yes	noted		R2-120280	HSDPA Multiflow configuration and dynamic carrier deactivation	Nokia Siemens Networks
Yes	not treated		R2-120281	Detailed infromation from UE to eNB in the indication to inform in-device interference	Samsung
Yes	noted		R2-120282	On channel bandwidth and Inter-band CA	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120283	Carrier Aggregation bandwidth combination	Qualcomm Incorporated
Yes	not treated		R2-120284	On the need for System Time for eMBMS Operation	Qualcomm Incorporated
Yes	not treated		R2-120285	MBMS Assistance Information for idle and connected mode	Qualcomm Incorporated
Yes	noted		R2-120286	Requirements to make DRX solution predictable for in-device coexistence	Samsung
Yes	rejected		R2-120287	Draft response LS on DTX detection of PUCCH format 2	Samsung
Yes	not treated		R2-120288	Signaling procedure to handle in-device interference	Samsung
Yes	noted		R2-120289	Relevance of measurement as trigger for sending in-device interference indication to eNB	Samsung, Qualcomm Incorporated, Broadcom, Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120290	Measurement for mobility purpose during in-device interference	Samsung, Broadcom
Yes	noted		R2-120291	Diverse data simulation results	Samsung
Yes	not treated		R2-120292	Cell specific TDD configuration Inter-band Carrier Aggregation	Samsung
Yes	noted	Late	R2-120293	Report of Email discussion [76#36] - Handling of FDD/TDD capabilities	Qualcomm Incorporated
Yes	not treated		R2-120294	Inter-RAT aspects of Logged MDT	NEC
Yes	not treated		R2-120295	Accuracy of detailed location information	NEC
Yes	revised		R2-120296	Technical solutions for the FDD/TDD capabilities issue	Qualcomm Incorporated
Yes	not treated		R2-120297	Acceptable Capability Differences between FDD and TDD	Qualcomm Incorporated
Yes	not treated		R2-120298	Connected Mode solution for FDD/TDD capabilities	Qualcomm Incorporated
Yes	not treated		R2-120299	Acceptable Capability Differences between FDD and TDD	Qualcomm Incorporated
Yes	not treated		R2-120300	Connected Mode solution for FDD/TDD capabilities	Qualcomm Incorporated
Yes	not treated		R2-120301	Acceptable Capability Differences between FDD and TDD	Qualcomm Incorporated
Yes	noted		R2-120302	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	noted		R2-120303	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
No	withdrawn	Late	R2-120304	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
No	withdrawn		R2-120305	VoIP continuity between LTE and UMTS	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004
Page 467 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120306	UE Initiated Dynamic Activation and De-activation of Secondary Cells	Qualcomm Incorporated
No	withdrawn	Late	R2-120307	UE Initiated Dynamic Activation and De-activation of Secondary Cells	Qualcomm Incorporated
No	withdrawn		R2-120308	UE Initiated Dynamic Activation and De-activation of Secondary Cells	Qualcomm Incorporated
Yes	postponed		R2-120309	Introduction of cell update-less RLC/PDCP unrecoverable error reporting	Renesas Mobile Europe Ltd, Alcatel-Lucent
No	withdrawn		R2-120310	UE Initiated Dynamic Activation and De-activation of Secondary Cells	Qualcomm Incorporated
Yes	not treated		R2-120311	Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery	Renesas Mobile Europe Ltd, Alcatel-Lucent
Yes	not treated		R2-120312	Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery	Renesas Mobile Europe Ltd, Alcatel-Lucent
Yes	not treated	Late	R2-120313	Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery	Renesas Mobile Europe Ltd, Alcatel-Lucent
Yes	not treated	Late	R2-120314	Introduction of cell update-less RLC/PDCP unrecoverable error reporting and recovery	Renesas Mobile Europe Ltd, Alcatel-Lucent
Yes	withdrawn		R2-120315	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd.
Yes	noted		R2-120316	Network Controlled CELL_FACH mobility	Nokia Siemens Networks
Yes	not treated		R2-120317	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120318	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120319	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd.
Yes	noted		R2-120320	Fallback to R99 RACH	Nokia Siemens Networks
Yes	not treated		R2-120321	Correction of IE HARQ info handling	Renesas Mobile Europe Ltd.
Yes	revised		R2-120322	Disabling of default radio configurations in CELL_FACH in Rel-8	Nokia Siemens Networks
Yes	revised		R2-120323	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks
Yes	revised		R2-120324	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks

IPR2025-00720, OnePlus Ex. 1004
Page 468 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-120325	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks
Yes	revised		R2-120326	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	revised		R2-120327	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	revised		R2-120328	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	not treated		R2-120329	Modification of security context storage rate on the UICC	Nokia Siemens Networks
Yes	revised		R2-120330	The minimum UL grant size to transmit RLC data	NTT DOCOMO, INC.
No	withdrawn		R2-120331	The minimum UL grant size to transmit RLC data	NTT DOCOMO, INC.
Yes	noted		R2-120332	Discussion of UM RLC ciphering error detection and recovery for VoIP	Renesas Mobile Europe Ltd.
Yes	noted		R2-120333	PUCCH format 2 DTX detection function	NTT DOCOMO, INC.
No	withdrawn	Late	R2-120334	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
No	withdrawn	Late	R2-120335	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	noted		R2-120336	Simultaneous transmission related to SRS	NTT DOCOMO, INC.
No	withdrawn		R2-120337	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	revised		R2-120338	Correction to the combination of physical uplink channels	NTT DOCOMO, INC.
Yes	not treated		R2-120339	UM RLC ciphering error detection and recovery enhancement for IMS voice	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120340	UM RLC ciphering error detection and recovery enhancement for IMS voice	Renesas Mobile Europe Ltd.
Yes	not treated	Late	R2-120341	UM RLC ciphering error detection and recovery enhancement for IMS voice	Renesas Mobile Europe Ltd.
Yes	postponed		R2-120342	Draft Reply LS on stage 3 for modification of security context storage rate on the UICC	Nokia Siemens Networks

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated	Late	R2-120343	UM RLC ciphering error detection and recovery enhancement for IMS voice	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120344	Radio link monitoring for SCell in Rel-11	NTT DOCOMO, INC.
Yes	revised		R2-120345	Correction to lower priority based criteria	Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd
Yes	not treated		R2-120346	Using enhanced location information in MDT	Renesas Mobile Europe Ltd.
Yes	revised		R2-120347	Correction to lower priority based criteria	Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd
Yes	noted		R2-120348	Large Area System Simulation results for Hetnet mobility	Renesas Mobile Europe Ltd.
No	withdrawn		R2-120349	On the use of proximity indication in Hetnet	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120350	Improvements to Mobility State Estimation in Hetnet	Renesas Mobile Europe Ltd.
Yes	noted		R2-120351	Modification period for System Information validity with m = 2048 or m=4096	Research In Motion UK Ltd.
No	withdrawn		R2-120352	CR for excluding handover from mobility state estimation	Renesas Mobile Europe Ltd.
No	withdrawn		R2-120353	CR for counting handovers in other RATs for mobility state estimation	Renesas Mobile Europe Ltd.
No	withdrawn		R2-120354	CR for reporting UE mobility state to the network	Renesas Mobile Europe Ltd.
Yes	revised		R2-120355	On SIB10/11 Reception Timing	NTT DOCOMO, INC.
Yes	not treated		R2-120356	Location Information for QoS measurements	NTT DOCOMO, INC.
Yes	not treated		R2-120357	Removing MDT restriction for event A2	NTT DOCOMO, INC.
No	withdrawn		R2-120358	Broadcast channel coverage optimisation	NTT DOCOMO, INC.
Yes	not treated		R2-120359	Details on IDC indication	Nokia Corporation
Yes	not treated		R2-120360	DRX operation with different TDD UL/DL configurations	ASUSTeK, Nokia Siemens Networks, Nokia Corporation
Yes	postponed		R2-120361	PDCCH monitoring in UL unsynchronized state	ASUSTeK
Yes	rejected		R2-120362	Corrections to DRX and RA procedure	ASUSTeK
Yes	rejected		R2-120363	Clarification on SPS	ASUSTeK
Yes	rejected		R2-120364	DL and UL SPS Reconfiguration	ASUSTeK
Yes	not treated		R2-120365	RAN2 work on FeICIC	NTT DOCOMO, INC.

IPR2025-00720, OnePlus Ex. 1004
Page 470 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120366	SI transmission during contention resolution	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	noted		R2-120367	Further results on network signalling load and UE power consumption	Nokia Corporation, Nokia Siemens Networks
Yes	revised		R2-120368	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	revised		R2-120369	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	revised		R2-120370	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
No	withdrawn	Late	R2-120371	Network TTI indication signalling for EUL in CELL_FACH	Ericsson, ST-Ericsson
Yes	revised		R2-120372	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	noted		R2-120373	SI attachment during CCCH transmission	Ericsson, ST-Ericsson
Yes	revised		R2-120374	Addition of new band XXVI (Extending 850 MHz Upper Band (814 - 849 MHz)	Alcatel-Lucent, Samsung, Sprint
Yes	noted		R2-120375	Performance evaluation of Per-HARQ grants and E-DCH TTI alignment between CELL_FACH UEs and CELL_DCH UEs	Ericsson, ST-Ericsson
Yes	revised		R2-120376	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	revised		R2-120377	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	revised		R2-120378	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	noted		R2-120379	Discussion on 2/10 ms TTI concurrent deployment in CELL_FACH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	revised		R2-120380	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	revised		R2-120381	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint

IPR2025-00720, OnePlus Ex. 1004
Page 471 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120382	On the support for per-HARQ-process activation in CELL_FACH and TTI alignment between CELL_FACH and CELL_DCH	Ericsson, ST-Ericsson, Orange, AT&T, SOFTBANK MOBILE
Yes	revised		R2-120383	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	noted		R2-120384	Total RLC AM buffer size	Ericsson, ST-Ericsson
Yes	not treated		R2-120385	Way forward for PRACH fallback for enhanced CELL_FACH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, ZTE, Interdigital, Broadcom Corporation
Yes	noted		R2-120386	Per-HARQ process activation in CELL_FACH and Idle Mode state	Ericsson, ST-Ericsson
Yes	revised		R2-120387	Additional value for Total RLC AM Buffer Size	Ericsson, ST-Ericsson
Yes	noted		R2-120388	Discussion on PRACH fallback for enhanced CELL_FACH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	revised		R2-120389	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	revised		R2-120390	Additional value for Total RLC AM Buffer Size	Ericsson, ST-Ericsson
Yes	withdrawn		R2-120391	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	noted		R2-120392	Discussion on 2nd DRX cycle in CELL_FACH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	revised		R2-120393	Additional value for Total RLC AM Buffer Size value range	Ericsson, ST-Ericsson
Yes	postponed		R2-120394	Correction of SRB1 mapping info for FACH	Alcatel-Lucent
Yes	not treated		R2-120395	Correction of SRB1 mapping info for FACH	Alcatel-Lucent
Yes	not treated		R2-120396	Correction of SRB1 mapping info for FACH	Alcatel-Lucent
Yes	revised		R2-120397	Additional value for Total RLC AM Buffer Size value range	Ericsson, ST-Ericsson
Yes	noted		R2-120398	On HS-SCCH order for cell activation/deactivation in multi-flow transmission	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-120399	Correction of SRB1 mapping info for FACH	Alcatel-Lucent
Yes	not treated		R2-120400	Correction of SRB1 mapping info for FACH	Alcatel-Lucent
No	withdrawn	Late	R2-120401	Signaling for support concurrent deployment of 2ms and 10ms TTI	Ericsson, ST-Ericsson
Yes	noted	Late	R2-120402	Mobility under multi-flow transmission	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120403	RAN2 input for TR37.803 on Enhanced HNB mobility in CELL_FACH	Alcatel-Lucent
Yes	not treated		R2-120404	Solutions for CELL_FACH mobility to/from HNB cells	Alcatel-Lucent
Yes	noted		R2-120405	Discussion on inter-NB aggregation under multi-flow transmission	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-120406	Initial E-DCH TTI selection to support concurrent deployment of 2ms and 10ms TTI in CELL_FACH	Ericsson, ST-Ericsson
Yes	noted		R2-120407	Measured Results on RACH	Alcatel-Lucent
Yes	noted		R2-120408	Mobility in CELL_FACH state	Alcatel-Lucent
Yes	noted		R2-120409	General definitions for Multiflow	Ericsson, ST-Ericsson
Yes	noted		R2-120410	Multiflow UE centric skew handling	Ericsson, ST-Ericsson
Yes	noted		R2-120411	Final selection of E-DCH TTI to support concurrent deployment of 2ms and 10ms TTI in CELL_FACH	Ericsson, ST-Ericsson
Yes	noted		R2-120412	Simulation regarding the selection of the second best cell	Ericsson, ST-Ericsson
Yes	noted		R2-120413	RAN2 related issues on stand-alone HS-DPCCH	Ericsson, ST-Ericsson
Yes	not treated		R2-120414	Continuation of MDT upon PLMN change	Samsung
Yes	noted		R2-120415	Inbound mobility to shared CSG cell	Samsung
Yes	not treated		R2-120416	Introduction of UE support for inbound mobility to a shared CSG cell	Samsung
Yes	noted		R2-120417	Fallback to R99 PRACH	Ericsson, ST-Ericsson
Yes	noted		R2-120418	SRB2 resumption following connection re-establishment	Samsung
Yes	revised		R2-120419	Clarification on SRB2 resumption upon connection re-establishment (parallel message transmission)	Samsung
Yes	revised		R2-120420	Clarification on MBMS counting for uncipherable services	Samsung
Yes	not treated		R2-120421	Dual-xDD UE with different FDD/TDD Capabilities/FGIs	Samsung
Yes	noted		R2-120422	S-CCPCH selection for ETWS	Nokia Siemens Networks
Yes	not treated		R2-120423	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE (option 1)	Samsung
Yes	revised		R2-120424	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE (option 2)	Samsung

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-120425	Minor correction regarding limited service access on non-CSG-member cell	Samsung
Yes	not treated		R2-120426	MBMS assistance information	Samsung
Yes	not treated		R2-120427	Handling of congested MBMS frequecy	Samsung
Yes	not treated		R2-120428	MBMS enhancements for REL-11, Idle	Samsung
Yes	not treated		R2-120429	UE status reporting	Samsung
Yes	not treated		R2-120430	Introducing support for multi-bands cells	Samsung
Yes	not treated		R2-120431	Draft TP on Introduction of Extended Access Barring	Samsung
Yes	not treated		R2-120432	Other solution direction for coping with difficult radio environments	Samsung
Yes	noted		R2-120433	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson
Yes	revised		R2-120434	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson
Yes	noted		R2-120435	UE-supported DRX parameter settings	Ericsson, ST-Ericsson
Yes	revised		R2-120436	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson
Yes	revised		R2-120437	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson
Yes	revised		R2-120438	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson
Yes	not treated		R2-120439	Allowing DRX during UL scheduling	Ericsson, ST-Ericsson
Yes	revised		R2-120440	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson
Yes	not treated		R2-120441	Inter RAT ANR FGI bit	NEC
Yes	not treated		R2-120442	IDC indication configuration and reporting	NEC
Yes	not treated		R2-120443	PHR triggering for MTA	HTC
Yes	noted		R2-120444	Connectionless approaches to supporting Diverse Data Applications	IPWireless Inc.
Yes	not treated		R2-120445	Random Access Response Control Element details	NEC
No	withdrawn		R2-120446	Measurement Period for QoS Measurements	Vodafone

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120447	Way forward on MSG2 location	Huawei, ITRI, Pantech, Panasonic, Renesas Mobile Europe Ltd, Potevio, MediaTek, HiSilicon, NEC
No	withdrawn		R2-120448	Measurement Period for QoS Measurements	Vodafone
Yes	not treated		R2-120449	Analyses of RRC Connection Handling	Ericsson, ST-Ericsson
Yes	noted		R2-120450	Further Enhanced UE DRX	Ericsson, ST-Ericsson
Yes	not treated		R2-120451	Discussions on Pico cell discovery in a HetNet	HTC
Yes	noted		R2-120452	Autonomous search in CELL_FACH state	Ericsson, ST-Ericsson
Yes	not treated		R2-120453	Measurement Period for QoS Measurements	Vodafone
Yes	not treated		R2-120454	MDT Throughput Measurement	Vodafone
Yes	noted		R2-120455	MDT data Volume Measurement	Vodafone
Yes	revised		R2-120456	UE RRC mobility states mismatch between UTRAN and E-UTRAN	Research In Motion UK Ltd.
Yes	rejected		R2-120457	CR to 25.331 on new establishment cause CSFB call	Vodafone
Yes	not treated		R2-120458	EAB SI considerations for LTE	Ericsson, ST-Ericsson
Yes	noted		R2-120459	ETWS with security in Release 8, 9 and 10	Ericsson, ST-Ericsson
Yes	postponed		R2-120460	ETWS with security in Release 8, 9 and 10	Ericsson, ST-Ericsson
Yes	noted		R2-120461	EAB SI considerations for UMTS	Ericsson, ST-Ericsson
Yes	postponed		R2-120462	ETWS with security in Release 8, 9 and 10	Ericsson, ST-Ericsson
Yes	noted		R2-120463	EAB information for RAN sharing	Ericsson, ST-Ericsson
Yes	noted		R2-120464	Discussion on large-area HetNet simulations	Ericsson, ST-Ericsson
Yes	not treated		R2-120465	Different TDD configurations in inter-band CA	Ericsson, ST-Ericsson
Yes	not treated		R2-120466	Measurements and triggers for IDC indication	Ericsson, ST-Ericsson
Yes	noted		R2-120467	Detection of small cells in HetNets	Ericsson, ST-Ericsson
Yes	not treated		R2-120468	Autonomous denials for rare signaling	Ericsson, ST-Ericsson
Yes	noted		R2-120469	On Reduced Power ABS	Ericsson, ST-Ericsson
Yes	revised		R2-120470	Introduction of CA Enhancements in MAC	Ericsson, Nokia Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120471	Security for PWS warning systems in Rel-11	Ericsson, ST-Ericsson
Yes	not treated		R2-120472	RLF and RLM on SCells	Ericsson, ST-Ericsson
Yes	noted		R2-120473	Change in Scheduling Information for ETWS and CMAS	Ericsson, ST-Ericsson
Yes	not treated		R2-120474	Need for cross carrier scheduling in Rel-11 CA scenarios	Ericsson, ST-Ericsson
Yes	not treated		R2-120475	Change in Scheduling Information for ETWS	Ericsson, ST-Ericsson
Yes	not treated		R2-120476	Change in Scheduling Information for ETWS	Ericsson, ST-Ericsson
Yes	not treated		R2-120477	Change in Scheduling Information for ETWS	Ericsson, ST-Ericsson
Yes	not treated		R2-120478	PHR Issues for Carrier Aggregation	Ericsson, ST-Ericsson
Yes	revised		R2-120479	Change in Scheduling Information for CMAS	Ericsson, ST-Ericsson
Yes	revised		R2-120480	Change in Scheduling Information for CMAS	Ericsson, ST-Ericsson
Yes	not treated		R2-120481	Random Access Response for an SCell	Ericsson, ST-Ericsson
Yes	noted		R2-120482	Random Access Failure Handling on SCell	Ericsson, ST-Ericsson
Yes	noted		R2-120483	Timing Advance Maintenance for SCells	Ericsson, ST-Ericsson
Yes	not treated		R2-120484	SCell RACH procedure	Motorola Mobility
Yes	not treated		R2-120485	PHR for Multi-TA	Motorola Mobility
Yes	not treated		R2-120486	Restrictions on Autonomous denial	Motorola Mobility
Yes	not treated		R2-120487	Provisioning of additional information in RAN for RRC_Connected UEs	Alcatel-Lucent
Yes	not treated		R2-120488	Remaining issues on provisioning of MBMS SAIs in the RAN	Alcatel-Lucent
Yes	not treated		R2-120489	Cell re-selection frequency prioritisation by Idle UEs w.r.t SAIs	Alcatel-Lucent
Yes	not treated		R2-120490	Requirement on MBMSInterestIndication message transmission instance w.r.t. UE capability	Alcatel-Lucent
No	withdrawn	Late	R2-120491	UE categories for Four Branch MIMO	Ericsson, ST-Ericsson
Yes	not treated		R2-120492	Congestion and admission control	Alcatel-Lucent
Yes	noted		R2-120493	Fast RRC connection release	Alcatel-Lucent
Yes	revised		R2-120494	Selection of transport blocks with 2 codeword in four branch MIMO	Ericsson, ST-Ericsson
Yes	rejected		R2-120495	Clarification on order of MTCH with respect to MCCH in MAC PDU	Alcatel-Lucent
Yes	not treated		R2-120496	New carrier type and power imbalance	Nokia Corporation, Nokia Siemens Networks

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120497	Clarification on order of MTCH with respect to MCCH in MAC PDU	Alcatel-Lucent
Yes	rejected		R2-120498	MAC PDU formatting for transmission of MCCH	Alcatel-Lucent
Yes	not treated		R2-120499	MAC PDU formatting for transmission of MCCH	Alcatel-Lucent
Yes	not treated		R2-120500	DRX for background traffic	Nokia Corporation, Nokia Siemens Networks
Yes	not treated		R2-120501	Positioning uncertainty and confidence for MDT	Ericsson, ST-Ericsson
Yes	not treated		R2-120502	Discussions on Msg2 location and monitoring for SCell RA	Samsung
Yes	not treated		R2-120503	Improving the trade-off between SR delay and uplink resource usage	Huawei, HiSilicon
Yes	not treated		R2-120504	Issues on SCell timing reference	Samsung, Ericsson, ST-Ericsson
Yes	not treated		R2-120505	Mobility State Estimation Enhancements	Samsung
Yes	noted		R2-120506	Measurements for MDT QoS Verification	Ericsson, ST-Ericsson
Yes	noted		R2-120507	Accessibility measurements for MDT	Ericsson, ST-Ericsson
No	withdrawn		R2-120508	Pico to Macro Failure Improvements	Samsung
Yes	not treated		R2-120509	Pico to Macro Failure Improvements	Samsung
Yes	not treated		R2-120510	Enhanced MAC/RLC procedures for isolated packet transmission	Huawei, HiSilicon
Yes	not treated		R2-120511	Mobility evaluation considering the usage of long DRX cycle	Huawei, HiSilicon
Yes	not treated		R2-120512	Open issues for MBMSInterestIndication	Huawei, HiSilicon
Yes	noted	Late	R2-120513	[76#38] - LTE: MBMS Assistance information	Huawei
Yes	not treated		R2-120514	[draft] Introduction of RAN overload control for MTC in 25.304	Huawei, HiSilicon
Yes	not treated		R2-120515	[draft] Introduction of RAN overload control for MTC in 25.331	Huawei, HiSilicon
Yes	not treated		R2-120516	[draft] Introduction of RAN overload control for MTC in 36.304	Huawei, HiSilicon
Yes	not treated		R2-120517	[draft] Introduction of RAN overload control for MTC in 36.331	Huawei, HiSilicon
Yes	noted	Late	R2-120518	Summary of Email Discussion 76#31 - Joint EAB Information Update Procedure	Huawei
Yes	not treated		R2-120519	EAB parameters in shared network	Huawei, HiSilicon
Yes	not treated		R2-120520	TR updates for small cell detection	Nokia Siemens Networks, Nokia Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120521	EAB open issues	Huawei, HiSilicon
Yes	noted		R2-120522	Multiflow skew handling	Huawei, HiSilicon
Yes	noted		R2-120523	Enhancements for Small Cell Detection	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120524	UE MSE and HetNet Mobility	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120525	Re-establishment issues in HetNet scenarios	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120526	Miscellaneous corrections for UL CLTD	Huawei, HiSilicon
Yes	noted		R2-120527	2 / 10 ms TTI design for the enhanced CELL_FACH	Nokia Siemens Networks
Yes	noted		R2-120528	Further enhanced DRX for the CELL_FACH state	Nokia Siemens Networks
Yes	revised		R2-120529	Autonomous state transition between the UTRA RRC states	Nokia Siemens Networks
Yes	noted		R2-120530	Signaling impacts for low-power ABS concept	Nokia Siemens Networks, Nokia Corporation
Yes	not treated		R2-120531	Frequency specific compressed mode for the non-adjacent carrier allocation	Nokia Siemens Networks
Yes	revised		R2-120532	Corrections on the maximum number of frequency bands supported by the UE (R10)	Huawei, HiSilicon, Alcatel-Lucent
Yes	noted		R2-120533	PS RAB unrecoverable error in the multi-RAB configuration	Nokia Siemens Networks
Yes	revised		R2-120534	Corrections on the maximum number of frequency bands supported by the UE (R11)	Huawei, HiSilicon, Alcatel-Lucent
Yes	noted		R2-120535	TTI selection criteria in CELL-FACH state	Huawei, HiSilicon
Yes	noted		R2-120536	TTI indication for 2ms and 10ms concurrent deployment in CELL FACH state	Huawei, HiSilicon
Yes	noted		R2-120537	Discussions on Solution of Fallback to R99 PRACH	Huawei, HiSilicon
Yes	not treated		R2-120538	Signature partition and sub-feature dependency in FE-FACH	Huawei, HiSilicon
Yes	revised		R2-120539	Correction to 25.331 on Cell Reselection enhancements (Rel-9)	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo
Yes	revised		R2-120540	Correction to 25.331 on Cell Reselection enhancements (Rel-10)	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-120541	Correction to 25.331 on Cell Reselection enhancements (Rel-11)	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo
Yes	revised		R2-120542	Signature partition and sub-feature dependency in FE-FACH	Huawei, HiSilicon
Yes	noted		R2-120543	On the benefits of DC-HSDPA operation in CELL_FACH state	Huawei, HiSilicon
Yes	not treated		R2-120544	Evaluations on DRX and Relationship to QoS	Research In Motion UK Ltd.
Yes	noted		R2-120545	Evaluation of SR for background traffic	Research In Motion UK Ltd.
Yes	agreed		R2-120546	Editorial Corrections to TR 36.822	Research In Motion UK Ltd.
No	withdrawn		R2-120547	RRC state control analysis	Research In Motion UK Ltd.
Yes	noted	Late	R2-120548	Further considerations on TTI alignmentper HARQ scheduling for between CELL_FACH UEs and CELL_DCH Ues	Huawei, HiSilicon
Yes	revised		R2-120549	[76#37] - LTE: EDDA discussion on RRC Signalling and DRX efficiency	Research In Motion UK Ltd.
Yes	not treated		R2-120550	RRC Enhancements for Background and IM Traffic	Research In Motion UK Ltd.
Yes	noted		R2-120551	CSG cell measurement exclusion for inter-frequency detected set	Huawei, HiSilicon
Yes	rejected		R2-120552	Clarification ofon SI transmission during collision resolution phase	Huawei, HiSilicon
Yes	noted		R2-120553	Multiflow mobility	Huawei, HiSilicon
Yes	noted		R2-120554	Multiflow and DTX/DRX	Huawei, HiSilicon
Yes	noted		R2-120555	Consideration on UE multiflow capability	Huawei, HiSilicon
Yes	noted		R2-120556	Discussion on HNB RAN sharing	Huawei, HiSilicon
Yes	not treated		R2-120557	Discussion on CELL_FACH enhancement	Huawei, HiSilicon
Yes	postponed		R2-120558	Clarifications on the periodic measurement report for DC-HSUPA (Rel-9)	Huawei, HiSilicon
Yes	noted		R2-120559	EAB information update procedure in LTE	Renesas Mobile Europe Ltd.
Yes	revised		R2-120560	Correction to the secondary uplink frequency activation state after reconfiguration procedure (Rel-9)	Huawei, HiSilicon

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	rejected		R2-120561	Clarification on the black listed cells for cell reselection to E-UTRA (Rel-8)	Huawei, HiSilicon, NTT Docomo
Yes	noted		R2-120562	Initial TTI selection for 2ms/10ms concurrent deployment in CELL_FACH	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120563	Clarification on the black listed cells for cell reselection to E-UTRA (Rel-9)	Huawei, HiSilicon, NTT Docomo
Yes	not treated		R2-120564	Signalling for 2ms/10ms concurrent deployment in CELL_FACH	Renesas Mobile Europe Ltd.
Yes	revised		R2-120565	Clarification on the black listed cells for cell reselection to E-UTRA (Rel-10)	Huawei, HiSilicon, NTT Docomo
Yes	noted		R2-120566	E-DCH or PRACH resource selection and fallback	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120567	Discussion on CS AMR type change during relocation	Huawei, HiSilicon
Yes	noted		R2-120568	UE Battery Life Improvements and Signalling Reduction	Renesas Mobile Europe Ltd.
Yes	noted		R2-120569	Reselection Enhancements in CELL_FACH	Renesas Mobile Europe Ltd.
Yes	noted		R2-120570	Enhanced Network Control of Mobility in CELL_FACH	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120571	Correction of the CS AMR type change during relocation	Huawei, HiSilicon
Yes	not treated		R2-120572	Consideration on Bluetooth and E-UTRAN co-existence	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120573	Enhanced solution for WiFi beacon handling	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120574	UE-assisted enhancement under DRX method in LTE+WiFi scenario	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120575	CMAS Triggers to read SIB1	Motorola Mobility
Yes	not treated		R2-120576	UM RLC Ciphering Error Detection for VOIP	Huawei, HiSilicon
Yes	not treated		R2-120577	Draft 36331_CRxxxx_(Rel-9)_R2-12xxxx CMAS Triggers to read SIB1	Motorola Mobility
Yes	noted		R2-120578	Impact of DRX to always-on background traffic	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120579	Extend UM RLC ciphering error detection and recovery mechanism for VoIP	Huawei, HiSilicon
Yes	not treated		R2-120580	PUCCH improvements for Diverse Data Applications	Renesas Mobile Europe Ltd.
Yes	noted		R2-120581	Discussion on HFN De-sync Problem for VOIP	Huawei, HiSilicon
Yes	not treated		R2-120582	The Solutions of UE Battery Life Improvement and Signaling Reduction	Huawei, HiSilicon
Yes	revised		R2-120583	Clarification to the integrity protection configuration in the UTRAN MOBILITY INFORMATION procedure	Research In Motion UK Ltd.

IPR2025-00720, OnePlus Ex. 1004
Page 480 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120584	Discussion on CELL_FACH mobility enhancement to LTE	Huawei, HiSilicon
Yes	noted		R2-120585	On the impact to legacy UEs due to Static Fallback to R99 Scheme	Qualcomm Incorporated
Yes	noted		R2-120586	A dynamic mechanism for Fallback to Rel-99 PRACH	Qualcomm Incorporated
Yes	noted		R2-120587	UE battery life improvements and signaling reduction via a 2nd DRX cycle in CELL_FACH	Qualcomm Incorporated
Yes	noted		R2-120588	On concurrent deployment of 2ms and 10ms TTI in a cell in CELL_FACH	Qualcomm Incorporated
Yes	noted		R2-120589	On the merits of DC-HSDPA in CELL_FACH	Qualcomm Incorporated
Yes	not treated		R2-120590	CLTD activation/deactivation	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120591	E-DCH resource analysis	Qualcomm Incorporated
Yes	noted		R2-120592	Multiflow mobility	Renesas Mobile Europe Ltd.
Yes	postponed		R2-120593	Introduction of Further Enhancements to CELL_FACH in 25.308	Qualcomm Incorporated
Yes	postponed		R2-120594	Introduction of Further Enhancements to CELL_FACH in 25.319	Qualcomm Incorporated
Yes	not treated		R2-120595	CSG reselection in CELL_FACH	Renesas Mobile Europe Ltd.
Yes	not treated		R2-120596	Signaling design to Enable and Disable CLTD	Qualcomm Incorporated
Yes	not treated		R2-120597	MAC Layer aspects of UL MIMO	Qualcomm Incorporated
Yes	not treated		R2-120598	Enabling Closed Loop Antenna Switching	Qualcomm Incorporated
Yes	noted		R2-120599	Introduction of supported bandwidth combinations for CA	Ericsson, ST-Ericsson
Yes	not treated		R2-120600	Introduction of supported bandwidth combinations for CA	Ericsson, ST-Ericsson
No	withdrawn		R2-120601	Introduction of FGI bits for Inter-RAT ANR	Ericsson, ST-Ericsson
No	withdrawn		R2-120602	Introduction of FGI bits for Inter-RAT ANR	Ericsson, ST-Ericsson
Yes	not treated		R2-120603	RA procedure for SCell	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-120604	Pathloss reference for sTAG and need of RLM	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-120605	Error handling for Timing reference of sTAG	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-120606	TA Maintenance in MTA	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell

IPR2025-00720, OnePlus Ex. 1004
Page 481 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120607	PHR triggers for MTA	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-120608	Remaining issues of EAB	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-120609	IDC Information forwarding	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
No	withdrawn		R2-120610	Introduction of FGI bits for Inter-RAT ANR	Ericsson, ST-Ericsson
No	withdrawn		R2-120611	Introduction of FGI bits for Inter-RAT ANR	Ericsson, ST-Ericsson
Yes	not treated		R2-120612	FGI for handover to VoHSPA	Ericsson, ST-Ericsson
Yes	not treated		R2-120613	FGI for handover to VoHSPA	Ericsson, ST-Ericsson
Yes	not treated		R2-120614	FGI for handover to VoHSPA	Ericsson, ST-Ericsson
Yes	noted		R2-120615	Comparison of EAB update solutions	Alcatel-Lucent
Yes	not treated		R2-120616	Positioning solutions for MDT	Alcatel-Lucent
Yes	not treated		R2-120617	ePLMN handling for MDT and RLF in Rel-11	Alcatel-Lucent
Yes	noted		R2-120618	Inter-RAT FGI bits	Alcatel-Lucent
Yes	noted		R2-120619	Discussion on solutions for dynamic R99 RACH fallback	InterDigital Communications
Yes	noted		R2-120620	CDMA inter-working with LTE network sharing	Alcatel-Lucent
Yes	noted		R2-120621	Mobility considerations for multiflow HSDPA	InterDigital Communications
Yes	noted		R2-120622	Considerations on DRX and multiflow HSDPA	InterDigital Communications
Yes	not treated		R2-120623	Handling Timing Advance Differences	InterDigital Communications
Yes	not treated		R2-120624	Pcmax Inclusion for Inter-band PHR	InterDigital Communications
Yes	noted		R2-120625	76#33 MDT Scheduled IP throughput measurement	MediaTek
Yes	not treated		R2-120626	Triggers and Timers for Inter-band and RRH PHR	InterDigital Communications
Yes	noted		R2-120627	Way Forward MDT throughput measurement	MediaTek, CMCC
Yes	noted		R2-120628	MDT Throughput measurement for WCDMA	MediaTek

IPR2025-00720, OnePlus Ex. 1004
Page 482 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	noted		R2-120629	PHR When SCell TAT Expired	InterDigital Communications
Yes	noted		R2-120630	MDT traffic volume	MediaTek
Yes	not treated		R2-120631	MSG1 transmission for RACH Procedure for SCells	InterDigital Communications
Yes	not treated		R2-120632	MSG2 Reception for RACH Procedure for SCells	InterDigital Communications
Yes	not treated		R2-120633	Comparison of Alternatives for MSG2 reception for SCells	InterDigital Communications
Yes	noted		R2-120634	76#34 MDT Location Information Enhancements	MediaTek
Yes	noted		R2-120635	Way Forward MDT location information enhancements	MediaTek, CMCC
Yes	not treated		R2-120636	MAC Timing Advance Control Element for SCells	InterDigital Communications
Yes	not treated		R2-120637	System View MDT Enhanced Available Location	MediaTek
Yes	not treated		R2-120638	ECID location in MDT	MediaTek
Yes	not treated		R2-120639	Predictable Idle Periods for In-device Coexistence	InterDigital Communications
Yes	not treated		R2-120640	UE selection for MDT with detailed location information	Kyocera
Yes	not treated		R2-120641	Draft LS on MDT location	MediaTek
Yes	not treated		R2-120642	Restricting Frequency and limiting Impact of Autonomous Denials	InterDigital Communications
Yes	not treated		R2-120643	MDT configuration with detailed location information	Kyocera
Yes	not treated		R2-120644	Preservation of CS call during RLC unrecoverable error in multiRAB environment	Research In Motion UK Ltd.

IPR2025-00720, OnePlus Ex. 1004
Page 483 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120645	MDT UL coverage RLF report	MediaTek
Yes	not treated		R2-120646	MDT logging stoppage based on battery threshold level	Kyocera
Yes	not treated		R2-120647	QoS measurement and location association for MDT	Kyocera
Yes	not treated		R2-120648	Selection/Reselection between MBMS capable cells and CSG cells	Kyocera
Yes	not treated		R2-120649	MBMS service continuity for mobility to/from CSG cells	Kyocera
Yes	not treated		R2-120650	CoMP Related RAN2 Issues	Huawei, HiSilicon
Yes	noted		R2-120651	Evaluation of Mobility Performance in HetNet with Simulations	Alcatel-Lucent
Yes	not treated		R2-120652	On UE-speed-based methods for improving the mobility performance in HetNets	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	not treated		R2-120653	Discussion on Context Fetch for RRC Connection Re-establishment in LTE HetNets	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell
Yes	noted		R2-120654	Inter-frequency small cell identification	Qualcomm Incorporated
No	withdrawn		R2-120655	RRC State Selection for background traffic scenarios	Qualcomm Incorporated
Yes	not treated		R2-120656	Consideration on counting only macro cell changes	Pantech
Yes	not treated		R2-120657	Selective counting in HetNet MSE	Pantech
Yes	not treated		R2-120658	MBMS cell and CSG reselection for service continuity	Pantech
Yes	not treated		R2-120659	MSG2 location for SCell RACH	Pantech
Yes	not treated		R2-120660	TA validity in Multiple TA environments	Pantech
Yes	not treated		R2-120661	New TAC MAC CE format to support Multiple TA	Pantech
Yes	not treated		R2-120662	IDC trigger issue	Pantech
Yes	not treated		R2-120663	Measurement on IDC to prevent ping-pong HO	Pantech
Yes	not treated		R2-120664	IDC trigger procedure	Pantech
Yes	noted		R2-120665	Throughput and loss rate measurements for MDT QoS verification	LG Electronics Inc.
Yes	noted		R2-120666	DRX changes for predictable TDM patterns in IDC	Qualcomm Incorporated
Yes	not treated		R2-120667	Impact of DRX parameters and RRC Inactivity Timer on power consumption for Background Traffic	Intel Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-120668	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	revised		R2-120669	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	revised		R2-120670	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	revised		R2-120671	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	revised		R2-120672	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	postponed		R2-120673	Clarifictions of CSG to CSG cell reselection rules	Qualcomm Incorporated
Yes	not treated		R2-120674	Clarifictions of CSG to CSG cell reselection rules	Qualcomm Incorporated
Yes	not treated		R2-120675	Clarifictions of CSG to CSG cell reselection rules	Qualcomm Incorporated
Yes	rejected		R2-120676	CSG reselection clarification during Inter-RAT	Qualcomm Incorporated
Yes	not treated		R2-120677	CSG reselection clarification during Inter-RAT	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004
Page 485 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120678	CSG reselection clarification during Inter-RAT	Qualcomm Incorporated
Yes	rejected		R2-120679	Reselection Conditions from non-CSG cells to CSG cells	Qualcomm Incorporated
Yes	not treated		R2-120680	Reselection Conditions from non-CSG cells to CSG cells	Qualcomm Incorporated
Yes	not treated		R2-120681	Reselection Conditions from non-CSG cells to CSG cells	Qualcomm Incorporated
Yes	postponed		R2-120682	Invalid configuration during radio bearer reconfiguration	Qualcomm Incorporated
Yes	not treated		R2-120683	Invalid configuration during radio bearer reconfiguration	Qualcomm Incorporated
Yes	not treated		R2-120684	Invalid configuration during radio bearer reconfiguration	Qualcomm Incorporated
Yes	not treated		R2-120685	Invalid configuration during radio bearer reconfiguration	Qualcomm Incorporated
Yes	not treated		R2-120686	Invalid configuration during radio bearer reconfiguration	Qualcomm Incorporated
Yes	noted		R2-120687	Scheduling information inclusion in Enh. CELL_FACH during collision resolution	Qualcomm Incorporated
Yes	not treated		R2-120688	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	not treated		R2-120689	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	not treated		R2-120690	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	not treated		R2-120691	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	not treated		R2-120692	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	not treated		R2-120693	VoIP continuity between LTE and UMTS	Qualcomm Incorporated
Yes	noted		R2-120694	Support of multiple frequency bands	Ericsson, ST-Ericsson
Yes	postponed		R2-120695	Support of multiple frequency bands in a cell	Ericsson, ST-Ericsson
Yes	not treated		R2-120696	Reduction of logging and reporting	New Postcom
Yes	not treated		R2-120697	FDD/TDD capabilities	Panasonic
Yes	revised		R2-120698	Clarification of F-DPCH with STTD in CELL_FACH	Panasonic
Yes	noted		R2-120699	Message2 location	LG Electronics Inc.
No	withdrawn		R2-120700	Scell RACH trigger	LG Electronics Inc.
Yes	not treated		R2-120701	TAC MAC CE and multiple timing advances	LG Electronics Inc.
Yes	not treated		R2-120702	PHR and multiple timing advances	LG Electronics Inc.

IPR2025-00720, OnePlus Ex. 1004
Page 486 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120703	Necessary procedure for avoiding ping-pong to problematic frequency	LG Electronics Inc.
No	withdrawn		R2-120704	MBMS Multibands Cell Selection and Reselection	Verizon Wireless
Yes	revised		R2-120705	MBMS Multibands Cell Selection and Reselection	Verizon Wireless
Yes	revised		R2-120706	MBMS Multibands Cell Selection and Reselection	Verizon Wireless
Yes	not treated		R2-120707	Overall IDC signaling procedure	LG Electronics Inc.
Yes	noted		R2-120708	eMBMS Multibands Cell Selection and Reselection	Verizon Wireless
Yes	not treated		R2-120709	MBMS Service Continuity for Inter-RAT Mobility	LG Electronics Inc
Yes	not treated		R2-120710	The issue of pico cell avoidance	Samsung
Yes	not treated		R2-120711	UE speed estimation in HETNET	Samsung
Yes	not treated		R2-120712	Power Consumption evaluation of Full Connected DRX	Intel Corporation
Yes	not treated		R2-120713	UE models for acquiring and re-acquiring EAB update	LG Electronics Inc.
Yes	not treated		R2-120714	SIB design for EAB	LG Electronics Inc.
Yes	revised		R2-120715	Inclusion of the mbsfn-AreaIndex in the MBMSCountingResponse message	LG Electronics Inc.
Yes	revised		R2-120716	Clarification on the setting of FGI bit 25	Intel Corporation
Yes	not treated		R2-120717	Handling of MBMS Interest Indication for Mobility	LG Electronics Inc.
Yes	revised		R2-120718	Clarification on the setting of FGI bit 25	Intel Corporation
Yes	not treated		R2-120719	Further discussion on MBMS service continuity	LG Electronics Inc.
Yes	revised		R2-120720	Clarification on the setting of FGI bit 25	Intel Corporation
Yes	not treated		R2-120721	Mobility between MBMS and CSG	LG Electronics Inc.
Yes	noted		R2-120722	On avoiding PS RAB RLC unrecoverable error during mRAB calls	Qualcomm Incorporated
Yes	not treated		R2-120723	Introduction of FE-FACH absolute priority cell reselection in 25.304	Qualcomm Incorporated
Yes	noted		R2-120724	IRAT prioritization for FE-FACH absolute priority cell reselection	Qualcomm Incorporated
Yes	noted		R2-120725	Optimizing RNC-based RLC split performance	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
No	withdrawn		R2-120726	Earlier implementability of MP-HSDPA	Qualcomm Incorporated
Yes	noted		R2-120727	Event based Virtual Active Set reporting for MP-HSDPA	Qualcomm Incorporated
Yes	noted		R2-120728	Impacts of baseline EAB	Qualcomm Incorporated
Yes	noted		R2-120729	Enhanced RRC redirection to E-UTRAN	Qualcomm Incorporated
Yes	not treated		R2-120730	PDCCH and PDSCH location for Msg2	Fujitsu
Yes	not treated		R2-120731	Further consideration on the TAG change procedure	Fujitsu
Yes	not treated		R2-120732	Discussions on PHR for SCell in Rel-11	Fujitsu
Yes	noted		R2-120733	Trigger of RA procedure on SCell(s)	Fujitsu
Yes	not treated		R2-120734	Remaining issues on SCell RA procedure	Fujitsu
Yes	not treated		R2-120735	Network-controlled autonomous denial	Fujitsu
Yes	not treated		R2-120736	Discussion on the scenario for UE mobility state estimation	Fujitsu
No	withdrawn		R2-120737	Consideration on the mobility enhancement in Hetnet	Fujitsu
Yes	withdrawn		R2-120738	The ACB parameters for delay tolerant access	CATT
Yes	withdrawn		R2-120739	clarification of the ACB parameters for delay tolerant access	CATT
Yes	not treated		R2-120740	Inter-PLMN MDT	LG Electronics Inc.
Yes	not treated		R2-120741	Inter-RAT MDT	LG Electronics Inc.
Yes	not treated		R2-120742	On-demand positioning for MDT	LG Electronics Inc.
Yes	not treated		R2-120743	Positioning Status reporting	LG Electronics Inc.
No	withdrawn	Late	R2-120744	Reduction of unnecessary log	LG Electronics INc.
Yes	not treated		R2-120745	RAN2 impact for supporting FeICIC	LG Electronics Inc.
Yes	not treated		R2-120746	Further analysis on EAB update mechanisms	CATT
Yes	noted		R2-120747	Support of HeNB RAN sharing	LG Electronics Inc.
Yes	noted		R2-120748	UE autonomous priority handling versus Camping RAT priority	LG Electronics Inc.
No	withdrawn		R2-120749	Further consideration on EAB NAS-AS modeling related issues	CATT
Yes	not treated		R2-120750	Further consideration on EAB NAS-AS modeling related issues	CATT

IPR2025-00720, OnePlus Ex. 1004
Page 488 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	rejected		R2-120751	Clarification of inter-RAT CSG cell reselection	LG Electronics Inc.
Yes	revised		R2-120752	Clarification of inter-RAT CSG cell reselection	LG Electronics Inc.
Yes	noted		R2-120753	Re-direction to E-UTRA issues	Ericsson, ST-Ericsson, NTT Docomo, TeliaSonera
Yes	not treated		R2-120754	RRC signaling for time to search and return to UTRA in RRC Connection Release	Ericsson, ST-Ericsson
Yes	not treated		R2-120755	RRC signaling for time to search and return to UTRA in RRC Connection Release	Ericsson, ST-Ericsson
Yes	not treated		R2-120756	RRC signaling for time to search and return to UTRA in RRC Connection Release	Ericsson, ST-Ericsson
Yes	not treated		R2-120757	Correction in time to search and return to UTRA in RRC Connection Release	Ericsson, ST-Ericsson
Yes	not treated		R2-120758	Correction in time to search and return to UTRA in RRC Connection Release	Ericsson, ST-Ericsson
Yes	not treated		R2-120759	Correction in time to search and return to UTRA in RRC Connection Release	Ericsson, ST-Ericsson
Yes	noted		R2-120760	RRC Connection Release enhancements	Ericsson, ST-Ericsson
Yes	not treated		R2-120761	Evaluation of RRC signalling overhead and power consumption	China Unicom
Yes	not treated		R2-120762	Evluation on the PDCCH capacity for background traffic	China Unicom
Yes	noted		R2-120763	Discussion on the mechanisms of fallback to R99 PRACH	China Unicom
Yes	not treated		R2-120764	Consideration on DRX configuration in Cell_FACH	China Unicom
Yes	noted		R2-120765	Discussion on LPP Error Case â€œRequested Method Not Supportedâ€	Qualcomm Incorporated
Yes	not treated		R2-120766	Clarification of LPP Error Case â€œRequested Method Not Supportedâ€	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004
Page 489 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	not treated		R2-120767	Clarification of LPP Error Case â€œRequested Method Not Supportedâ€	Qualcomm Incorporated
Yes	noted		R2-120768	Support for Multiple Serving Cells in LPP	Qualcomm Incorporated
Yes	not treated		R2-120769	Addition of Support for Multiple Serving Cells	Qualcomm Incorporated
No	withdrawn		R2-120770	Addition of Support for Multiple Serving Cells	Qualcomm Incorporated
No	withdrawn		R2-120771	Addition of Support for Multiple Serving Cells	Qualcomm Incorporated
Yes	not treated		R2-120772	Measurement Types for QoS Verification	CATT
Yes	not treated		R2-120773	MDT Positioning with/without LCS server	CATT
Yes	not treated		R2-120774	Using TA+AOA positioning method for MDT	CATT
Yes	not treated		R2-120775	MDT Continuity between Different PLMNs	CATT
Yes	noted		R2-120776	Multi-carrier Handover between UTRAN and E-UTRAN	CATT
Yes	not treated		R2-120777	How to Handle FDD/TDD capabilities	CATT
Yes	not treated		R2-120778	MBMS Congestion Handling	CATT
Yes	not treated		R2-120779	MBMS Continuity and the Relationship with CSG	CATT
Yes	not treated		R2-120780	MBMS UE capability extensions	Ericsson, ST-Ericsson
Yes	not treated		R2-120781	MBMSInterestIndication for connected UEs	Ericsson, ST-Ericsson
Yes	not treated		R2-120782	EAB update mechanism	Samsung
Yes	not treated		R2-120783	EAB parameter for RAN sharing	Samsung
Yes	not treated		R2-120784	one to one mapping between QoS measurement and accurate location information	Samsung
Yes	not treated		R2-120785	Rel-11 MDT enhancement on location information in CONN	Samsung
Yes	not treated		R2-120786	Rel-11 MDT enhancement on location information in IDLE	Samsung
Yes	not treated		R2-120787	EAB Interface between AS & NAS	Samsung
Yes	not treated		R2-120788	EAB and ACB procedures	Samsung
Yes	not treated		R2-120789	Where to provide the EAB information	Samsung
Yes	not treated		R2-120790	Autonomous denial for Wi-Fi Beacon	Samsung
Yes	not treated		R2-120791	DRX efficiency for diverse data applications	Huawei, HiSilicon
Yes	noted		R2-120792	UE RRC mobility states mismatch between UTRAN and E-UTRAN	Research In Motion UK Ltd.
Yes	not treated	Late	R2-120793	Technical solutions for the FDD/TDD capabilities issue	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004
Page 490 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	rejected	Late	R2-120794	Removal of discrepancy on the use of TAU	Qualcomm Incorporated, Clearwire
Yes	not treated	Late	R2-120795	Removal of discrepancy on the use of TAU	Qualcomm Incorporated, Clearwire
Yes	revised	Late	R2-120796	Time to keep RLF Reporting logs	Qualcomm Incorporated
Yes	noted	Late	R2-120797	Email discussion: [76#20] - LTE: HetNet mobility calibration simulations	Alcatel-Lucent (Rapporteur)
Yes	noted	Late	R2-120798	Selection of transport blocks with 2 codeword in four branch MIMO	Ericsson
Yes	not treated	Late	R2-120799	Timing Reference Change	CATT
Yes	revised	Late	R2-120800	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	revised	Late	R2-120801	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	noted	Late	R2-120802	The minimum UL grant size to transmit RLC data	NTT DOCOMO, INC.
Yes	rejected	Late	R2-120803	Clarification on the transport block size change in an adaptive retransmit order for UL HARQ	Research In Motion UK Ltd.
No	withdrawn	Late	R2-120804	New Blocking and Collision Probability Analysis	Huawei, HiSilicon
Yes	agreed	Late	R2-120805	[76#37] - LTE: EDDA discussion on RRC Signalling and DRX efficiency	Research In Motion UK Ltd.
Yes	revised		R2-120806	[Draft] reply LS to S5-113887 = R2-120034 on Usage of speed criterion for MDT data collection (contact: NEC)	NEC
Yes	revised		R2-120807	Draft reply LS to C6-110601 = R2-12035 on H(e)NB air interface activation (to: CT6; cc: SA3; contact: Huawei)	Huawei
Yes	revised		R2-120808	Draft reply LS to RT-120017 = R2-120039 on Preparation Work in 3GPP for ITU related to Final Submission to ITU-R towards Rev.11 of Rec. ITU-R M.1457 (to: 3GPP ITU-R ad hoc; contact: Telecom Italia)	Telecom Italia
Yes	postponed		R2-120809	Draft reply LS to S4-120283 = R2-120040 on MBMS assistance information for service continuity (to: SA4; contact: Qualcomm)	Qualcomm Incorporated
Yes	revised		R2-120810	Draft reply LS to RP-111770 = R2-120024 on Capability handling of LTE TDD and FDD modes (to: RAN; contact: Qualcomm)	Qualcomm Incorporated

IPR2025-00720, OnePlus Ex. 1004
Page 491 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-120811	Draft reply LS to R4-116249 = R2-120020 on DTX detection of PUCCH format 2 (to RAN4; contact: NTT DOCOMO)	NTT DOCOMO, INC.
Yes	revised		R2-120812	CR to 36.305 for network based positioning (NBPS) Support in LTE	TruePosition
Yes	agreed		R2-120813	Correction to the handling of RRC container during the inter-RAT handover	ZTE Corporation
Yes	agreed		R2-120814	Correction to the handling of RRC container during the inter-RAT handover	ZTE Corporation
Yes	revised		R2-120815	Draft LS on handling of RRC container during the inter-RAT handover (to: GERAN; contact: ZTE)	ZTE Corporation
No	withdrawn		R2-120816	Correction to inter-RAT measurement reporting with reportQuantityUTRA-FDD set to EcNo and RSCP	Deutsche Telekom
Yes	agreed		R2-120817	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	agreed		R2-120818	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	agreed		R2-120819	Correction to multiplexing and assembly	NTT DOCOMO, INC.
Yes	agreed		R2-120820	Time to keep RLF Reporting logs	Qualcomm Incorporated
Yes	not treated		R2-120821	Remaining open issues on timing and pathloss reference for sTAG	Intel Corporation
Yes	not treated		R2-120822	TTT configuration for HetNet mobility	MediaTek
Yes	noted		R2-120823	Reply LS to S4-111114 = R2-115678 on LS on MBMS FEC Evaluation Framework (R1-120831; contact: Huawei)	RAN1
Yes	noted		R2-120824	Discussion on ROHC context transfer	Samsung, Alcatel-Lucent, KDDI
Yes	noted		R2-120825	Summary of offline discussion about LTE HetNet mobility simulations	Alcatel-Lucent

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-120826	Clarification on number of PDCP SDUs for categories 6-8 UEs	HTC
Yes	revised		R2-120827	Correction to the combination of physical uplink channels	NTT DOCOMO, INC.
Yes	agreed		R2-120828	UE processing requirement in the presence of MCH transmission	Qualcomm Incorporated, NSN
Yes	noted		R2-120829	Reply LS to R2-116552 on parallel transmissions of PRACH and PUSCH/PUCCH/SRS (R1-120841; contact: Huawei)	RAN1
Yes	revised		R2-120830	Limiting MBMS counting responses to within the PLMN	Nokia Siemens Networks, Nokia Corporation
Yes	revised		R2-120831	Clarification on MBMS counting for uncipherable services	Samsung
Yes	revised		R2-120832	Inclusion of the mbsfn-AreaIndex in the MBMSCountingResponse message	LG Electronics Inc.
Yes	endorsed.		R2-120833	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	Samsung
Yes	revised		R2-120834	Offline discussion summary on capabilities allowed to be different for TDD/FDD	Qualcomm Incorporated
Yes	revised		R2-120835	Clarification on the setting of FGI bit 25	Intel Corporation
Yes	revised		R2-120836	FGI bit related to ANR and inter-RAT measurement	ZTE Corporation, China Telecom
Yes	revised		R2-120837	FGI bit related to ANR and inter-RAT measurement	ZTE Corporation, China Telecom
Yes	rejected		R2-120838	Clarification on the setting of FGI bit 25	Intel Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-120839	Minor correction regarding limited service access on non-CSG-member cell	Samsung
Yes	agreed		R2-120840	On SIB10/11 Reception Timing	NTT DOCOMO, INC.
Yes	agreed		R2-120841	MBMS Multibands Cell Selection and Reselection	Verizon Wireless
Yes	agreed		R2-120842	MBMS Multibands Cell Selection and Reselection	Verizon Wireless
No	withdrawn		R2-120843	Clarification on SRB2 resumption upon connection re-establishment (parallel message transmission)	Samsung
No	withdrawn		R2-120844	Clarification on SRB2 resumption upon connection re-establishment (parallel message transmission)	Samsung
Yes	agreed		R2-120845	Clarification on SRB2 resumption upon connection re-establishment (parallel message transmission)	Samsung
No	withdrawn		R2-120846	36.331 CR on HFN/SN handling at HO failure	Samsung
No	withdrawn		R2-120847	36.331 CR on HFN/SN handling at HO failure	Samsung
Yes	revised		R2-120848	Draft LS on LTE FDD/TDD capability solution (to: SA2; contact: Qualcomm)	Qualcomm Incorporated
Yes	noted		R2-120849	LS on extended S-RNTI (R3-120348; contact: Ericsson)	RAN3
Yes	agreed		R2-120850	Clarification on the black listed cells for cell reselection to E-UTRA (Rel-10)	Huawei, HiSilicon, NTT Docomo
Yes	agreed		R2-120851	Disabling of default radio configurations in CELL_FACH in Rel-8	Nokia Siemens Networks
Yes	agreed		R2-120852	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks
Yes	agreed		R2-120853	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks
Yes	agreed		R2-120854	Correction of default radio configurations in CELL_FACH	Nokia Siemens Networks
No	withdrawn		R2-120855	Correction to definition of enhanced inter-frequency measurements without CM	ZTE Corporation

IPR2025-00720, OnePlus Ex. 1004
Page 494 of 700

Uploaded	status	Late	Tdoc	Title	Source
No	withdrawn		R2-120856	Correction to definition of enhanced inter-frequency measurements without CM	ZTE Corporation
Yes	agreed		R2-120857	Specification Cleanup: removal of DRAC left over	Broadcom Corporation
Yes	not treated		R2-120858	Autonomous state transition between the UTRA RRC states	Nokia Siemens Networks, Deutsche Telekom
Yes	postponed		R2-120859	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	postponed		R2-120860	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	postponed		R2-120861	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	postponed		R2-120862	SI attachment during DCCH/DTCH EUL transmission in CELL_FACH state	Ericsson, ST-Ericsson, Broadcom Corporation, ZTE
Yes	postponed		R2-120863	Correction to the secondary uplink frequency activation state after reconfiguration procedure (Rel-9)	Huawei, HiSilicon
Yes	agreed		R2-120864	Correction to 25.331 on Cell Reselection enhancements (Rel-9)	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo
Yes	agreed		R2-120865	Correction to 25.331 on Cell Reselection enhancements (Rel-10)	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo
Yes	agreed		R2-120866	Correction to 25.331 on Cell Reselection enhancements (Rel-11)	Huawei, HiSilicon, Renesas Mobile Europe Ltd, NTT Docomo
Yes	revised		R2-120867	Additional value for Total RLC AM Buffer Size	Ericsson, ST-Ericsson
Yes	revised		R2-120868	Additional value for Total RLC AM Buffer Size	Ericsson, ST-Ericsson
Yes	revised		R2-120869	Additional value for Total RLC AM Buffer Size value range	Ericsson, ST-Ericsson

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-120870	Additional value for Total RLC AM Buffer Size value range	Ericsson, ST-Ericsson
Yes	agreed		R2-120871	Add up several missing optional capabilities	ZTE, Panasonic
Yes	agreed		R2-120872	Add up several missing optional capabilities	ZTE, Panasonic
Yes	agreed		R2-120873	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	agreed		R2-120874	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	agreed		R2-120875	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	agreed		R2-120876	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	agreed		R2-120877	Clarifications of the UE behaviours when initiating a cell update procedure	Qualcomm Incorporated, Ericsson, ST-Ericsson, Broadcom Corporation, and InterDigital Communications
Yes	postponed		R2-120878	Corrections on the maximum number of frequency bands supported by the UE (R10)	Huawei, HiSilicon, Alcatel-Lucent

IPR2025-00720, OnePlus Ex. 1004
Page 496 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	postponed		R2-120879	Corrections on the maximum number of frequency bands supported by the UE (R11)	Huawei, HiSilicon, Alcatel-Lucent
Yes	agreed		R2-120880	Additional value for Total RLC AM Buffer Size	Ericsson, ST-Ericsson
Yes	agreed		R2-120881	Additional value for Total RLC AM Buffer Size	Ericsson, ST-Ericsson
Yes	agreed		R2-120882	Additional value for Total RLC AM Buffer Size value range	Ericsson, ST-Ericsson
Yes	agreed		R2-120883	Additional value for Total RLC AM Buffer Size value range	Ericsson, ST-Ericsson
Yes	postponed		R2-120884	Clarification to the integrity protection configuration in the UTRAN MOBILITY INFORMATION procedure	Research In Motion UK Ltd.
Yes	revised		R2-120885	Draft LS regarding support for mobility improvements to GERAN in CELL_FACH (to: RAN; cc: -; contact: Qualcomm)	Qualcomm Incorporated
Yes	revised		R2-120886	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120887	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120888	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120889	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120890	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120891	Draft LS on the RAN2 Multiflow agreements (to: RAN3; cc: RAN1; contact: NSN)	Nokia Siemens Networks
Yes	agreed		R2-120892	Addition of new band XXVI (Extending 850 MHz Upper Band (814 - 849 MHz)	Alcatel-Lucent, Samsung, Sprint
Yes	agreed		R2-120893	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-120894	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	agreed		R2-120895	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	agreed		R2-120896	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	agreed		R2-120897	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	agreed		R2-120898	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	agreed		R2-120899	Add Extending 850 MHz Upper Band (814 - 849 MHz) to TS25.307	Alcatel-Lucent, Sprint
Yes	revised		R2-120900	Clarification of F-DPCH with STTD in CELL_FACH	Panasonic
Yes	revised		R2-120901	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120902	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120903	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120904	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120905	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	agreed		R2-120906	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	agreed		R2-120907	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	agreed		R2-120908	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	agreed		R2-120909	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-120910	Clarification on stored HARQ info when HS-DSCH reception is not supported	Ericsson, ST-Ericsson, Renesas
Yes	revised		R2-120911	Draft LS regarding support for mobility improvements to GERAN in CELL_FACH (to: RAN; cc: -; contact: Qualcomm)	Qualcomm Incorporated
Yes	agreed		R2-120912	LS on the RAN2 Multiflow agreements (to: RAN3; cc: RAN1; contact: NSN)	RAN2
Yes	agreed		R2-120913	LS regarding support for mobility improvements to GERAN in CELL_FACH (to: RAN; cc: RAN4; contact: Qualcomm)	RAN2
Yes	agreed		R2-120914	Clarification of F-DPCH with STTD in CELL_FACH	Panasonic
Yes	agreed		R2-120915	Report of RAN2 #76, San Francisco, USA, 14.11.-18.11.2011	ETSI MCC
No	withdrawn		R2-120916	Void	-
No	withdrawn		R2-120917	Void	-
No	withdrawn		R2-120918	Void	-
No	withdrawn		R2-120919	Void	-
Yes	agreed		R2-120920	Correction on MME/eNB behaviour in case of broken SCTP connection	RAN3
Yes	agreed		R2-120921	Correction of Emergency Call	RAN3
Yes	agreed		R2-120922	Correction on unnecessary HO	RAN3
Yes	agreed		R2-120923	Correction on unnecessary HO	RAN3
Yes	agreed		R2-120924	CR for clarification of eMBMS architecture description	RAN3
Yes	agreed		R2-120925	Restriction on Rel-10 X2-based handover between HeNBs	RAN3
Yes	agreed		R2-120926	Restriction on Rel-10 X2-based handover between HeNBs	RAN3
Yes	endorsed		R2-120927	Stage 2 agreements on service continuity for MBMS for LTE	Huawei
Yes	endorsed		R2-120928	Introduction of Carrier aggregation enhancements (status after RAN2 #77)	Nokia Corporation

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	endorsed		R2-120929	Stage-2 agreements on signalling and procedure for interference avoidance for IDC	CMCC
Yes	agreed		R2-120930	LS on CA enhancement status in RAN2 (to: RAN1; cc: - ; contact: Nokia)	RAN2
No	withdrawn		R2-120931	Void	-
No	withdrawn		R2-120932	Void	-
No	withdrawn		R2-120933	Void	-
No	withdrawn		R2-120934	Void	-
No	withdrawn		R2-120935	Void	-
No	withdrawn		R2-120936	Void	-
No	withdrawn		R2-120937	Void	-
No	withdrawn		R2-120938	Void	-
No	withdrawn		R2-120939	Void	-
No	withdrawn		R2-120940	Void	-
No	withdrawn		R2-120941	Void	-
No	withdrawn		R2-120942	Void	-
No	withdrawn		R2-120943	Void	-
No	withdrawn		R2-120944	Void	-
No	withdrawn		R2-120945	Void	-
No	withdrawn		R2-120946	Void	-
No	withdrawn		R2-120947	Void	-
No	withdrawn		R2-120948	Void	-
No	withdrawn		R2-120949	Void	-
No	withdrawn		R2-120950	Void	-
No	withdrawn		R2-120951	Void	-
No	withdrawn		R2-120952	Void	-
No	withdrawn		R2-120953	Void	-
No	withdrawn		R2-120954	Void	-
No	withdrawn		R2-120955	Void	-
No	withdrawn		R2-120956	Void	-
No	withdrawn		R2-120957	Void	-
No	withdrawn		R2-120958	Void	-
No	withdrawn		R2-120959	Void	-
No	withdrawn		R2-120960	Void	-
No	withdrawn		R2-120961	Void	-
No	withdrawn		R2-120962	Void	-
No	withdrawn		R2-120963	Void	-
No	withdrawn		R2-120964	Void	-
No	withdrawn		R2-120965	Void	-
No	withdrawn		R2-120966	Void	-
No	withdrawn		R2-120967	Void	-
No	withdrawn		R2-120968	Void	-
No	withdrawn		R2-120969	Void	-
No	withdrawn		R2-120970	Void	-
No	withdrawn		R2-120971	Void	-
No	withdrawn		R2-120972	Void	-
No	withdrawn		R2-120973	Void	-
No	withdrawn		R2-120974	Void	-
No	withdrawn		R2-120975	Void	-
No	withdrawn		R2-120976	Void	-
No	withdrawn		R2-120977	Void	-
No	withdrawn		R2-120978	Void	-

IPR2025-00720, OnePlus Ex. 1004
Page 500 of 700

Uploaded	status	Late	Tdoc	Title	Source
No	withdrawn		R2-120979	Void	-
No	withdrawn		R2-120980	Void	-
No	withdrawn		R2-120981	Void	-
No	withdrawn		R2-120982	Void	-
No	withdrawn		R2-120983	Void	-
No	withdrawn		R2-120984	Void	-
No	withdrawn		R2-120985	Void	-
No	withdrawn		R2-120986	Void	-
No	withdrawn		R2-120987	Void	-
No	withdrawn		R2-120988	Void	-
No	withdrawn		R2-120989	Void	-
No	withdrawn		R2-120990	Void	-
No	withdrawn		R2-120991	Void	-
No	withdrawn		R2-120992	Void	-
No	withdrawn		R2-120993	Void	-
No	withdrawn		R2-120994	Void	-
No	withdrawn		R2-120995	Void	-
No	withdrawn		R2-120996	Void	-
No	withdrawn		R2-120997	Void	-
No	withdrawn		R2-120998	Void	-
No	withdrawn		R2-120999	Void	-
Yes	not treated	Late	R2-121000	RAN WG2 compendium v14.0	ETSI MCC
Yes	agreed		R2-121001	CR to 36.331 on cdma2000 band classes and references	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated
Yes	agreed		R2-121002	CR to 36.331 on cdma2000 band classes and references	Nokia Siemens Networks, Alcatel-Lucent, Ericsson, Qualcomm Incorporated
Yes	revised		R2-121003	Duplicated ASN.1 naming correction	Nokia Siemens Networks, Nokia Corporation
No	withdrawn		R2-121004	Void	-
Yes	agreed		R2-121005	Clarification on physical layer parameter values requirement	Samsung, Qualcomm Incorporated
No	withdrawn		R2-121006	Changing of DL Timing Reference	Acer Incorporated
Yes	noted		R2-121007	Offline discussion summary on capabilities allowed to be different for TDD/FDD	Qualcomm Incorporated
Yes	revised		R2-121008	TR 36.822 v0.2.1 including agreements of RAN2 #77	Research In Motion UK Ltd.

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-121009	LS on the introduction of extended UE capabilities for dual mode UEs (to: SA2; cc: SA, RAN1, CT1; contact: Qualcomm)	RAN2
Yes	noted		R2-121010	Report of RAN2 #77 ad hoc about UP stage 3 details for REL-11 LTE Carrier Aggregation Enhancements	LG (RAN2 vice-chairman)
Yes	revised		R2-121011	Introduction of CA Enhancements in MAC	Ericsson, Nokia Corporation
Yes	revised		R2-121012	Clarification on the setting of FGI bit 25	Intel Corporation
Yes	revised		R2-121013	Clarification on the setting of FGI bit 25	Intel Corporation
Yes	endorsed.		R2-121014	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	Samsung
Yes	endorsed.		R2-121015	Introducing means to signal different FDD/TDD Capabilities/FGIs for Dual-xDD UE	Samsung
Yes	agreed		R2-121016	TR 36.822 v0.3.0	Research In Motion UK Ltd.
Yes	agreed		R2-121017	Limiting MBMS counting responses to within the PLMN	Nokia Corporation, Nokia Siemens Networks, LG Electronics, Ericsson, ST-Ericsson, Huawei, HiSilicon

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-121018	Duplicated ASN.1 naming correction	Nokia Siemens Networks, Nokia Corporation
Yes	agreed		R2-121019	Clarification on number of PDCP SDUs for categories 6-7 UEs	HTC
Yes	agreed		R2-121020	Clarification on MBMS counting for uncipherable services	Samsung
Yes	postponed		R2-121021	Correction to lower priority based criteria	Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd
Yes	postponed		R2-121022	Correction to lower priority based criteria	Research In Motion UK Ltd, Ericsson, ST-Ericsson, Renesas Mobile Europe Ltd
Yes	noted		R2-121023	Way forward for the EAB info update mechanism for LTE	Huawei
Yes	rejected		R2-121024	Network based positioning support	Ericsson
Yes	revised		R2-121025	Draft LS on Network based positioning (to: RAN1, RAN3, RAN4; cc: -; contact: Ericsson)	Ericsson
Yes	noted		R2-121026	LS on VoHSPA capability indication (S2-121016; contact: Ericsson)	SA2
Yes	noted		R2-121027	LS on CSFB awareness in UMTS and GERAN (R3-120373; contact: Vodafone)	RAN3
Yes	revised		R2-121028	TR 36.839 v0.4.1 on Study on HetNet mobility enhancements for LTE	Alcatel-Lucent
Yes	agreed		R2-121029	LS on network-based positioning (to: RAN1, RAN3, RAN4; cc: -; contact: Ericsson)	RAN2
Yes	endorsed		R2-121030	CR to 36.305 for network based positioning (NBPS) Support in LTE	TruePosition

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source
Yes	revised		R2-121031	Clarification on MBSFN and measurement resource restrictions	Samsung, Qualcomm Incorporated, NTT DOCOMO, Huawei, Renesas Mobile Europe Ltd, LG Electronics, Intel Corporation, Pantech, RIM
Yes	endorsed		R2-121032	Introduction of MDT enhancements	MediaTek
Yes	revised		R2-121033	Change in Scheduling Information for CMAS	Ericsson, ST-Ericsson
Yes	revised		R2-121034	Change in Scheduling Information for CMAS	Ericsson, ST-Ericsson
Yes	agreed		R2-121035	Reply LS to RP-111770 = R2-120024 on Capability handling of LTE TDD and FDD modes (to: RAN; cc: SA, RAN1, SA2, CT1; contact: Qualcomm)	RAN2
Yes	agreed		R2-121036	Clarification on MBSFN and measurement resource restrictions	Samsung, Qualcomm Incorporated, NTT DOCOMO, Huawei, Renesas Mobile Europe Ltd, LG Electronics, Intel Corporation, Pantech, RIM, Nokia Corporation
Yes	withdrawn		R2-121037	Clarification of inter-RAT CSG cell reselection	LG Electronics Inc.
Yes	not treated		R2-121038	Clarification of inter-RAT CSG cell reselection	LG Electronics Inc.
Yes	rejected		R2-121039	Clarification on the setting of FGI bit 25	Intel Corporation

IPR2025-00720, OnePlus Ex. 1004
Page 504 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	rejected		R2-121040	Clarification on the setting of FGI bit 25	Intel Corporation
No	withdrawn		R2-121041	Change in Scheduling Information for CMAS	Ericsson, ST-Ericsson
No	withdrawn		R2-121042	Change in Scheduling Information for CMAS	Ericsson, ST-Ericsson
Yes	revised		R2-121043	Reply LS to S5-113887 = R2-120034 on Usage of speed criterion for MDT data collection (to: SA5; contact: NEC)	RAN2
Yes	agreed		R2-121044	FGI bit related to ANR and inter-RAT measurement	ZTE Corporation, China Telecom
Yes	agreed		R2-121045	FGI bit related to ANR and inter-RAT measurement	ZTE Corporation, China Telecom
Yes	agreed		R2-121046	Reply LS to R4-116249 = R2-120020 on DTX detection of PUCCH format 2 (to RAN4; cc: RAN1; contact: NTT DOCOMO)	RAN2
Yes	agreed		R2-121047	Reply LS to S5-113887 = R2-120034 on Usage of speed criterion for MDT data collection (to: SA5; cc: -; contact: NEC)	RAN2
Yes	noted		R2-121048	Reply LS to RP-111770 on Capability handling of LTE TDD and FDD modes (R1-120928; contact: Qualcomm)	RAN1
Yes	rejected		R2-121049	Draft LS on MBMS service continuity	Huawei
Yes	agreed		R2-121050	Reply LS to C6-110601 = R2-120035 on H(e)NB air interface activation (to: CT6; cc: SA3, RAN3; contact: Huawei)	RAN2
Yes	agreed		R2-121051	LS on Clarification to the handling of the RRC container during inter-RAT handover (to: GERAN2; cc: -; contact: ZTE)	RAN2

IPR2025-00720, OnePlus Ex. 1004
Page 505 of 700

Uploaded	status	Late	Tdoc	Title	Source
Yes	agreed		R2-121052	Reply LS to RT-120017 = R2-120039 on Preparation Work in 3GPP for ITU related to Final Submission to ITU-R towards Rev.11 of Rec. ITU-R M.1457 (to: 3GPP ITU-R ad hoc; cc: -; contact: Telecom Italia)	RAN2
Yes	endorsed		R2-121053	Introduction of CA Enhancements in MAC	Ericsson, Nokia Corporation
Yes	agreed		R2-121054	TR 36.839 v0.5.0 on Study on HetNet mobility enhancements for LTE	Alcatel-Lucent
Yes	agreed		R2-121055	Correction to the combination of physical uplink channels	NTT DOCOMO, INC.

IPR2025-00720, OnePlus Ex. 1004

Appendix G

TSG-RAN Working Group 2 meeting #72bis **R2-110679**
Dublin, Ireland, 17 -21 January 2011

Agenda Item: 2.2

Source: ETSI MCC

Title: Report of 3GPP TSG RAN WG2 meeting #72,
Jacksonville, USA, November 15 - 19, 2010

Document for: Approval

Report of 3GPP TSG RAN WG2 meeting #72

held in Jacksonville, USA
November 15 – 19, 2010

IPR2025-00720, OnePlus Ex. 1004
Page 508 of 700

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

http://www.3gpp.org

© 2010, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TTA, TTC).
All rights reserved.

IPR2025-00720, OnePlus Ex. 1004
Page 509 of 700

Contents

Organisation of the meeting 7
Statistics/Executive Summary 7
1 Opening of the meeting 9
1.1 Call for IPR 9
2 General 9
2.1 Proposed Agenda 9
2.2 Minutes of previous meeting 10
2.3 Reporting from other meetings 10
2.4 Other 10
3 Incoming liaisons 11
3.1 Joint UMTS/LTE relevance 11
3.2 LTE relevance 13
3.3 UMTS relevance 15
4 UMTS/LTE joint session 16
4.1 Release 8 16
4.2 Release 9 16
4.3 Release 10 17
4.3.1 Minimisation of Drive Test (RP-100360) 17
4.3.1.1 Stage-2: Corrections 17
4.3.1.2 Stage-2: Architecture 18
4.3.1.3 Stage-2: Logged MDT 18
4.3.1.4 Stage-2: Immediate MDT 21
4.3.1.5 Stage-2: Other 22
4.3.1.6 Stage-3 22
4.3.2 RAN mechanisms to avoid CN overload due to MTC(WI: RP-101026) 23
4.3.2.1 Stage-2: Indication(s) at connection setup 23
4.3.2.2 Stage-2: Extended "Wait timers" 24
4.3.2.3 Stage-2: Common ACB / Roaming user handling 25
4.3.2.4 Stage-2: Other: 25
4.3.2.5 Stage-3: 25
4.3.3 Other 26
5 LTE Release 8 26
5.1 In principle agreed CRs 26
5.2 Other 26
6 LTE Release 9 27
6.1 Positioning Support for LTE (RP-091389) 27
6.1.1 In principle agreed CRs 27
6.1.2 Other 27
6.2 Support for IMS Emergency Calls over LTE (RP-081140) 29
6.3 MBMS over LTE (RP-091457) 29
6.3.1 In principle agreed CRs 29
6.3.2 Other 29
6.4 Home-eNB enhancements (RP-091392) 29
6.4.1 In principle agreed CRs 29
6.4.2 Other 29
6.5 Public Warning System (PWS) (RP-090649) 30
6.6 Vocoder Adaptation (RP-090978) 30
6.7 TEI9 30
6.7.1 In principle agreed CRs 30
6.7.2 Other 30
6.8 LTE-A (SI: RP-091360) 31

IPR2025-00720, OnePlus Ex. 1004
Page 510 of 700

6.9 Other LTE Rel-9 WIs 32
7 LTE Release 10 32
7.1 WI: Carrier aggregation (RP-100661), UL-MIMO, eDL-MIMO 32
7.1.1 Stage-2 32
7.1.1.1 CA Stage-2 Corrections 32
7.1.1.2 CA CC/cell management: CC/cell configuration 33
7.1.1.3 CA CC/cell management: CC/cell change 36
7.1.1.4 Other 37
7.1.2 Stage-3 Common 39
7.1.3 Stage-3 Control Plane 40
7.1.3.1 Running RRC CR 40
7.1.3.2 Other 41
7.1.4 Stage-3 User Plane 46
7.2 WI: Relays (RP-100953) 46
7.2.1 Stage-2 46
7.2.1.1 Stage-2 Corrections 46
7.2.1.2 Stage-2 Other 46
7.2.2 Stage-3 48
7.3 WI: MBMS enhancements (RP-100691) 53
7.3.1 Stage-2 53
7.3.1.1 Stage-2 Corrections 53
7.3.1.2 Stage-2 Other 53
7.3.2 Stage-3 54
7.4 WI: Minimisation of Drive Test (RP-100360) 55
7.4.1 LTE specific Stage-2 aspects 55
7.4.2 LTE Stage-3 57
7.5 WI: Network based positioning support for LTE (RP-100135) 58
7.6 WI: eICIC (RP-100383) 60
7.6.1 Stage-2 61
7.6.1.1 Stage-2: Connected mode handling 61
7.6.1.2 Stage-2: IDLE mode handling 65
7.6.2 Stage-3 66
7.7 WI: TEI10 67
7.7.1 In principle agreed CRs 67
7.7.2 Other 68
7.8 WI: Other LTE Rel-10 WIs 73
7.9 SI: In-device coexistence interference avoidance (RP-100671) 73
7.9.1 FDM 74
7.9.2 TDM 76
7.9.2.1 LTE <-> WiFi 76
7.9.2.2 LTE <-> BT 77
7.9.2.3 LTE <-> GNSS 78
7.9.2.4 Other 78
7.10 SI: Other LTE Rel-10 SIs 79
8 UTRA Release 8 and earlier releases 79
8.1 In principle agreed CRs 79
8.2 Others 82
9 UTRA Release 9 90
9.1 DC-HSDPA with MIMO (RP-090332) 90
9.1.1 In principle agreed CRs 90
9.1.2 Others 90
9.2 DC-HSUPA (RP-090014) 91
9.3 Home-NB enhancements (RP-091392) 92
9.3.1 In principle agreed CRs 92
9.3.2 Others 92
9.4 TEI9 92
9.4.1 In principle agreed CRs 92
9.4.2 Others 92
9.5 Other UTRA Rel-9 WIs 94

IPR2025-00720, OnePlus Ex. 1004
Page 511 of 700

10 UTRA Release 10 94
10.1 WI: LCR TDD MC-HSUPA (RP-090990) 94
10.1.1 CRs 94
10.1.1.1 In principle agreed CRs 94
10.1.1.2 Others 95
10.1.2 E-TFC selection 96
10.1.3 Others 96
10.2 WI: 4C-HSDPA (RP-100991) 96
10.2.1 CRs 96
10.2.1.1 In principle agreed CRs 96
10.2.1.2 Others 97
10.2.2 Others 98
10.3 WI: RF pattern matching in UMTS (RP-091427) 98
10.4 WI: Minimisation of Drive Test (RP-100360) 99
10.4.1 UMTS specific Stage-2 aspects 99
10.4.2 UMTS Stage-3 99
10.5 ANR for UTRA 100
10.5.1 ANR measurement control and reporting 101
10.5.2 ANR Measurements 103
10.5.3 Other ANR issues 103
10.6 WI: Interfrequency detected set measurements (RP-101015) 104
10.7 WI: TEI10 106
10.7.1 In principle agreed CRs 106
10.7.2 Others 106
10.8 Other UTRA Rel-10 WIs/SIs 108
10.8.1 In principle agreed CRs 108
10.8.2 Others 109

11 Outgoing LS and email discussions for UTRA 110
11.1 Agreed outgoing LS for UTRA 110
11.2 Email discussions for UTRA 111

12 Left-overs 111
12.1 LTE User Plane session 111
12.2 UMTS 112

13 Outgoing LS and output to other groups for LTE/joint 112

14 Any other business 114

15 Closing of the meeting 115

Annex A: Report of LTE Carrier Aggregation Stage 3 User Plane session 116
7.1.4 Stage-3 User Plane 116
7.1.4.1 Running MAC CR 116
7.1.4.2 MAC PHR reporting 118
7.1.4.3 Other CA 122
7.1.4.4 UL MIMO 122
Come Backs for Friday 123

Annex B: Reports of joint sessions with other WGs 124
B.1 SA2-RAN2-RAN3-CT1-CT4 ad hoc on MTC (Mon 17:30-20:30) 124
B.2 SA2-RAN2-RAN3-CT1 ad hoc on LIPA HO (Tue 7:30-9:00) 129
B.3 SA2-RAN2 ad hoc on MBR/GBR (Wed 7:00-8:00) 132
B.4 SA2-RAN2-RAN3 ad hoc on MTU (Wed 8:00-9:00) 134
B.5 SA2-RAN2-CT1-CT4 ad hoc on MTC (Fri 7:00-8:00) 137

IPR2025-00720, OnePlus Ex. 1004

Annex C: List of participants 139

Annex D: List of Tdocs 139

Annex E: Incoming liaison statements for TSG RAN WG2 #72 139

Annex F: Outgoing liaison statements of TSG RAN WG2 #72 143

Annex G: List of agreed CRs for RAN #50 144

Annex H: RAN WG2 meeting #72 post processing 159

Email discussions/approvals 159
CRs from other WGs to be agreed/reviewed by RAN2 before RAN #50: 163
Preparation of SI and WI status reports for RAN #49: 164

Annex I: History 166

IPR2025-00720, OnePlus Ex. 1004
Page 513 of 700

Organisation of the meeting

Meeting:	3GPP TSG RAN WG2 #72	
Meeting location:	Jacksonville, USA	
Duration:	Monday 15.11.2010 - Friday 19.11.2010	
Host:	North American Friends of 3GPP	
TSG RAN WG2 Chairman:	Gert-Jan van Lieshout (Samsung)	email: Gert.vanLieshout@samsung.com
TSG RAN WG2 Vice chairman:	Etienne Chaponniere (Qualcomm)	email: echaponn@qualcomm.com
TSG RAN WG2 Vice chairman:	Benoist Sebire (Nokia Siemens Networks)	email: Benoist.Sebire@nsn.com
TSG RAN WG2 MCC Support:	Joern Krause (ETSI MCC)	email: Joern.Krause@etsi.org
Email reflector:	3GPP_TSG_RAN_WG2@LIST.ETSI.ORG	
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_72/Docs	
Ad hocs:	Parallel ad hocs held (see agenda item 2.1) on	
	- UTRA (see agenda items 8-11, Tue - Fri noon): chaired by Etienne Chaponniere	
	- LTE Carrier Aggregation User Plane (see agenda item 7.1.4 or Annex A, Wed): chaired by Benoist Sebire	
	5 joint ad hocs with other WGs were held (see Annex B):	
	- SA2-RAN2-RAN3-CT1-CT4 ad hoc on MTC (Mon 17:30-20:30)	
	- SA2-RAN2-RAN3-CT1 ad hoc on LIPA HO (Tue 7:30-9:00)	
	- SA2-RAN2 ad hoc on MBR/GBR (Wed 7:00-8:00)	
	- SA2-RAN2-RAN3 ad hoc on MTU (Wed 8:00-9:00)	
	- SA2-RAN2-CT1-CT4 ad hoc on MTC (Fri 7:00-8:00)	
next meetings:	TSG RAN #50, 07.12. - 10.12.2010	Istanbul, Turkey
	TSG RAN WG2 #72bis, 17.01. - 21.01.2011	Dublin, Ireland
	TSG RAN WG2 #73, 21.02. - 25.02.2011	Taipei, Taiwan

Statistics/Executive Summary

TSG RAN WG2 #72 was held in Jacksonville, USA, hosted by the North American Friends of 3GPP, co-located with RAN WG1/3/4, CT1/3/4 and SA2/SA5 ("mega meeting") 2 weeks before TSG RAN #50. The RAN WG2 meeting was split in a UTRA part (see agenda items 8-11; Tue-Thu, Fri until noon) and an LTE/LTE-Advanced part, with common UMTS/LTE/LTE-Advanced parts on Monday and Friday afternoon.
In addition the LTE/LTE-Advanced part had a parallel session on LTE Carrier Aggregation Stage 3 User Plane on Wednesday (see agenda item 7.1.4 or Annex A).
Apart from these RAN2 only sessions also 5 joint sessions with other WGs were held led by SA2 (see Annex B):

- SA2-RAN2-RAN3-CT1-CT4 ad hoc on MTC (Mon 17:30-20:30)
- SA2-RAN2-RAN3-CT1 ad hoc on LIPA HO (Tue 7:30-9:00)
- SA2-RAN2 ad hoc on MBR/GBR (Wed 7:00-8:00)
- SA2-RAN2-RAN3 ad hoc on MTU (Wed 8:00-9:00)
- SA2-RAN2-CT1-CT4 ad hoc on MTC (Fri 7:00-8:00)

- 184 participants (registered just before the meeting: 245)
- 945 Tdocs allocated with actually 862 available contributions
- 41 incoming liaison statements (3 for UTRA, 23 for LTE, 15 for joint aspects): 36 of the LSs were treated
- 8 outgoing liaison statements (1 for UTRA, 5 for LTE, 2 for joint aspects).
- 18 (+24) email discussions scheduled after RAN2 #72 (plus email discussions of WI/SI status reports)

IPR2025-00720, OnePlus Ex. 1004

- REL-10 WI Carrier aggregation (see AI 7.1): CR set that will be provided to RAN #50 for approval: 36.300 corrections R2-106854, feature introduction: 36.302 R2-106898, 36.321 R2-106917/R2-106863, 36.331 R2-106856; additionally 36.355 CR R2-106156.
  Note: Also features "UL multiple antenna transmission for LTE (LTE_UL_MIMO-Core)" and "Enhanced Downlink Multiple Antenna Transmission for LTE (LTE_eDL_MIMO-Core)" are introduced with the same CR set.
- REL-10 WI on Relays (see AI 7.2): CR set that will be provided to RAN #50 for approval: 36.300 R2-106930 (plus several CRs from RAN3), 36.321 R2-106890, 36.323 R2-106970 and 36.331 R2-106886.
- REL-10 WI Minimisation of Drive Tests (MDT, see AI 4.3.1, AI 7.4, AI 10.4):
  stage 2 TS 37.320 v2.0.0 R2-106936 will be provided for approval to RAN #50.
  CR set for approval: 36.304 R2-106900, 36.331 R2-106937 (note: 25 series CRs will be postponed to next quarter).
- REL-10 WI RAN mechanisms to avoid CN overload due to Machine-Type Communications (see AI 4.3.2 and Annex B): topic only discussed in joint session with SA2/RAN3/CT1/CT4 (see Annex B), input see R2-106677, outcome of joint session of Monday: R2-106975, results of offline discussion about Access Barring R2-106976, results of offline discussion about Wait Timer handling R2-106977.
- REL-10 WI Further enhancements to MBMS for LTE (see AI 7.3): CR set that will be provided to RAN #50 for approval: 36.300 stage 2 R2-106880 (plus additional RAN3 CRs), 36.331 stage 3 R2-106882
- REl-10 WI Network based positioning support for LTE (see AI 7.5): First agreements following email discussion [71b#25].
- REL-10 WI Enhanced ICIC for non-CA based deployments of heterogeneous networks for LTE (see AI 7.6): Status reflected in stage 2 CR to 36.300 R2-106943 (under email discussion [72#21]).
- REL-10 SI interference avoidance for in-device coexistence (see AI 7.9): Status after RAN2 #72 is summarized in email agreed TR 36.816 v1.0.0 R2-106971 that will be provided to RAN #50 for information.
- REL-10 WI 1.28Mcps TDD Multi-carrier HSUPA (TDD_MC_HSUPA, see AI 10.1): CR set for approval to RAN #50: 25.302 R2-106983, 25.319 R2-106743, 25.306 R2-106744, 25.321 R2-106746, 25.322 R2-106091, 25.331 R2-106765.
- REL-10 WI Four carrier HSDPA (see AI 10.2): larger set of correction CRs agreed to this feature that was introduced at RAN #49.
- REL-10 WI Automatic Neighbour Relation (ANR) for UTRAN (see AI 10.5): LS on way forward sent to RAN3 in R2-106803.
- REL-10 WI Interfrequency detected set measurements for UMTS (see AI 10.6): technically endorsed 25.331 CR R2-106806 that will be provided to RAN #50 for decision.
- The following topics were on hold and not on the agenda:
  - REL-10 WI Latency Reduction
  - REL-10 WI Service continuity in connected mode and location information for MBMS for LTE
  - REL-10 SI RAN improvements for Machine-Type Communications
- Among 467 change requests (CRs) in total: 179 CRs agreed (103 for UTRA specs, 76 for LTE specs). Also 1 technically endorsed CR will be submitted to RAN #50 and 1 technically endorsed CR was provided to RAN3 (as related to 25.401).
- Introduction of REL-10 RAN2 specs: If not yet existing, all 36 series TSs/TRs needed for ITU-R submission and all 25 series for which RAN #50 approves CRs will be introduced after RAN #50.

Note: The sequence in which the different topics appear in this report is related to the agenda of the meeting. However, the Tdocs do not necessarily appear in the sequence as they were treated in the meeting.

IPR2025-00720, OnePlus Ex. 1004

1 Opening of the meeting

TSG RAN WG2 chairman Gert-Jan van Lieshout (Samsung) opened the meeting RAN WG2 #72 on Monday morning 15.11.2010 at 09:00 o'clock.

On behalf of the host, the North American of 3GPP, Don Zelmer (AT&T) welcomed the delegates to Jacksonville and explained organisational issues.

RAN WG2 meeting rooms:
Main RAN2 room/joint WG meetings with RAN2: River Terrace 1 (3rd floor), planned for 230 participants, Mon-Fri
UTRA ad hoc room: Daytona (Tue-Thu, 3rd floor) & City Terrace 9 (3rd floor), planned for 50 participants
UP ad hoc room: City Terrace 9 (3rd floor), planned for 80 participants, Wed
Other WGs: all in the same hotel: RAN1, RAN3, RAN4, CT1, CT3, CT4, SA2, SA5 (OAM)

1.1 Call for IPR

Gert-Jan van Lieshout (TSG RAN WG2 chairman) made the following call for IPRs and reminded the delegates of their obligations with respect to IPRs:

> 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 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 (http://webapp.etsi.org/Ipr/).

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN2 chairmen.

2 General

2.1 Proposed Agenda

Chairman: **THANK YOU** for companies that submit contributions before deadline. Also early submissions are appreciated. Will start to refrain from treating late documents.

R2-106040: Proposed agenda for RAN2 #72, Jacksonville, USA, 15.11.-19.11.2010 Samsung (RAN2 chairman) Agenda
=> Approved

IPR2025-00720, OnePlus Ex. 1004

Time-schedule, only indicative (i.e. topics might move forward/backward!):

Indicative Time-schedule	**Main room**	**LTE room2**	**UMTS room**
Mon 09:00 - 17:30	[2],[3],[4] except MTC		
Mon 17:30 ->	MTC joint session SA2/CT1/CT4		
Tue 7:30 - 9:00	LIPA joint session		
Tue 09:00 - 18:30?	[5][6] + CA [7.1.1][7.1.2]		[8 non-TDD] [9] [8 TDD]
Tue 18:45 ->	MTC [4.3.2] (TBC)		
Wed 07:00 - 08:00	MBR > GBR: joint SA2		
Wed 08:00 - 09:00	MTU: joint SA2/ RAN3/CT1/CT3/CT4		
Wed: 9:00 ->	CA CP [7.1.3], MBMS [7.3], MDT [7.4], RN CP [7.2] ?, Nwk Pos [7.5]	CA UP [7.1.4]	LCR TDD [10.1] 4C [10.2] ANR [10.5]
Thu: 8:30 ->	RN [7.2] eICIC [7.6] TEI-10 [7.7]		All day: MDT [10.4] Interfreq Detect [10.6] TEI-10 [10.7] Other [10.8] After-Lunch: Come-back session
Fri: before morning coffee	Left-overs [12][13][14]		Come –back session
Fri: morning coffee -> lunch			
Fri: lunch -> until 5pm			

Note: LAC MSB discussion on Thursday 7:30 - 09:00 SA2 room. RAN2 will not join.

2.2 Minutes of previous meeting

R2-106041: Draft report of 2 #71bis, Xian, China, 11.10.-15.10.2010 ETSI MCC Report
- Comments invited up to Thursday; To be agreed on Friday of the meeting
- Some small comments received; one technical comment on Tdoc R2-105611

=> Updated in R2-106869

R2-106869: Draft report of 2 #71bis, Xian, China, 11.10.-15.10.2010 ETSI MCC Report

=> Agreed in R2-106929

2.3 Reporting from other meetings

Nothing to report.

2.4 Other

Proposed rapporteur change:

	Previous Rapporteur	**Proposed rapporteur**	
TS36.314	Johan Johansson (Huawei)	Guo Yi (Huawei)	=> Change is approved

IPR2025-00720, OnePlus Ex. 1004
Page 517 of 700

Planning

For information, main open WIs/SIs with RAN2 responsible for certain output to a certain RAN meeting:

Main RAN2 related WI/SIs	*RAN Tdoc*	*Lead WG*	*WI or SI*	*RAN2 Agenda*	*Planning w.r.t. RAN delivery*	*Remarks*
UMTS + LTE						
Minimisation of Drive Test	*RP-100360*	*2*	*WI*	*4.3.1/ 7.4/10.4*	*TS37.320 for info: RAN#49 TS37.320 for appr: RAN#50 All CRs: RAN#50*	
RAN mechanisms to avoid CN overload due to Machine-Type Communications	*RP-101026*	*2*	*WI*	*4.3.2*	*All CRs: RAN#51*	
RAN Improvements for Machine-type Communications	*RP-100330*	*2*	*SI*	*-*	*TR37.868 for appr: RAN#50*	*Put on hold until Dec 2010*
UMTS						
LCR TDD MC-HSUPA	*RP-090990*	*1*	*WI*	*10.1*	*Stage-3: RAN#49*	
4C-HSDPA	*RP-100991*	*1*	*WI*	*10.2*	*Stage-3: RAN#49*	
RF pattern matching in UMTS	*RP-091427*	*2*	*WI*	*10.3*	*All CRs: RAN#48*	
Automatic Neighbour Relation	*RP-100688*	*3*	*WI*	*10.5*	*All CRs: RAN#50*	
Interfrequency detected set measurements for UMTS	*RP-101015*	*2*	*WI*	*10.6*	*All CRs: RAN#50*	
LTE						
Carrier aggregation	*RP-100661*	*1*	*WI*	*7.1*	*All CRs: RAN#50*	
Relay	*RP-100953*	*1*	*WI*	*7.2*	*All CRs: RAN#50*	
Latency reduction	*RP-091449*	*2*	*WI*	*-*	*All CRs: RAN#50*	*Put on hold until Dec 2010*
MBMS enhancements	*RP-100691*	*2*	*WI*	*7.3*	*All CRs: RAN#50*	
MBMS Service Continuity in Connected / Location info	*RP-100690*	*2*	*WI*	*-*	*All CRs: RAN#52*	*Put on hold until Dec 2010*
Network-Based positioning Support for LTE	*RP-100135*	*2*	*WI*	*7.5*	*36.300, 36.305, 36.331: RP#49 36.455: RP#50*	*RAN#49 decided that RAN2 can start looking into this in parallel to the benefit analysis of RAN1*
LTE Self Optimizing Networks (SON) enhancements	*RP-101004*	*3*	*WI*	*7.8*	*All CRs: RAN#50*	
Enhanced ICIC for non_CA	*RP-100383*	*1*	*WI*	*7.6*	*All CRs: RAN#50*	
In-device coexistence interference avoidance	*RP-100671*	*2*	*SI*	*7.9*	*TR 36.xxx for info/appr: RAN#50*	
Network Energy Saving for E-UTRAN	*RP-100674*	*3*	*SI*	*7.10*	*TR 36.xxx for info/appr: RAN#50*	

3 Incoming liaisons

3.1 Joint UMTS/LTE relevance

Rel-9: CSFB

R2-106053: Applicability of Handover restriction list for CSFB (contact: NSN) RAN3
=> Noted

R2-106056: LS on delivering registered PLMN ID for CS domain to eNB for multi-PLMN CSFB (contact: Qualcomm) SA2
- So different opinion then RAN3.
- No direct relation to RAN2; NSN wonders if we have indicate anywhere on what basis the redirection should be based ? QC thinks a Rel-10 change should be avoided to S1.

=> Noted (can leave discussion to RAN3/SA2 for now; no RAN2 opinion so far)

Rel-9: Other

R2-106044: LS on RAN sharing for Home(e)NB cells (contact: Nokia) GERAN2

IPR2025-00720, OnePlus Ex. 1004

=> Related Tdoc in R2-106594; discussion is minuted there.

R2-106043: Reply LS to S2-104424 on PS handover failure during the SRVCC (contact: Nokia) GERAN2
=> Noted

R2-106055: Reply LS to C4-102304 on MTU in 3GPP system (contact: NSN) SA2
- NSN/Samsung sees no impact to RAN2.
=> Noted (will be discussed in joint meeting)

Rel-10: NIMTC

R2-106060: Reply LS to R2-105994 on Release 10 NIMTC Conclusions (contact: Vodafone) SA2
=> Noted (discussion will take place in joint WG meeting)

R2-106158: LS on MTC indicators and configuration options (S1-103320) - S1
- So not so in favour of an "MTC" indicator
=> Noted (discussion will take place joint WG meeting)

R2-106159: Reply LS on Release 10 NIMTC Conclusions (S1-103343) - S1
=> Noted (discussion will take place joint WG meeting)

Rel-10: CSFB

R2-106054: LS on Paging Priority indication over S1 for eMPS (contact: Alcatel-Lucent) RAN3
=> Noted

R2-106157: Reply LS on service requirement for Rel-10 UE CSFB call (S1-103244) - S1
- So no separate "no barring" codepoint in LTE
=> Noted

Rel-10: Other

R2-106059: LS on S1 handover / Iu relocation with LIPA connection removal (contact: Alcatel-Lucent) SA2
=> Proposed response LS in R2-106430; Rest of discussion is minuted there.

Late LSs: MDT

R2-106871: Review of MDT design and reply LS on Security Issues with Logged MDT - SA3
=> Withdrawn (was only draft version)

R2-106876: Review of MDT design and reply LS on Security Issues with Logged MDT - SA3
- Huawei wonders if for IMM MDT, notice and consent is needed ? UE is also not aware of current measurements. So Huawei assumes it is not needed. NTT DCM assumes it might be related to logging the location. Vdf thinks there could be privacy requirements, and therefore need the user consent.
- TIM wonders if we have to be able to disable the "detailed information reporting" in MDT if the user has not given the consent.
- Mediatek assumes that this user consent/notice is depending on market ?
- Probably the CN/RAN3 should take into account this anonymisation requirement ? Mediatek assumes that SA5 would take this anonymisation into account.
- SA5 will ensure that trace is only asked for users that have given consent ? Will the RAN for a management trace get this information from the CN, e.g. by SPID ?
=> Noted; might trigger actions to other groups in next meeting.

R2-106870: LS on inclusion of RF measurements into MDT report - SA5
- Mediatek wonder for the UL whether it is clear what measurements we have ? The stage-2 does not currently not refer to specific measurements. NSN indicates that for the uplink, SINR is usefull and SA5 seems to have agreed on that measurement during this week. Mediatek points out that such a measurement is not defined in LTE for an eNB.
- Huawei thinks we have enough for the DL quality.
=> NOted; will reply from next meeting (rapporteur will remember)

R2-106879 LS on MDT Stage 2 functionality (contact: NSN) SA5 LSin to: RAN2 REL-10 MDT_UMTSLTE-Core S5-103319
[CBFrid] finally not treated

IPR2025-00720, OnePlus Ex. 1004

Late LSs: Other

R2-106866 Reply LS to S2-104444 on new Study Item on Core Network Overload issues (contact: Vodafone) SA3 LSin cc: RAN2REL-11 - S3-101400
[CBFrid] finally not treated

3.2 LTE relevance

Rel-8

R2-106062: LS on RAN4 decisions on Band 12 (contact: Huawei) RAN4
=> Noted

Rel-9: Positioning

R2-106045: LS Concerning LTE Positioning Protocol OMA LOC
- Document is available to introduce reference
- Chairman wonders if there is really no violation? QC understand client and server roles are switched. NSN confirms and thinks it is transparent to the CP LPP.

=> Noted

R2-106057: LS on Home (e)NodeB support in LCS (contact: NTT DOCOMO) SA2
=> Noted

Rel-9: Other

R2-106051: LS on GBR and MBR definition (contact: Alcatel-Lucent) RAN3
=> Noted

Rel-10: CA, DL/UL-MIMO

R2-106046: LS response to R2-104205 on per-UE PHR (contact: Alcatel-Lucent) RAN1
=> Noted

R2-106048: LS on the reference format on virtual PHR (contact: Ericsson) RAN1
- ZTE wonders about Type2 PHR, when there is no (PUSCH, no PUCCH) or (PUCCH, no PUSCH), is the real Pcmax or virtual used ?

=> Noted (many contributions available for LTE UP session)

R2-106061: LS on parameters for Rel-10 (contact: Ericsson) RAN1
=> Noted (will be handled in LTE CP session)

R2-106063: Reply LS to R2-102663 on Radio Link Monitoring for Carrier Aggregation (contact: NTT DOCOMO) RAN4
=> Noted (will take the discussion based on inputs)

R2-106064: Response LS to R2-104205 on Per UE PHR related questions (contact: Ericsson) RAN4
=> Noted

Rel-10: RN

R2-106047: LS on physical layer parameters for relay-specific advancements to be configured by higher layers (contact: Ericsson) RAN1
=> Noted

R2-106050: LS on RN E-CGI configuration by O&M (contact: Alcatel-Lucent) RAN3
=> Noted

Rel-10: MBMS

R2-106052: Reply LS to R2-105226 Consideration on counting for MBMS activation (contact: Huawei) RAN3
=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-106058: Reply LS to R2-105226 Considerations on counting for MBMS activation (contact: Huawei) SA2
- So BMSC cannot count UE's receiving in unicast

=> Noted

R2-106674: LS reply on Counting for Activation of an MBMS Bearer Service (S4-100871) - S4
- So we can count based on TMGI a service not yet provided by broadcast (UE can be aware of TMGI)

=> Noted (if there is any new progress for counting, we could inform SA4)

Rel-10: Other

R2-106675: Reply LS on MBR>GBR bearers in MTSI (S4-100880) - S4

=> Noted

R2-106676: LS on impact of LTE air interface transmission delay on LTE system capacity for voice services (S4-100966) - S4
- Ericsson thinks increased delay will seriously impact the capacity. In general network assumptions on latency seems to be very low in this analysis.
- NTT DCM thinks more delay should be tolerated for codec algorithm. NTT DCM has contribution in RAN2 showing importance of SPS. Next SA4 meeting is one week before our January meeting.
- Nokia thinks it is clear you get more capacity with larger allowance for scheduler delays.
- NTT DCM assumes that if we allow 40-50ms, we can allow more than speech e.g. music.
- QC thinks we should see some simulation results.
- Answer might also depend on whether you assume SPS or not.
- Motorola thinks it would be strange to start to allow larger codec delays since we have tried so much to keep radio transmission delays low.
- QC clarifies that although the question is only asked for LTE, the codecs would also be used for CS (i.e. also over UMTS).
- Ericsson wonders if we could really quantify the gain even in the next meeting. So maybe the only thing we can do in general is a qualitative response anyway. NTT DCM assumes SA4 is already aware of the qualitative response.
- NTT DCM wonders if we could get an email discussion to quantify the gain e.g. up to end fo this year. Motorola sees no gain.

=> Will respond from our next RAN2 meeting (GJTODO)

Late LSs SON

R2-106872: Request to enable UE-originated RLF reporting after fresh RRC connection setup - RAN3
- Mediatek wonders if the request is to store RLF information also after T304 expiry ? Can be studied, but seems so.
- NSN wonders if this can all be included in Rel-10. NSN thinks we have not discussed handover failure so much yet. Samsung has CR proposal.

=> Noted

Late LSs: Relay

R2-106874: Reply LS on Progress on relay node security - CT1

=> LS is noted

R2-106875: Reply LS on Progress on relay node security - SA3
- LG wonders whether IP is applied per DRB or for all DRB's ? Chairman assumes this is our decision as already discussed.
- LG wonders why S1/X2 is not decided, i.e. is any other solution considered ? Huawei understands SA3 is discussion another solution for S1/X2. But for now, SA3 only agreed the PDCP solution.
- LG wonders if we only protect X2/S1, would that be a different kind of DRB ? Ericsson was not assuming a different kind of DRB. They have agreed that if you do all, you do it in PDCP. Then the rest is open for a second solution if they only need X2/S1. Ericsson thinks if we indicate we think our one solution is sufficient for X2/S1, we could say that.
- NSN understands the second solution is also related to protecting all DRB's, as a lightweight alternative. NSN feels normal integrity protection is to heavy and has proposed an alternative lightweight solution.
- Ericsson thinks there are 3 solutions:

IPR2025-00720, OnePlus Ex. 1004

1) IP at PDCP on DRB's <= RAN2 can start to work on this.
2) Lightweight solution protecting all DRB's
3) Solution to protect specifically X2/S1

- It seems unclear at the moment if solution 2) would make 1) unnecessary. This might require further evaluation.

Second question

- QC wonders if we can really answer this question which is very implementation specific ? ALU agrees this cannot really be discussed.NSN has same understanding.
- QC thinks we should not be negative on the lightweight solution.
- Ericsson thinks we could also indicate that the PDCP IP solution could easily be applied to S1/X2.
- NTT DCM/Vdf would still prefer to have the CR.

=> Will sent a small response LS indicating that this is so much implementation dependant that it is not possible for RAN2 to give any guidance in R2-106889

=> Will also indicate that we have agreed to be able to configure it per DRB, so it would be possible for the DRB carrying X2/S1.

=> Will ask if we have the lightweight solution, whether the PDCP IP solution is still required to be specified. If possible, RAN2 would prefer to specify only 1 solution for protection all DRB's.

R2-106867 Reply LS to S3-101105 on Progress on relay node security (contact: Sagem) CT6 LSin
cc: RAN2REL-10 LTE_Relay-Core C6-100586
[CB2] not treated

Late LSs: Other

R2-106885 LS on Pcmax,c (contact: Qualcomm) RAN1 LSin to: RAN2 REL-10 LTE_CA-Core R1-106497
[CB] not treated

R2-106864: LS on UE categories
=> Noted (should be considered in the capability updates)

R2-106865: LS on in-device coexistence between LTE and ISM update of TR 36.816

- CMCC thinks this LS does not answer if BT is a problem or not, i.e. does not show that BT would not have to be considered.
- Mediatek thinks latest versions of BT can do more by themselves.
- Motorola assumes the BT case needs more analysis in RAN4. MOtorola thinks it would be better to focus on Wifi first.
- QC thinks from usage point of view, BT headset is used most frequent. QC is ok to focus on Wifi untill more input is received from RAN4, but that does not mean it is more important.
- QC thinks we can continue a bit with BT under the assumption that we then have a solution if there is a problem.
- QC thinks it is clear that there is a difference understanding in RAN4 on whether there is a problem. Especially since BT is the most complex case.
- Mediatek thinks the situation for BT might be better than shown because BT might apply interference avoidance.
- QC thinks we can analyse the timeline aspect, and then the RF answer has to come from RAN4.

=> Agree to include the text proposal in the TR.

3.3 UMTS relevance

Rel-10

R2-106049: LS on UTRAN ANR TS (contact: ZTE) RAN3
=> Noted

R2-106042: LS on Enhancements of Iur-g interface (contact: ZTE) GERAN2
=> Noted

Late LSs:

IPR2025-00720, OnePlus Ex. 1004

R2-106868 LS on introduction of radio bearer combination for DC-HSDPA and MIMO (contact: Ericsson)
RAN5 LSin to: RAN2 REL-9RANimp-DC_MIMO_UEConTest
not treated

4 UMTS/LTE joint session

Contributions submitted under this agenda item will be handled in a joint UMTS/LTE session. Documents should focus on Stage-2 aspects common for both UTRA and E-UTRA, but also common stage-3 aspects should be submitted here (e.g. 25/36.304).

4.1 Release 8

No contributions.

4.2 Release 9

R2-106594: RAN sharing for H(e)NB - Samsung
- DT assumes an open mode HeNB is a normal cell for RAN2. Then DT Would assume sharing is supported. Vdf thinks open cell is normal planned cell so there is no issue on sharing.
- Vdf sees no problem with sharing in a CSG cell if the operators have agreed to coordinate CSG id's.
- Huawei thinks sharing is supported. MOCN routing can be from HNB-GW.
- Huawei thinks for the member check we do not check the PLMN. Chairman points out that 36.331 indicates the CSG is for the primary PLMN.
- RIM thinks sharing is possible.
- QC thinks sharing should be possible: the CSG-id should be valid for all broadcast PLMN.
- Nokia thinks if there is a one to one mapping between CSG-id and PLMN, RAN sharing seems not possible. QC agrees the current specification is not that clear, and RAN2 has to take a decision. QC assumes if we leave it vague, it is probably not supported.
- Chairman thinks it seems we can go two ways:
  1) No PLMN sharing for CSG-Hybrid
  2) Clarify that CSG-Id is valid for all broadcast PLMN's
- Samsung thinks we will need a CR in either case.
- DT thinks for hybrid cells it should be supported. DT thinks for UE's that are not a member, this is a normal cell. Chairman wonders who is a member of the hybrid cell ?
- NSN assumes network sharing is not supported.

Agreements: 1) Since RAN2 does not differentiate "open mode H(e)NB" from normal macro cell, sharing is fully supported for "open mode H(e)NB".

=> Allow some offline discussion for closed CSG/Hybrid, vdf provides summary report in R2-106914

R2-106914: Summary of offline Discussions on RAN sharing for H(e)NB
- Nokia wonders how RAN sharing can be supported, but still there is work to do ? Vdf has looked at the issue from the RAN2 point of view. Nokia wonders how we can indicate this if this has not been discussed before. Also Nokia thinks the statement on manual selection is quite vague.
- DT agrees with the Vdf analysis.
- QC thinks when we made the CSG specification, we did not really consider eNB PLMN sharing. Now it seems to work by chance. QC would like to do a full analysis.
- QC thinks we can answer GERAN that the UE should report ECGI (including primary PLMN), and on the sharing, QC would like to answer "most likely supported".
- Nokia thinks we cannot say it is "most likely supported".

=> We confirm that the CSG-Id is only applicable to the primary-PLMN

IPR2025-00720, OnePlus Ex. 1004

R2-106263: Inter H(e)NB connected mode mobility in enterprise deployment NEC
Conclusion 1:
- QC points out that the proximity message is not relevant for IDLE mode, and the indicated quotation is for IDLE mode. QC does not understand why the UE could not sent a proximity
- Nokia also sees no relation to this IDLE mode behaviour and proximity indications.

General:
- QC sees no problem to sent a proximity indication when your camping on a CSG cell
- Mediatek wonders if the enterprise network would be a planned deployment ? DT assumes t is planned.
- Chairman assumes the main purpose of proximity is for the network to ask the UE to read SI (I could be a member) and to trigger the network to confgure the measurements. There are no real restrictions for the UE to sent a proximity indication (e.g. for another freq/RAT) if it is served by a member-CSG cell
- QC could agree that if all enterprise networks are intra-freq, maybe there is not so much benefit of sending the proximity, but the spec does currently not restrict.

=> Currently see no problems related to proximity indication handling in enterprise networks.

R2-106615: Inclusion of PLMN id in the CSG Whitelist definition Research In Motion UK Limited
R2-106616: Inclusion of PLMN id in the CSG Whitelist definition Research In Motion UK Limited
- DT assumes this is not essential for Rel-9, but could be introduced from Rel-10
- QC thinks the objects defined for how NAS gets this list include per PLMN id one or more CSG-id's.
- RIM thinks 22.122 references xx.304 in Rel-9 and it would be good to have it correct already from Rel-9. QC thinks it would be good to have clarification in Rel-9, but there are more cases where this change should be done. RIM thinks this can be checked.
- Vdf thinks this should be clarified

=> Will see updates in R2-106680 CR0143 36.304, R2-106681 CR0263 25.304; later withdrawn because of ongoing discussion on RAN sharing.

4.3 Release 10

4.3.1 Minimisation of Drive Test (RP-100360)

(MDT_UMTSLTE-Core, leading WG: RAN2, started: Dec. 09, target: Dec. 10, WID: RP-100360)

Focus is expected to change from Stage-2 work to stage-3 aspects. UMTS/LTE common stage-2/3 aspects can be discussed under this agenda item. LTE specific stage-2/3 aspects should be submitted under 7.4, UMTS specific under 10.4.

4.3.1.1 Stage-2: Corrections

Proposals from rapporteur to correct/improve Stage-2 TS37.320 shall be submitted under this agenda item. Also proposed non-contentious corrections to the TS can be submitted here.

R2-106198: Some update proposal for 37.320 Huawei, HiSilicon Disc
Section 4.1:
=> Change is agreed
Section 5.1.1.1.1:
- Ericsson thinks this is sufficiently clear from 5.1.1.

=> Changes are not needed
Section 5.1.1.1.2:
- LG thinks the changes are somewhat redundant

=> Changes do not seem needed
Section 5.1.1.2:
=> Seems not so needed
Other
=> Do not seem so needed. So only change to 4.1 will be included in TS update in R2-106682

IPR2025-00720, OnePlus Ex. 1004
Page 524 of 700

R2-106315: Location Information definition in TS 37.320 NTT DOCOMO, INC. Disc
- LG supports the changes
- NTT DCM wants to clarify that location information is either CID, RF fingerprint or "accurate location information"
- NSN thinks this is not a minor change. E.g. do we want to include network assisted methods for MDT ? NTT DCM thinks we have never agreed that this could be GNSS based location information
- Ericsson is fine with the CR: the CR does not mandate any functional change.
- Samsung thinks original text is sufficiently clear.
- Mediatek supports the CR and understands there is no change due to this: the UE will anyway just report available location information. DT agrees.
- NSN wonders why we do not talk about "geographical coordinates" instead of "accurate location information". DT would be ok with this. NTT DCM is fine with "geographical location information".

=> Will introduce consistent terminology for positioning based on lat/long. Can still discuss terminology offline. Will see update text proposal in R2-106683

R2-106683: Location Information definition in TS 37.320 NTT DOCOMO, INC. Disc
- Ericsson thinks a fingerprint could have more detail than this information. Ericsson thinks it would be better if the name indicates what it is. Ericsson would have prefered "accurate location information"
- CATT wonders if lat/long is always available in case of detailed information ? NSN thinks at least lat/long shall be present

=> We concluded on "detailed location information"

R2-106527: Location Information of Immediate MDT CATT Disc

=> Noted (covered by previous discussion)

R2-106682: Stage-2 update rapporteur v1.1.1

=> Square brackets around "3" in section 5.1.1.3.3 can be removed

=> Change in 5.1.1.1.1 can be removed (stage-3 detail)

=> CATT would prefer "1.28 TDD" than "LCR TDD"

=> Spelling mistake in 5.1.1.3.1. on cell update

=> With these changes, the TS is agreed as v2.0.0 in R2-106936

4.3.1.2 Stage-2: Architecture

E.g. relation/interaction with trace functionality, OAM parameters,...

No contributions.

4.3.1.3 Stage-2: Logged MDT

=> Including email discussion outcome for [71b#20]: UMTS/LTE: MDT - Values for max neighbour cell reporting [CMCC]

=> Email discussion outcome [71b#20]: Max values for neighbour cell reporting [CMCC]

R2-106380: Summary of [71b#20] email discussion on MDT - Values for max neighbour cell reporting CMCC Report
- Nokia thinks 2 or 3 does not make any real difference for MDT, so why not 2.
- TIM thinks the difference between 2 and 3 is small, because anyway we will not ask for new UE measurements.

After offline discussion:
- Majority can be number "3"

Agreements:
- intra-frequency measurements: 6
- inter-frequency measurements: 3
- GERAN: 3
- UTRAN (if non-serving): 3
- E-UTRAN (if non-serving): 3

=> Will be included in MDT stage-3 CR's for 25.331 and 36.331 (R2-106931)

IPR2025-00720, OnePlus Ex. 1004

PLMN

R2-106238: Logged MDT reporting when roaming Nokia Siemens Networks, Nokia Corporation Disc

- NSN would like to put the PLMN in the request. Samsung thinks the RAN might not know the RPLMN of the UE ? NSN thinks the RAN should know what PLMN it is serving.
- CATT wonders if we limit the indication to connection setup, how will a target eNB know it can retrieve the information ? NSN thinks the handover is not so important to handle. It is enough to retrieve at connection establishment. Ericsson would agree with NSN: main thing is that the first cell/RAN node can retrieve.
- Ericsson thinks we should specify that the UE has the correct RPLMN before responding with non-empty report.
- NTT DCM thinks we might have specified the wrong MDT-PLMN. Instead of the rPLMN we should specify the PLMN that we get from OAM at trace.
- Mediatek thinks the retrieval can be handled with mandating the UE to ensure the rPLMN is the MDT-PLMN.
- Chairman wonders if delaying the response is really an option since we have the in sequence processing requirement. STE thinks delaying is not a good solution
- Mediatek thinks the UE knows before reading the PLMN from the new cell, and until a TAU is finalised, the UE should only return empty reports (maybe even with "more data indication").
- QC thinks we could remove the info available for handover.
- DT thinks we could base it on the pPLMN for the RLF case, and the rPLMN for the log MDT case. NTT DCM wonders why to pPLMN in both cases ?
- DT thinks we should not optimise for the corner cases. Samsung thinks inter-PLMN is anyway not that frequent.

Main options:

1) rPLMN based:
   MDT-PLMN = rPLMN at time of configuration
   Availability indicator based on rPLMN at time of sending the indicator
   UE should ensure he has valid rPLMN=MDT-PLMN when returning non-empty report.
2) pPLMN based:
   MDT-PLMN = pPLMN at time of configuration
   Availability indicator based on pPLMN of serving cell at time of sending the indicator
   UE should ensure serving cell pPLMN=MDT-PLMN when returning non-empty report.
3) ....

After offline discussion; summary of offline discussion in R2-106935

R2-106935: Offline discussion report on Inter-PLMN MDT reporting

- Proposal is to keep the rPLMN based solution, and handle the rlf case separately. The reasoning is that normally the UE will only select a cell of the rPLMN or ePLMN and then the operators trust eachother. So there would only be a problem after PLMN selection, but this is considered acceptable. Samsung points out that this could also be the case where the selected PLMN is in a different country.
- DT thinks also for rlf case the same approach can be used. NSN agrees

=> Stay with the MDT-PLMN=RPLMN for logged reporting

R2-106543: Log available bit handling during PLMN change CMCC Disc

=> Can be handled as part of offline discussion on R2-106238

Other

R2-106308: Size limitation for logged MDT report NTT DOCOMO, INC. Disc

- Kyocera wonders if the UE cannot support the 512KB ? Does the UE have to reject a configuration ? NTT DCM clarifies their intention is to mandate the 512KB for any UE indicating MDT support.
- Samsung thinks we might need additional UE capability bit if we increase the memory size. So Samsung prefers to stay at the 32kB.
- Nokia would also like to stay at 32KB. Nokia thinks the UE might be logging different things at different times
- TIM has some sympathy with the proposal: the 32KB seems a bit restrictive. TIM could agree that maybe the 512kB is not needed, but something a bit larger than 32KB.
- LG thinks Sintrasearch and Snonintrasearch will already seriously limit the logging, so no need for more than 32KB.

IPR2025-00720, OnePlus Ex. 1004

- QC thinks 32KB is a compromise we have to live with. You also do not want to sent too many messages at log retrieval.

=> Can try to see further offline if a somewhat bigger value could be acceptable, but seems quite a few companies have concerns

R2-106346: Enhancements to Time Stamp Method Ericsson, ST-Ericsson Disc

- Kyocera wonders how the 48hours is taken into account ? STE indicates that this solution will require the transmission of the report also to include a relative timestamp. The RAN node adds the absolute timestamp before passing to OAM.
- Chairman wonders what the gain is compared to what we have today ?
- Samsung wonders if there is more complexity for the RAN node, e.g. when you retrieve different parts at different times ? Or is each sample reworked ?
- Huawei thinks this solution is too complex.
- Nokia thinks the proposal makes some sense.
- Mediatek thinks if we have accuracy of something like 5s every hour (current proposal in RAN4), then having the timer running for up to 48hours extra would increase inaccuracy.
- Ericsson thinks the benefit with this proposal is that you know where the absolute timestamp comes from.

=> Noted (limited support only)

R2-106220: Clear MDT configuration and logs in detached state HTC TP 37.320

- DT agrees with the proposal; DT thinks "switch off" implies detach. HTC thinks "detach" is more precise. Samsung supports the proposal.
- STE thinks "detach" is normaly not a concept we use in our specifications.
- DT thinks we already agreed at PLMN selection the log is cleared. NSN thinks we agreed we only suspend.
- LG thinks at detach the UE should be allowed to start from scratch and thus clear the log
- NSN thinks it is sufficient to capture in the minutes.
- DT wonders why not keep the log.
- Vdf wonders if it is not sufficient to address "switch off".
- NTT DCM thinks it should be a "may" for the detach procedure.
- NSN would prefer not to refer to NAS procedures.

=> Noted (can think further if really something needs to be specified and if so how)

R2-106191: The Order for Segmented Logged MDT ReportingCHTTL Disc

- Vdf thinks we should go for option 1, since probably the initial logs are most important
- Samsung thinks with option 2 or 3, the eNB will need to perform some reordering. So Samsung prefers option 1.
- DT prefers option 1 based on same reasoning as Vdf. LG agrees.
- Chairman points out that already last meeting we agreed that inside one message, the oldest information is included first. So this is now about inter-message ordering
- Nokia prefers option 1, or leave it to UE implementation since anyway every message is self-decodable.
- Ericsson thinks it could be left to UE implementation
- DT thinks it would be good to have consistent UE behaviour. Vdf agrees.
- Nokia thinks option 1 makes sense.

=> Will go for option 1: i.e. UE should provide oldest available log in earliest message. Should be capture in stage-2 update R2-106682

R2-106506: Clarification on when to log measured result Panasonic Disc

- Samsung also looks at this issue in a stage-3 contribution. Samsung proposes we only log measurements that are still valid for cell reselection. Panasonic thinks xx.133 only specifies periodicity, but does not specify how long a measurement result is valid. So Panasonic thinks it is not sufficient to only refer to "measurements valid for cell reselection".
- CATT wonders if we have the same requirement for RF fingerprint ? CATT thinks if accurate location information is only valid for one log periodicity, the same should apply here.
- Samsung wonders how cell reselection can work if xx.133 does not specify that old measurements cannot be used for cell reselection
- NTT DCM tihnks the Panasonic proposal is quite clear and wonders what the concern is ?

IPR2025-00720, OnePlus Ex. 1004

- DT thinks we have agreed that we require no new measurements, so we should base it on cell reselection measurement availability.

=> Allow offline discussion text proposal in R2-106888

R2-106888: Clarification on when to log measured result Panasonic Disc

- Chairman assumes it is still ofcourse required that if you have measured again the same value, then you shall include again. Panasonic confirms.

=> Text proposal will be included in TS update

R2-106570: Speed scaling of logging interval LG Electronics Inc. Disc
R2-106566: Fingerprint for idle mode MDT LG Electronics Inc. Disc
R2-106567: Guideline for log report segmentation LG Electronics Inc. Disc
R2-106568: Log report request when MDT buffer is empty LG Electronics Inc. Disc
R2-106571: Stop condition of logging duration timer LG Electronics Inc. Disc
All 5 Tdocs not treated

Not available/too late/withdrawn

R2-106630 Uncertainty Information for Logged MDT report NTT DOCOMO, INC. Disc
withdrawn

4.3.1.4 Stage-2: Immediate MDT

Accurate location validity

R2-106196: Validity of location information for immediate MDTHuawei, HiSilicon, China Unicom Disc
-

R2-106608: Validity of GNSS location information for Immediate MDT LG Electronics Inc. Disc
Configure/standaridse one or more values for validity time (fixed value, per mob state, ...) ?

Discussion:
Proposal 1:

- Huawei wants to introduce low/medium/high mobility state.
- NSN thinks there might not be a need for a validity time
- NTT DCM thinks the problem should be resolved.
- Mediatek thinks there are 2 problems:
  a) event based reporting (how old info to include)
  b) periodic reporting (avoid including same info twice)
- LG thinks both problems should be resolved
- Nokia wonders if we cannot log the time of location determination ? NTT DCM agrees that is one solution.
- Nokia thinks that the GNSS time can already be included in the location reporting in UMTS.
- Mediatek thinks proposals from Huawei are quite ok
- Ericsson wonders what we do with "accurate positioning estimates" which are very inaccurate. What do we do in that case ? Then the timer like 6s does not bring much.
- Mediatek thinks maybe we can leave it to UE implementation (guideline in a note).
- STE thinks for periodic immediate reporting, the validity could be the periodicity of the reporting. STE assumes we need to specify a time value for the first report of event based reporting.
- CATT points out that for IMM MDT we can have multiple measurements (e.g. 2 periodic). Does it mean that only the first periodic report would get the location information and not the other periodic reporting (e.g. 0.1s later)
- LG would like a validity timer for event based reporting
- Vdf thinks even for periodic we should have the validity timer so that if the location information is still valid, it could still be included. So if we have anyway a validity timer, we can use it for all cases. NTT DCM agrees.
- NSN indicates that GNSS time can be included in location information. NTT DCM thinks we have other than GNSS based location information.
- Huawei wonders how the network can determine the value ? NTT DCM thinks this could depend on operator policy.
- Nokia wonders if these decisions also impact UMTS ? DT assumes that since "available location reporting" is not available yet in UMTS, this also has to be added in UMTS.

IPR2025-00720, OnePlus Ex. 1004

- NSN would prefer a fixed value and is a simple approach. Vdf would be fine with a fixed value. NTT DCM thinks it will depend on the granularity of the coverage map. Ericsson wonders if the event based triggering measurements would actually be used for coverage map.
- DT prefers to have it fixed. Ericsson is fine with fixed.

Agreements: 1: The UE should include the available accurate location information only once in an immediate measurement report 2: For both event based and periodic reporting, the accurate location information can only be included if the report is transmitted within "validity time" after the accurate location information was obtained. - FFS if "validity time" is configurable or specified in standard

=> Capture the above in the stage-2 update

Other

R2-106310: MDT UL measurements Mediatek Disc
R2-106545: Consideration on MDT mobility Pantech Disc
Both not treated

Not available/too late/withdrawn

R2-106313: Validity Timer for Location Information in Immediate MDT NTT DOCOMO, INC. Disc
not treated

R2-106316 UE Capability for Immediate MDT NTT DOCOMO, INC. Disc
withdrawn

4.3.1.5 Stage-2: Other

Capability

R2-106309: Battery Status Mediatek Disc
R2-106499: UE capability indicator for MDT Samsung Disc
R2-106194: MDT capability Huawei, HiSilicon, China Unicom Disc
R2-106535: Some Corrections for MDT in 36.331 ZTE Disc
R2-106528: Discussion on UE Capability of MDT CATT Disc
All 5 Tdocs not treated

4.3.1.6 Stage-3

R2-106239: MDT stage 3 open issues Nokia Siemens Networks, Nokia Corporation Disc
Proposal 1:
- Ericsson assumed that we would not specify a format for the absolute timestamp (it is just echoed back). TIM wonders how this works accross different network implementations. DT has the same concern. DT assumes Year is not needed.

Proposal 2:
- Samsung wonders how long 32 bits indicates ?

Proposal 3:
- Vdf would prefer to see minutes and hours. Vdf would prefer 8 values for the 3 bits.
- NTT DCM thinks it could be nice to have up to 1 or 2 days. Vdf thinks proposal 3 and 5 go together (the longer the logging interval, the longer the duration could be).
- DT thinks we should stop at a reasonable simple level.
- Mediatek thinks if you want to log on big areas that do not support MDT, long values make some sense.

Proposal 5:
- Huawei would prefer to remove the 1.28s value. DT thinks we already agreed on this so should unnecessarily revisit.
- Samsung wonders if up to 16s is not sufficient ? NTT DCM thinks they are not so relevant.

Proposal 7:
- CMCC wonders if the CGI for GERAN cells is really needed since currently we only include the PCI. DT agrees with CMCC.

IPR2025-00720, OnePlus Ex. 1004

- Samsung assumes in general if we want to calculate this constant, we should base it on the minimum log report size (i.e. only serving cell).
- It was clarified this is only part of ASN.1. So we should find out minimum log size and then divide max message size by this amount.

Proposal 8:
- This is only relevant for the variable definition in stage-3. The whole variable is only related to UE implementation. Samsung assumes it is only related to minimum log size. So it should be 32KB divided by minimum log size.
- TIM thinks we could have UE's with bigger memory.

Proposal 9:
- LG thinks stage-3 should respect stage-2 agreements. Chairman assumes as long as it is functionaly aligned with the stage-2 it is fine. LG thinks some of the configuration parameters should be moved to the log reporting variable.

=> No immediate problem detected, but can discuss further.

Agreements (UMTS and LTE):
1: The absolute time info format is YY-MM-DD HH:MM:SS (48 bits); this is the format provided by the network, and echoed back by the UE.
3: The logging duration includes the following values: : 600sec, 1200sec, 2400sec, 3600sec, 5400sec, 7200sec updated to min&hours
4: The relative time stamp includes the following values: Integer (0…7200).
5: The logging interval includes the following values: 1.28, 2.56, 5.12, 10.24, 20.48, 30.72, 40.96, 61.44.

=> These decisions will be reflected in stage-3 updates

R2-106197: MDT related Stage3 issue Huawei, HiSilicon Disc
revised in R2-106678
R2-106678 MDT related Stage3 issue Huawei, HiSilicon Disc REL-10 MDT_UMTSLTE-Core
not treated

R2-106218 Summary of email discussion [71b#04]: UMTS: MDT - Running CR for 25.331 & 25.304 Nokia Siemens Networks, Nokia Corporation Report related to email discussion [71b#04] REL-10 MDT_UMTSLTE-Core
not treated

Not available/too late/withdrawn
R2-106611 Clarification on the release of Idle Logging Configuration LG Electronics Inc. Disc
-> Withdrawn

4.3.2 RAN mechanisms to avoid CN overload due to MTC(WI: RP-101026)

(NIMTC-RAN_overload, leading WG: RAN2, started: Sep.10, target: March 11, WID: RP-101026)

Note that the WI is focussing on CN overload scenarios identified by SA2, and not on general RAN overload control. It is still FFS in RAN2 if/where to capture the stage-2 agreements for the WI.

Note: There will be a joint meeting with SA2 and other groups somewhere early in the week in Jacksonville. This joint meeting will mainly be based on the latest LSs exchanged on this subject. Chairmen might select some contributions submitted to WG's for presentation in the joint session. Any discussion in RAN2 after this joint session will then work along the lines agreed by the joint session (i.e. selection of documents will be determined based on joint session outcome).

Note: After joint session with SA2 agenda item 4.3.2 was skipped.

4.3.2.1 Stage-2: Indication(s) at connection setup

R2-106428: Discussion on MTC requirements and solutions Alcatel-Lucent Disc
R2-106467: Indication at connection setup Nokia Corporation, Nokia Siemens Networks Disc
R2-106660: Issues with using an Establishment Cause for low priority and MTC indication Disc
R2-106188: MTC device/low priority/roaming indications at RRC connection setup ETRI Disc
R2-106189: Indications for MTC in RRC Signaling ETRI CR 36.331 - - ?

IPR2025-00720, OnePlus Ex. 1004

R2-106190: Indications for MTC in RRC Signaling ETRI CR 25.331 - - ?
R2-106270: 36331_CRxxx_Indications for Low Priority and MTC Vodafone CR 36.331 (0501) - B
R2-106272: 25331_CRxxx_Indications for Low Priority and MTC Devices Vodafone CR 25.331 (4376) - B
R2-106290: MTC related indications in RRC signalling Intel Corporation (UK) Ltd. Disc
R2-106296: MTC indicator at connection setup Huawei, HiSilicon Disc
R2-106319: Handling of MTC and Low Priority Indicators CATT Disc
R2-106337: Way Forward on "MTC indicators" ZTE Disc
All 12 Tdocs not treated.

R2-106338: Solution for indicators in RRC Connection Request ZTE Disc
=> Updated before presentation in R2-106672
R2-106672: Solution for indicators in RRC Connection Request ZTE Disc
not treated

R2-106460: Indicators for MTC Support Ericsson, ST-Ericsson Disc
R2-106599: RRC Connection Establishment with MTC Indication LG Electronics Inc. Disc
Both Tdocs not treated.

Options:??
*- Low priority Indicator: In Connection Req as new establishment cause**
In Connection Setup Complete
- MTC indicator: Not needed
In Connection Setup Complete

Questions also related to other WGs:
1) Do we need separate MTC indicator or would be sufficient to only have a new cause value "low priority" in Rel-10 ?
2) If "MTC" is considered necessary:
2a) What is main purpose ? E.g. routing by eNB , blocking deterministic traffic patterns ? Identifying signalling intensive communication ?
2b) Is it possible for Rel-10 UE to indicate low priority and not MTC ? What type of device is this ?
2c) Is it possible for Rel-10 UE to set MTC and not low priority ? What type of device is this ?

4.3.2.2 Stage-2: Extended "Wait timers"

R2-106320: Wait timer extension for CN overload control CATT Disc
not treated

R2-106377: Overload control by rejecting access attempts Qualcomm Incorporated Disc
revised in R2-106685
R2-106685 Overload control by rejecting access attempts Qualcomm Incorporated Disc
not treated

R2-106271: 36331_CRxxx_Introduction of Wait Time in RRC Connection Release Vodafone CR 36.331 (0502) - B
R2-106273: 25331_CRxxx_Extended Wait Times for RRC Connection Reject and Release Vodafone CR 25.331 (4377) - B
R2-106298: Reject of MTC devices Huawei, HiSilicon Disc
R2-106339: Extension of Wait Time ZTE Disc
R2-106468: Extended wait timer Nokia Corporation, Nokia Siemens Networks Disc
R2-106602: Extended Wait Time in RRC Connection Reject for MTC LG Electronics Inc. Disc
All 6 Tdocs not treated

Questions also related to other WGs:
1) Reject wait timer to be handled at AS (RRC will block new attempts) or NAS (i.e. just passed up to higher layers) ?
2) Granularity of 1min, with range up to 1 hour is sufficient?
Mainly RAN2 internal questions:
- Rejection at RRC only, or also lower layer (e.g. UMTS AICH)

IPR2025-00720, OnePlus Ex. 1004

- What RRC messages to include extended value ?

4.3.2.3 Stage-2: Common ACB / Roaming user handling

R2-106470: Establishment Cause and Access Barring for Low Priority Access Ericsson, ST-Ericsson Disc
R2-106606: Handling of Roaming MTC Devices LG Electronics Inc. Disc
R2-106429: Discussion in MTC requirements and ACB Alcatel-Lucent Disc
R2-106274: Extended ACB for LTE Vodafone Disc
R2-106275: Extended ACB for UMTS Vodafone Disc
R2-106286: Broadcast of access control data Sharp Disc
R2-106297: ACB for roaming MTC devices Huawei, HiSilicon Disc
R2-106321: Handling of roamers for CN overload control CATT Disc
R2-106340: ACB scheme for 'low priority' access requests ZTE Disc
All 9 Tdocs not treated.

R2-106341: Protection from roaming UEs configured for MTC ZTE Disc
=> Revised before presentation in R2-106673
R2-106673: Protection from roaming UEs configured for MTC ZTE Disc
not treated

R2-106551: Analysis on Common ACB and Other Access Control Methods Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
not treated

W.r.t. ACB/roaming handling, many different opinions expressed, a.o.:
a) ACB with differentiated handling for different roaming user groups
b) One new ACB for low priority users
c) No ACB but connection rejections
d) No ACB but PLMN specific, non cell specific blocking
e) No ACB but other mechanisms like slotted access
What is simplest acceptable level for Rel-10

4.3.2.4 Stage-2: Other:

R2-106268: MTC agnostic RAN IPWIRELESS Disc
R2-106267: Interpreting SA2 MTC requirements for the UTRAN IPWIRELESS Disc
R2-106253: Text proposal for TR 37.868 on Access Barring Scaling for MTC Deutsche Telekom, MediaTek TP 37.868 TP for TR on MTC based on R2-105215 and the discussion in the meeting
R2-106266: Interpreting SA2 MTC requirements for the E-UTRAN IPWIRELESS Disc
R2-106613: Use of Backoff for Overload Control LG Electronics Inc. ?
R2-106639: Discussion on CN Overload Avoidance for MTC Institute for Information Industry (III), Coiler Corporation Disc
All 6 Tdocs not treated

R2-106677: RAN2 input for Joint WG meeting on MTC (15-11-2011) - RAN2 chairman
noted in joint session with SA2

4.3.2.5 Stage-3:

R2-106523: 25331_CRxxx_New Indicators in RRC Connection Request ZTE CR 25.331 (4414) - B
not treated

R2-106524: 36331_CRxxx_New Indicators in RRC Connection Request ZTE CR 36.331 (0510) - B
=> Withdrawn

R2-106525: 25331_CRxxx_ACB factor for 'low priority access' ZTE CR 25.331 (4415) - B
R2-106526: 36331_CRxxx_ACB factor for 'low priority access' ZTE CR 36.331 (0511) - B
R2-106614: CR to 36.331 on Machine Type Communication LG Electronics Inc. CR 36.331 (0522) - B
All 3 Tdocs not treated

IPR2025-00720, OnePlus Ex. 1004

Not available/too late/withdrawn

R2-106661 Analysis on sending the MTC Indicator to the network in Release 10 Nokia Siemens Networks, Nokia Disc
not treated

4.3.3 Other

R2-106379: Adding Support for Explicit Congestion Notification Qualcomm Incorporated CR 25.323 (0322) - B REL-10 TEI10, LTE-L23

5 LTE Release 8

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: RP-080747)

5.1 In principle agreed CRs

R2-106138: Clarification of feature group indicator settings for inter-RAT periodical measurement reporting Motorola, NTT DOCOMO CR 36.331 0479

R2-106139: Clarification of feature group indicator settings for inter-RAT periodical measurement reporting Motorola, NTT DOCOMO CR 36.331 0480
=> Update available in R2-106656/R2-106657

R2-106141: Clarification on Meaning of FGI Bits Vodafone CR 36.331 0482
- Ericsson thinks this is not really needed, and this should not lower the barr for other Rel-8 changes

=> CR is agreed

R2-106142: Clarification on Meaning of FGI Bits Vodafone CR 36.331 0483
=> CR is agreed

R2-106143: Clarification regarding reconfiguration of the quantityConfig Ericsson, ST-Ericsson, Nokia Siemens Networks, Nokia Corporation, Samsung CR 36.331 0484
=> CR is agreed

R2-106144: Clarification regarding reconfiguration of the quantityConfig Ericsson, ST-Ericsson, Nokia Siemens Networks, Nokia Corporation, Samsung CR 36.331 0485
=> CR is agreed

5.2 Other

R2-106656: Clarification of FGI settings non ANR periodical measurement reporting Nokia Siemens Networks, NTT DoCoMo, Motorola
=> CR is agreed in R2-106689 36.331 CR0497 R1
Note: After RAN2 #72 it was detected that R2-106689 had a mistake (R1 changes disappeared) therefore R2-106689 was revised in R2-106945 R2 which was then agreed.

R2-106657: Clarification of FGI settings non ANR periodical measurement reporting Nokia Siemens Networks, NTT DOCOMO, INC., Motorola
=> CR is agreed in R2-106690 36.331 CR0498 R1

R2-106436: Clarification regarding default configuration value N/A Samsung
=> NSN proposes to remove: "when appropriate e.g."
- QC wonders what to do about the parameters with "OR" ?
- It was clarified that really the network has to configure the parameter before the functionality can be used.
- Can continue discussion further offline

=> Will see CR's in R2-106691 36.331 CR0506 Rel8, R2-106692 36.331 CR0526 Rel-9

R2-106691: Clarification regarding default configuration value N/A CR0506 Samsung
- After offline discussion, text was ok, so only already agreed change is included
- Samsung clarifies there is only network impact

=> CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-106692: Clarification regarding default configuration value N/A CR0526 Samsung
=> CR number should be CR0526
=> Should be written on correct specification version, and should be indicate Rel-9 CR
=> With these cover page changes, the CR is agreed in R2-106901 CR0526 R1

R2-106631: Restriction of AC barring parameter setting NTT DOCOMO, INC.
- Motorola wonders what the behaviour is when you have the special barring set to TRUE ? Is then the barring factor not applied ?
- Samsung wonders if this is an essential case for Rel-8; why not only inform RAN5 ? NTT DCM indicated that their RAN5 collegue asked for this clarification.

=> CR is agreed with adding CR number in R2-106693 CR0523

R2-106633: Restriction of AC barring parameter setting NTT DOCOMO, INC.
=> CR is agreed with adding CR number in R2-106694 CR0524

Not available/too late/withdrawn:

R2-106226: Clarification of FGI settings non ANR periodical measurement reporting Nokia Siemens Networks, NTT DOCOMO, INC., Motorola

R2-106227: Clarification of FGI settings non ANR periodical measurement reporting Nokia Siemens Networks, NTT DOCOMO, INC., Motorola
=> Withdrawn

6 LTE Release 9

6.1 Positioning Support for LTE (RP-091389)

(LCS_LTE, leading WG: RAN2, started: Dec. 08, closed: June 10, WID: RP-091389)

6.1.1 In principle agreed CRs

R2-106153: Correction of reliable transport terminology in description of LPP-Message Qualcomm Incorporated CR 36.355 0037
=> CR is agreed

R2-106154: One cell with known SFN in OTDOA assistance data Ericsson, ST-Ericsson CR 36.355 0038
=> CR is agreed

R2-106155: UE frequency capability for LPP Ericsson, ST-Ericsson CR 36.355 0039
- NSN wonders if we have to specify when the UE has to include this additional information ?
- QC thinks we should have procedural text for that, i.e. whenever the UE is asked to provide it OTDOA capabilities.

=> Should add some procedure text to mandate inclusion
=> Will see updated CR in R2-106695 CR0039 R1

R2-106695: UE frequency capability for LPP Ericsson, ST-Ericsson CR 36.355 0039 R1
=> CR is agreed

6.1.2 Other

R2-106281: Correction to LPP reliable transport Qualcomm Incorporated CR 36.355 (0041) - F REL-9 LCS_LTE
Section 4.3.1:
- Huawei wonders what this "shall support and make use" imply ? Is the UE required to use it for every message it sends ? QC intends the clarification not to require the UE to ask ACK for every message. However the UE shall support the functionality and can determine itself when to use the ACKrequest.
- NSN thinks the text is a bit confusing

=> Some rewording for 4.3.1. can be considered

IPR2025-00720, OnePlus Ex. 1004

=> NSN points out that also in section 4.1.4 we have to indicate that an ACK can be requested and returned

Other

=> Some editorials (e.g. acknowledgements has two different spellings)

=> Samsung thinks the field description clarification is already in procedure text

=> Will see updated CR in R2-106696 CR0041

R2-106696: Correction to LPP reliable transport Qualcomm Incorporated CR 36.355 0041 - F REL-9 LCS_LTE

=> CR is agreed

R2-106282: Correction to LPP Error procedure Qualcomm Incorporated CR 36.355 (0042) - F REL-9 LCS_LTE

=> NSN has some editorial remarks

=> Will see updated CR in R2-106697 CR0042

R2-106697: Correction to LPP Error procedure Qualcomm Incorporated CR 36.355 0042 - F REL-9 LCS_LTE

=> CR is agreed

R2-106283: Addition of missing reference to LPPe Qualcomm Incorporated CR 36.355 (0043) - F REL-9 LCS_LTE

=> CR is agreed in R2-106698 CR0043

R2-106485: Correction to the ODTOA assistance data Nokia Siemens Networks, Nokia Corporation, Qualcomm Incorporated, Ericsson, ST-Ericsson CR 36.355 (0044) - F REL-9 LCS_LTE

=> Updated in R2-106688

R2-106688: Correction to the ODTOA assistance data Nokia Siemens Networks, Nokia Corporation, Qualcomm Incorporated, Ericsson, ST-Ericsson CR 36.355 0044 - F REL-9 LCS_LTE

- Huawei wonders if the intra-freq the PRS always overlaps, the slotnumberoffset is not used intra-freq ? NSN is fine to obsolete the parameter. Samsung assumes it can be removed for intra-freq. QC thinks we could indicate this in the field description, but would like to check. NSN thinks it is not always 0, but you can derive it.

=> Will see updated with "obsoleting" the slotnumberoffset. Companies can stil check offline. Will see update in R2-106699 CR0044 R1

After offline discussion:

- It seems some companies still feel the slotnumberoffset that the parameter is needed and would prefer not to remove it now. Proposal is to agree on R2-106688 and handle the slotnumberoffset at a future meeting
- Motorola would prefer to remove it. If there is a reason to keep it we should discuss that and clarify the purpose. QC agrees but no consensus was possible.

=> Slotnumberoffset can be obsoleted next meeting if the usage is not clarified

=> R2-106688 was supposed to be revised in R2-106699 CR0044 R1 but R2-106699 was not provided and is therefore withdrawn.

=> Finally R2-106688 is agreed in R2-106920 CR0044 R2

R2-106529: Consideration on OTDOA Measurement Gap CATT Disc REL-9LCS_LTE

- NSN thinks in principle this could fix the problem, but since RAN4 already specifies gap pattern0, there is no need for the UE to signal that. The UE can just indicate it needs gaps.
- Ericsson came to the same conclusion in order to support UP positioning, but is proposing it for Rel-10.
- QC came also to this solution. QC wonders whether this is still seriously considered for Rel-9 ? Ericsson argees it is better to only have this from Rel-10. QC thinks it would be preferable to have this in Rel-9 if backward compatible.
- CATT is ok to have it only in Rel-10. They just want the problem to be discussed.
- Verizon would prefer to only have this in Rel-10.
- Chairman wonders if we would not need an indication from the network that it supports this new functionality.
- NSN also prefers Rel-10, but would also prefer to have the capability in Rel-10.
- QC thinks RAN4 is going to ask for Rel-10

=> Noted (will rediscuss for Rel-10); so in Rel-9 inter-freq OTDOA will be best-effort.

IPR2025-00720, OnePlus Ex. 1004

R2-106658: Alignment of LPPa descriptions to stage 3 Ericsson, ST-Ericsson CR 36.305 (0021) - F REL-9 LCS_LTE
=> Will wait for input from RAN3.

6.2 Support for IMS Emergency Calls over LTE (RP-081140)

(IMS_EMER_LTE, leading WG: RAN2, started: Dec. 08; closed: Sep. 09, WID: RP-081140)

No contributions.

6.3 MBMS over LTE (RP-091457)

(MBMS_LTE, leading WG: RAN2, started: March 09; closed: March 10, WID: RP-091457)

6.3.1 In principle agreed CRs

R2-106126: Correction on MAC padding on MCH CATT CR 36.300 0272 - F REL-9 MBMS_LTE
=> CR is agreed
R2-106127: Correction on MAC padding on MCH CATT CR 36.300 0273 - A REL-10 MBMS_LTE
=> CR is agreed

6.3.2 Other

No contributions.

6.4 Home-eNB enhancements (RP-091392)

(EHNB-RAN2, leading WG: RAN2, started: March 09, closed: March 10, WID: RP-091392)

6.4.1 In principle agreed CRs

R2-106124: 36300_CRxxx_Handover for Hybrid Cells Vodafone, Nokia, Nokia Siemens Networks CR 36.300 0270
=> CR is agreed
R2-106125: 36300_CRxxx_Handover for Hybrid Cells Vodafone, Nokia, Nokia Siemens Networks CR 36.300 0271
=> CR is agreed

6.4.2 Other

R2-106596: T321 timer fix Samsung CR 36.331 (0519) - F REL-9 EHNB-RAN2
Intra->LTE
- QC is ok with first change.

LTE->UTRA
- QC thinks this case is not the same as intra-UMTS
- QC points out we have autonomous gaps and RAN4 is still to define how much gap the UE is allowed to create. This discussion is still ongoing in RAN4. Samsung thinks this discussion is already ongoing for more than 6 months and we are one year after Rel-9 freeze. Maybe we should sent LS ?
- QC would be ok with 1s in square brackets.
- NSN thinks maybe 2s is more appropriate

=> Can continue offline. Will see update removing square brackets for 150ms, and probably have square backeted value for inter-RAT case in R2-106850 CR0519

R2-106850: T321 timer fix Samsung CR 36.331 0519 - F REL-9 EHNB-RAN2
Intra->LTE
=> NTT DCM wonders if there is impact for the RAN ? Untick RAN box
=> With this change the CR is agreed in R2-106923 CR0519 R1

IPR2025-00720, OnePlus Ex. 1004

6.5 Public Warning System (PWS) (RP-090649)

(PWS-RAN, leading WG: RAN2, started: June 09, closed: Dec. 09, WID: RP-090649)

No contributions.

6.6 Vocoder Adaptation (RP-090978)

(LTEimp-Vocoder, leading WG: RAN2, started: June 09, closed: Sep. 09, WID: RP-090978)

No contributions.

6.7 TEI9

6.7.1 In principle agreed CRs

R2-106145: Corrections to the presence of IE regarding DRX and CQI ASUSTeK CR 36.331 0486
=> CR is agreed with removal of highlighting in R2-106851 CR0486 R1

R2-106152: The field descriptions of MeasObjectEUTRA Huawei, HiSilicon CR 36.331 0493
=> CR is agreed

6.7.2 Other

R2-106192: Missing fresh KASME during the security key-change-on-the-fly Nokia Corporation
- ZTE wonders under which scenario this case could happen ? Nokia thinks it is the case that the SMC procedure at NAS level has not completed yet before the RRC key change procedure is executed. ZTE thinks MME is in full control of the timing.
- Huawei has the same view as ZTE. Also the proposed solution does not solve it because in the re-establishment the eNB has no idea of why the failure happened, and has thus now idea whether it should use the new or old KASME.
- If we do not have this CR, it seems integrity failure will also cause re-establishment. Nokia agrees but the speed of detection might be different.

=> Noted (no support)

R2-106240: Redirection based CSFB failure Qualcomm Incorporated
R2-106241: Cell selection in case of redirection based CSFB procedure Qualcomm Incorporated (CR0142)
- LG thinks we should first make sure we correctly understand the NAS specs. Is it indicated RAT, or both RAT's ?
- DT assumes it is clear the operator/network has the control, so the UE only attempts the indicated RAT. Vdf understands the CT1 specifications such that it should maximise probability of success, so also try the other CS RAT.
- NSN wonders how often it will happen that the eNB would sent the UE to the wrong RAT ? DT agrees. Vdf agrees it might not be so often, but it is a failure case.
- Motorola wonders if the UE would have to prioritise what RAT ? QC assumes you prioritise the indicated RAT/freq, then other frequencies of the RAT and QC wants to add other CS RAT.
- NSN wonders if the specification is not enough for the normal cases, and this is a failure case.
- Chairman wonders if AS is always aware of CSFB ? QC thinks anyway we have the NAS requirement so the UE overall should be aware.
- Vdf thinks it would be good to allow the UE to go to a second RAT; we don't need explicit dedicated signalling for that but the UE could e.g. use neighbouring cell information from the LTE cell.
- Vdf wonders for the current text, if the UE is directed to another RAT, should the UE check for other PLMN's ? DT assumes it is restricted to the rPLMN.
- NSN sees no reason to make an exception for this specific error case.
- Motorola thinks 24.301 should be updated to reflect selection to the "indicated RAT"

IPR2025-00720, OnePlus Ex. 1004

- DT thinks we have not excluded non-CS UMTS or GERAN deployments so that is why the UE should follow the indicated RAT. NSN thinks it is possible to have RNC only supporting PS.
- NSN thinks we should optimise normal cases, not error cases.
- RIM points out that 24.301 seems mainly concerned about RLF after sending extended service request
- RIM understands that with the current spec we only mandate the UE to go back to LTE. Then the NAS spec anyway allows the UE to switch to another RAT autonomously. So the proposed change only avoids this temporary reselection back.
- DT thinks we could change the reselecting back to LTE.
- Nokia wonders how long the UE should look for the other RAT ? QC tihnks a reasonable implementation would rely on stored information. QC also points out that there is a 10s timer for extended service request.
- RIM supports removal of the returning, and in case of failure just ask the UE to camp on a suitable cell. What RAT/freq to choose would be UE implementation.
- NSN wonders if the UE is free to choose any RAT/freq, should it not obey the priority freq/RAT's ? QC thinks we have no priority for cell selection. RIM agrees this is cell selection.

=> After offline discussion, updated CR is provided in R2-106915

R2-106915: Cell selection in case of redirection based CSFB procedure

- Vdf thinks the consequence is now that if we perform load balancing from LTE to GERAN, then the UE might end up in UMTS now which was previously not the case. So this behaviour is more tuned for CSFB then for load balancing. However Vdf agrees that it is probably better to focus on the CSFB case.
- NSN supports the proposal
- DT wonders if this can be implemented in Rel-8.

=> CR number should be included

- Magic sentence should be included ? QC indicates that the Rel-8 is different and the red text of Rel-9 is not included in Rel-9. So magic sentence is not needed.

=> Impact analysis should be updated (all inter-RAT redirection is applicable)

=> Will see update R2-106919 CR0142

R2-106919: Cell selection in case of redirection based CSFB procedure CR0142

=> CR is agreed

R2-106549: RRC establishment cause value setting Huawei, HiSilicon

- NTT DCM thinks there are other factors then call type that influence the establsihment cause (e.g. access class). NTT DCM thinks the CR is not really needed, but if we want to clarify the line should be updated. QC also thinks no CR is needed. LG thinks no CR is needed.
- RIM thinks table D.1.1 in 24.301 cannot be misunderstood.

=> Confirm that the establishment cause is determined based on 24.301, D.1.1.. No CR needed.

R2-106629: Mandating SPS for VoLTE capable UE NTT DOCOMO, INC.

- NTT DCM thinks the VOIP codec discussion simulation results should preferably take SPS and non-SPS solutions into account. NSN thinks we can check Rel-8 papers; there is probably gains if your cell is fully loaded with VOIP users, but maybe not in other scenarios.
- NSN agrees it is more a plenary discussion. NSN understands that SPS is not part of VoLTE initiative of GSMA.
- NTT DCM will propose to discuss this aspect as new in RAN

=> Noted; further discussion can take place offline/RAN

R2-106668: Removal of SEQUENCE OF SEQUENCE in *UEInformationResponse*

- NTT DCM supports the CR

=> CR is agreed in R2-106852 36.331 CR0525

6.8 LTE-A (SI: RP-091360)

(FS_RAN_LTEA, leading WG: RAN1, started: June 08, closed: March 10, WID: RP-091360)

No contributions.

IPR2025-00720, OnePlus Ex. 1004

6.9 Other LTE Rel-9 WIs

(SON, leading WG: RAN3, started: March 09, closed: March 10, WID: RP-090162)

R2-106251: Corrections to RLF Report NEC CR 36.331 (0500) - F REL-9SON
First change
- Samsung wonders whether the ordering makes any difference, since the cells are sent per freq. Samsung thinks we can remove the ordering.

=> Can think about wording
Second change
- NEC thinks if we do not change, it seems like intra-freq neighbours cannot be included. Samsung thinks we should remove it all cases. Mediatek support this proposal.

=> Proposal is agreed
General
- QC wonders if we need the magic sentence ? NEC thinks this is Rel-9 functionality.

=> Can see update in R2-106853 CR0500

R2-106853: Corrections to RLF Report NEC CR 36.331 0500 - F REL-9SON
=> CR is agreed

7 LTE Release 10

7.1 WI: Carrier aggregation (RP-100661), UL-MIMO, eDL-MIMO

(LTE_CA-Core, leading WG: RAN1, started: Dec. 09, target: Dec. 10, WID: RP-100661)

(LTE_UL_MIMO-Core, leading WG: RAN1, started: Dec.09, target: Dec.10, WID: RP-100959)

Note: UL/DL MIMO related contributions can also be submitted under this agenda item since at least for RRC, a combined CR will be submitted to RAN.

7.1.1 Stage-2

7.1.1.1 CA Stage-2 Corrections

Rapporteur shall submit in principle agreed stage-2 CR, as well as any further non-contentious clarifications/corrections under this agenda item. Other companies can also submit non-contentious corrections to the stage-2 CR under this agenda item. Note that focus will be on finalising stage-3 rather than adding details to the stage-2.

In principle agreed CR

R2-106123: 36.300 CR for RAN2 #71bis agreements on Carrier Aggregation NSN CR 36.300 0269 - F covers agreed changes of R2-105398, R2-105480, R2-105703 REL-10 LTE_CA-Core
=> Revised in R2-106186

R2-106186: Corrections and new agreements on Carrier Aggregation Nokia Siemens Networks (Rapporteur) CR 36.300 0269 1 B REL-10 LTE_CA-Core
- Huawei woudl like to change "radio quality" to "RSRP" in section 10.1.2.1.

=> Agreed to be used as baseline for further stage-2 work. Will see update in R2-106854 CR0269 R2

R2-106854: Corrections and new agreements on Carrier Aggregation Nokia Siemens Networks (Rapporteur) CR 36.300 0269 2 B REL-10 LTE_CA-Core
=> CR is agreed

Other

R2-106357: Stage 2 corrections for CA New Postcom CR 36.300 (0279) - F REL-10 LTE_CA-Core
Proposal 1:
=> Agreed to be included in rapporteur CR
Proposal 2:

IPR2025-00720, OnePlus Ex. 1004

- QC thinks we should say "in this version of the specification"
- Ericsson thinks the sentence starting "Further enhancents..." can be removed
- NSN was under the impression to remove the annex at some point; so it is really important to keep it completely up to date.

=> Remove the last sentence of the paragraph in the rapporteur CR

Proposal 3:

=> Premature; not agreed

Proposal 4:

- Huawei thinks anyway this is just examples, so not necessary.

Proposal 5:

=> Agreed to be included in rapporteur CR

R2-106383: Correction to 36.300 for Carrier Aggregation CATT CR 36.300 (0280) - F REL-10 LTE_CA-Core

Proposal 1:

- Ericsson thinks this is not correct change, since an Scell does not have to have an UL.

=> Not needed

Proposal 2:

- Huawei thinks this is clear from stage-3

=> Not needed (annex will be removed anyway)

R2-106592: Corrections on Carrier Aggregation in 36.300 HTC CR 36.300 (0282) - F REL-10 LTE_CA-Core

First change:

=> Removal of last line of first paragraph in J.3.2. is agreed to be included in rapporteur CR

Second change:

- Ericsson thinks it is sufficient clear from stage-3.

=> Not needed

7.1.1.2 CA CC/cell management: CC/cell configuration

Aspects of CC/cell management not related to mobility/addition/removal. E.g. Scell RLM,..

Scell RLM

R2-106183: Radio Link Monitoring of SCells Nokia Siemens Networks, Nokia Corporation Disc

- ALU wonders when the eNB is informed ? Is it after T310 expiry ? NSN thinks immediately after T310 expiry.
- QC wonders why the indication to the eNB is needed ? NSN was assuming (based on RAN4 input) eNB cannot detect sufficiently fast so an indication is needed.
- CATT wonders how quick the detection would be in the UE ? NSN assumes same as current Rel89.

R2-106624: SCell radio link monitoring NTT DOCOMO, INC. Disc

Proposal 3:

- Nokia wonders how long the UE keeps on trying to obtain in-sync ? NTT DCM assumes continuously until deactivation (explicit or implement)
- Panasonic wonders if the automous stopping is not easier to capture in L1 spec ? QC has the same thinking.
- NTT DCM clarifies that only UL transmission on Scell are stopped, but e.g. CQI reporting for the Scell on the Pcell are continued.
- CMCC if there is no "mismatch" problem between UE and eNB due to proposal 1 and 3 ? NTT DCM assumes the eNB does not have to be aware very accurately.
- NSN thinks if the eNB keeps on scheduling the UE, the eNB might waste transmission/reception resources.
- NTT DCM would be fine with or without an indication to the eNB

R2-106327: SCell Radio Link Monitoring ZTE Disc

- ZTE wonders how eNB can detect radio link problems based on CQI ? ZTE agrees there is a "out of range" value, but the other values have values.

R2-106384: Radio Link Monitoring on Scell CATT Disc

IPR2025-00720, OnePlus Ex. 1004

- QC agrees with observation 3, but wonders how we address the case of the UE receiving a false PDCCH. (in the time period inbetween the UE indicating e.g. low CQI and the network deactivating the UE)

R2-106655: On the use of RLM on SCells Ericsson, ST-Ericsson Disc
- IDT wonders if we have no Scell RLM, will it mean a demand for more CQI reporting ? Ericsson assumes not; Ericsson assumes that the reporting would anyway come something inbetween 40-100ms, which is still faster than RLF detection.

R2-106243: RL monitoring for pathloss reference SCell Qualcomm Incorporated Disc
R2-106213: Radio Link Monitoring on Scell Huawei, HiSilicon Disc
R2-106351: Analysis on SCell Radio Link Monitoring New Postcom Disc
R2-106391: Discussion about SCell Radio Link Monitoring ITRI Disc
R2-106393: Finalisation of RLM on SCells Fujitsu Disc
R2-106416: SCell RLM Procedures InterDigital Disc
R2-106432: The need of Radio Link Monitoring for SCell Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
R2-106500: Radio Link Monitoring for SCells Sharp Corporation Disc
R2-106519: Handling of SCell Radio Link Monitoring Panasonic Disc
R2-106573: Resolving issues related to rradio link monitoring on SCell LG Electronics Inc. Disc
R2-106588: Need of RLM on sCell Samsung Disc
All 11 Tdocs not treated

Scell RLM ?
Yes:
A) UE only informs eNB about RLF status (RLF yes/no), eNB has to take action
- no UE autonomous stopping/resumption
B) UE locally stops UL transmissions as long as RLF recovery does not happen
- No Scell deactivation
- Automatic resumption
C) UE deactivates Scell and informs eNB:
- no automatic resumption

Issues:
1 RLM optional to configure ?
2 Only on activated Scells ?
3 Independant configuration of RLF timers/counters ?
4 Handling of CQI during non-UL-tx ? indicates "out of range" ?
5 Indication to eNB

No:
D) No RLM/autonomous UE actions needed in Rel-10
E) Still UL on/off based on CQI thresholds

Discussion
- QC thinks solution A does not address the false-alarm case. So then the UE could still transmit. Motorola thinks it is an extremely rare case.
- IDT thinks maybe CQI is enough, but it would mean more frequent CQI reporting. So maybe network should be able to choose ? Mediatek thinks CQI reporting is enough and will be quicker.
- Nokia assumes Scell RLM would work the same as Pcell RLM. Nokia sees no need for optionality.
- NSN thinks RAN1 has not agreed that aperiodic CQI reporting will depend on activated Scells. NTT DCM thinks it should be checked.
- NTT DCM thinks if we have Scell RLM, then it should lead to autonomous UE stopping, not only informing eNB. So if we have Scell RLM, it should be option B or C.
- Huawei thinks option C) is complex for the eNB since it has to take into account different activation configurations. Huawei wonders in general why we need Scell RLM.

From offline discussion:
- NTT DCM thinks A and E have not that much support. So B, C and D are left
  B: Stopping transmission
  C: Deactivation
  D: No autonomous UE action

IPR2025-00720, OnePlus Ex. 1004

- On D versus B/C there is no real consensus. B/C seems to be a safety mechanism compared to D. Simpler will be better.
- B or C can probably not be decided before RAN1 progress on the CQI reporting
- Whether to have an indicator to eNB is a question for both B and C.

Continue discussion:
- LG thinks "deactivation" terminology is to specific, so we should talk about "UL stopping" and it could include deactivation.
- Ericsson thinks D is simplest and we should take first that decision.
- NTT DCM points out that CQI measurements might not be so appropriate for RLM since it might depend on UE configuration: NTT DCM thinks e.g. with 8rx UE, the CQI is improved but it should not impact failure detection.
- Samsung thinks RAN4 has incorrectly assumed that there is no impact to RAN2 specifications.
- Motorola wonders what the "regulatory" aspect is ? QC thinks that is not important: we should focus on UL interference. Motorola thinks the UE tx power will always be limiited to 23dBm and allocated resources.
- NTT DCM thinks there is no regulatory requirement for LTE, but there was for UMTS. So it is not completely unimportant. NTT DCM thinks UE based approach is complimentary approach.
- Ericsson thinks what we have heard is that the UE based solution can help UL interference in some rare cases if the eNB does not take control.
- Chairman wonders if we could add it later ? QC thinks if it is simple we should introduce it asap.

1) Do we want Scell RLM & autonomous UE stopping of transmission ?
Yes [12]
No [15]
=> Not in Rel-10; will rely on network control. Will sent response LS to RAN4 (response to R2-106063) in R2-106855

Deactivation timer simplification

R2-106501: Simplification of deactivation timer Panasonic, Alcatel-Lucent Disc
-

R2-106392: Simplification of deactivation timer Fujitsu Disc
R2-106355: Optimization of SCell Deactivation Timer New Postcom Disc
Both Tdocs not treated

Discussion:
- ZTE if there is no problem with desync, do we need to simplify ? Panasonic thinks if there is no issue, we don't need the timer.

Proposal 1:
- Samsung wonders whether the proposal is whenever PDCCH is received, we start the deactivation timer (one for all Scells) ? Then does it work if we have multiple Scells ? Panasonic thinks it would still work, but it might work less beneficial for power saving.
- LG thinks if we have explicit deactivation per CC, we should probably also have implicit deactivation per CC.
- NSN thinks companies should accept the decision.
- Chairman wonders if Pcell PDCCH is also included ? Panasonic thinks we could exclude Pcell PDCCH ? What about cross carrier scheduling ?
- Huawei thinks with this proposal it becomes a lot like an DRX inactivity timer. So we could use the same.

=> Noted (not so much support)

Proposal 2:
- Nokia wonders if it will work in the future if first networks are not using it / only using "infinity".
- Asustek wonders if we introduce infinity/optionality, would we reconsider TAT expiry handling ? Chairman assumes not (still a network choice to not use it/use it).
- IDT thinks this makes sense: a network could rely on explicit signalling
- LG support this proposal.
- Newpostcom thinks option 1 is easier.

IPR2025-00720, OnePlus Ex. 1004

- Samsung assumes that if we have 6 values for the timer, "infinity" does not cost any bits.

=> We agree to add infinity value, can be handled by 36.331 rapporteur.

Scell AN at TAT expiry

R2-106623: Handling of dedicated A/N configuration at TAT expiry NTT DOCOMO, INC. Disc
- LG wonders if Scells would typically not be released before TAT expires ? Why did the network not release the Scells before TAT expiry ? NTT DCM thinks a network could rely on TAT expiry for UE action.
- CATT thinks when TAT expires, SPS AN resources are not cleared. The Scell AN resources are very similar, so why have different handling. NTT DCM thinks a network would typically not let the TAT expire when there are SPS resources.

R2-106437: Status of A/N resources after TAT expiry Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
-

Discussion:
- Ericsson wonders if we can really take a decision now, since the TDD PUCCH resource allocation is not clear yet in RAN1. I.e. for TDD it is not clear yet whether when the Pcell is scheduling only, the Rel89 resources would be applicable.
- NSN wonders if we could not agree now, and then later correct if RAN1 agrees something different for RAN1.
- Samsung thinks this is isolated issue and we can discuss it again in the future.
- Huawei also thinks RAN1 has not progressed sufficient, at least for deciding release.
- ZTE wonders what the benefit of releasing the resource is even if possible ? It is still no real radio resource because it is shared (not exclusive), and you can reconfigure before activation. NTT DCM wanted uniform behaviour for PUCCH resources.

=> For now assume we will keep the AN resources at TAT expiry, but this can be revisited if also TDD would allow release of Scell AN resources without jeopardising Pcell scheduling.

Other:

R2-106294: DRX related timers in carrier aggregation NEC Disc
R2-106544: UL CC configuration on activated SCell Pantech Disc
Both not treated

Not available/too late/withdrawn

R2-106184 TAT Expiry Nokia Siemens Networks, Nokia Corporation Disc
=> Withdrawn
R2-106262 Release of PUCCH resources upon TAT expiry Ericsson, ST-Ericsson Disc
=> Withdrawn
R2-106477 Scell Radio link monitoring Motorola Disc
=> Withdrawn

7.1.1.3 CA CC/cell management: CC/cell change

Aspects of CC/cell management related to mobility/addition/removal. Any stage-2 aspects left ?

R2-106575: Handling of Source SCell configuration at handover LG Electronics Inc. Disc
-

R2-106385: Handling of SCell Configuration in HO Procedure CATT Disc
R2-106520: Handling of existing Scell configuration at HO Panasonic Disc
Both Tdocs not treated

Discussion:
Proposal 1:
- LG clarifies their proposal 1 is for both inter-eNB and intra-eNB handover, although the benefit for inter-eNB is small.
- ALU supports the proposal.

Proposal 2:
- CATT thinks it would be sufficient to only transfer the cell index at inter-eNB handover so that target eNB can release.
- ALU thinks we should always provide the full RRC configuration to the target.

IPR2025-00720, OnePlus Ex. 1004

- NSN thinks we could have signalling to say "release all Scells" ? Then we would not have to inform the target about the Scell configuration.
- LG thinks we should stick to the Rel89 behaviour.
- Samsung thinks Rel89 should apply: forward full configuration to the target eNB, and no other optimisations.
- Chairman wonders whether maybe the target wants to configure the same configuration to the UE (e.g. same frequencies). QC agrees continuity might be good.
- Panasonic thinks there is no need to transfer the Scell configuration at inter-eNB handover. Anyway we will report the best cell on each frequency.
- QC wonders why we would not forward the full configuration ?
- ZTE supports the proposals from LG.

Agreements:
1) UE does not autonomously release any Scell configuration at handovers; i.e. normal network control applies.
2) Like in Rel89, the source will pass the full RRC configuration to the target eNB, including Scell configuration

=> Will impact stage-3

7.1.1.4 Other

E.g. UE (measurement) capability modelling, UL/DL MIMO aspects,.... In principle agreed 36.302 CR shall be submitted under this agenda item.

In principle agreed CR

R2-106131: 36.302 CR to introduce carrier aggregation Alcatel-Lucent CR 36.302 0021 - B REL-10 LTE_CA-Core
=> revised in R2-106435

R2-106435: Introduction of CA to TS36.302 Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.302 0021 1 B REL-10 LTE_CA-Core
- Ericsson is concerned that no transport channel combinations are considered for UL, i.e. PUCCH+nPUSCH. Ericsson thinks this should be added e.g. in later meeting. ALU assumed that qPUSCH would not be contentious, and we can always add other aspects later. Ericsson thinks maybe the first row might be removed even later.

=> Allow some time for offline discussion to see if further inform can be included. Update in R2-106895

R2-106895: Introduction of CA to TS36.302 Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.302 0021 2 B REL-10 LTE_CA-Core
=> 1 TDD row should use p and q instead of 2 times q
- Ericsson points out that further changes are needed in the future for q*PUSCH on different frequencies. Same for DL.

=> With this one change the CR is agreed in R2-106898 CR0021 R3

Other

R2-106411: UE capability signalling for CA and MIMO in REL10 Nokia, Nokia Siemens Networks Disc
- Mediatek understands that RAN4 is working on a draft LS which will be instructive for capability design.
- QC thinks we should progress as much as possible. We might always change later.
- QC wonders why we need future proofing for non-contiguous now ?
- QC wonders if we could remove non-continuous for now ?? Verizon wonders why we remove the inter-band non-contiguous ? Huawei thinks we cannot remove
- Mediatek wonders why CA and MIMO capability need to be signalled separately (proposal 1 from RAN1). Nokia thinks this is clear RAN1 decision.
- Huawei wonders if we can merge contiguous into non-continuous (contiguous as special case of non-continuous)
- Nokia clarifies that already today we have inter-band non-contiguous, and then the same signalling could be used for intra-band non-contiguous.
- Mediatek is worried if we rush. Ericsson is fine to not rush: this is ASN.1 which can be added later.
- Chairman wonders if the "band" is forgotten to be signalled in single band case ?

IPR2025-00720, OnePlus Ex. 1004

- Chairman wonders if there are MIMO parameters needed in band combination ? I.e. can the MIMO capabilities depend on the band combination ? Mediatek thinks this is being discussed in RAN4.

=> Comeback on Thursday to see what can be included in ASN.1 in R2-106892

R2-106892: UE capability signalling for CA and MIMO in REL10 Nokia, Nokia Siemens Networks Disc

- Huawei thinks some of the text for the MIMO capability is not correct
- Nokia understands that a UE cannot signal for a band a lower MIMO capability than indicated in the category

=> Will go for email discussion and at least category will be included **[EMAIL DISC up to thursday Nokia] [72#01].** Final CR in R2-106934 CR0528

R2-106284: Indication of need for measurement gaps in carrier aggregation Qualcomm Incorporated Disc

- CATT wonders whether the gaps could be CC-specific ? QC thinks this would technically be possible, but sees no immediate big advantages
- Huawei thinks CC specific gaps might make sense. NSN would consider CC specific gaps as an optimisation.
- If we keep the current approach (no additions), then you can only indicate "no gaps required" if you have a stand-alone receiver for a single band
- Mediatek thinks there are many different architectures for implementing CA, so it would be good to discuss further.

=> At least we will have to clarify how the current measurement gap signalling in capabilities translates in the CA case

- Samsung thinks the measurement gaps is a quite complicated issue. It would help if we could make consensus on whether the gap is CC specific or UE specific. Samsung thinks given the time-frame, maybe we should accept UE specific for Rel-10.
- Huawei sees potential big gains for per CC gaps.

=> Noted; contributions invited.

R2-106507: SCell activation and CQI reporting SamsungDisc

- Panasonic points out that RAN1 is also discussing this. Panasonic thinks they are discussing to extend the note that we have in MAC that allows the UE not to report CQI after coming out of DRX, and extend this for deactivation. So e.g. for 4 subframes after activation, you do not have to report CQI.
- Ericsson thinks we should also wait for RAN4 input on the activation value.
- Nokia thinks reporting OOR for some time (unspecified duration) would be fine, and when the UE has avaliable CQI it starts to transmit real values.
- Motorola wonders if solution 1 is aligned to DRX case ? Samsung thinks it is more like solution 2 (i.e. 4ms).
- Ericsson thinks a UE could start to report immediately if the eNB knows that anyway the first values are not that reliable.
- LG thinks we have sent LS to RAN1/4 w.r.t. waiting time for CQI reporting.
- Motorola thinks we could have the same solution as for DRX, i.e. allow the UE not to report CQI up to 4 TTI's after deactivation. Ericsson thinks we should avoid blind decodes in the eNB.
- Samsung assumes that the UE needs some time after the activation to collect measurements; I.e. the UE only starts to measure from the activation.
- Nokia thinks the UE should report OOR until CQI available.
- NTT DCM wonders if there is any difference between this case and the case of a UE sending D-SR, UE going to active state and being able to report CQI immediately afterwards ?=
- Not a good solution to leave it up to the UE when to start transmitting CQI because it would result in additional blind decodes.
- Ericsson assumes the UE should always start to sent CQI from the activation onwards, and it is up to the eNB to discard certain initial reportings.
- Panasonic wonders if the eNB should ever discard (the accuracy is not given).
- Samsung wonders if we have to specify for how long the UE is allowed to sent OOR.
- Nokia thinks DRX and activation is not completely the same because one is MAC the other is L1.
- At least from UL timing point of view, DRX and activation time of view it seems similar (i.e. no UL transmissions initially).

=> Noted (contributions invited)

IPR2025-00720, OnePlus Ex. 1004

Not available/too late/withdrawn
R2-106326 Reporting of CC-specific PCMAX,c Potevio Disc

7.1.2 Stage-3 Common

Stage-3 aspects related to both control- and user plane. E.g. inclusion of user plane parameters in RRC.

L2 parameters
R2-106438: Carrier Aggregation: Layer 2 configuration parameters SamsungTP 36.331 - REL-10 LTE_CA-Core
Proposal 1& 2 are already covered
Proposal 3:
" 3 Apply the following values for the sCell deactivation timer: rf32, rf64, rf128, rf256, rf512, rf1024, infinity."
- Nokia thinks shorter values would be good to have. Nokia wants to really use it to avoid sending the explicit command. Nokia was thinking: 10..320ms. Samsung assumed the idea of the deactivation timer was to protect against MAC CE loss. Samsung does not see real overhead with sending MAC CE. Nokia is considering this mainly as a mechanism to avoid MAC CE sending (comparable values to short DRX).
- NSN wonders why have power of 2 ? In Rel8 we have multiples of 10.

After offline discussion:
- Proposal is to have values 2,4,8,16,32,64,128,infinity in radio frames.

Proposal 4:
- Nokia wonders which UE's will support this ? All Rel-10 UE's or only CA supporting UE's ? Samsung thinks we have already agreed that the extended BSR is independant from UL MIMO or CA. ALU sees value in this for UL MIMO irrespective of CA. Nokia thinks if there is no use case, it should not be required.
- Ericsson thinks it is can also be beneficial to have the extended report even if the UE does not support UL MIMO or CA, since it will give more information to the eNB.

Agreements:
3 Deactivation timer will have range 2,4,8,16,32,64,128,infinity in radio frames
4 E-UTRAN may configure extended sizes for BSR reporting independently of whether the UE is configured with Carrier Aggregation or UL MIMO
5 Apply need code ON for field extendedBSR-Sizes-r10 and change the value range to a boolean and update field description.
6 Specify that 'FALSE' is the default value for field extendedBSR-Sizes-r10.
FFS whether this is to be supported by all Rel-10 UE's or only a subset.

=> Corresponding changes can be included in the rapporteur CR 36.331 in R2-106856

R2-106638: Values of the Deactivation Timer Huawei, HiSilicon Disc
R2-106201: Deactivation timer value range Nokia Siemens Networks, Nokia Corporation Disc
Both not treated

Other
R2-106261: Selection between Rel-8/9 and Rel-10 PHR format Ericsson, ST-Ericsson Disc
- Ericsson indicates that RAN1 has agreed to sent an LS that should allow a Rel-10 UE to report Pcmaxc also if only configured with one CC. Therefore Ericsson assumes it would be good to have it configured by RRC.
- Nokia wonders what the benefit is ? Ericsson thinks the benefit is that the MPR uncertainty can be reduced for the single cell case.
- ALU thinks also if the UE is configured for parallel PUCCH+PUSCH transmission, even on one cell you would have to use the Rel-10 PHR. So ALU thinks it would be good if all UE's support this.
- Panasonic supports Ericsson proposal to use RRC.
- Cases where this could be useful:
  - 1 cell with parallel PUCCH+PUSCH
  - Multiple cells
  - General more insight in MPR/AMPR situation in UE
  - SAR

IPR2025-00720, OnePlus Ex. 1004

Agreements:
1) Whether to use the Rel-10 PHR format can be configured by RRC

FFS whether this is to be supported by all Rel-10 UE's or only a subset.

=> Will see RRC text proposal in R2-106857

R2-106857: Selection between Rel-8/9 and Rel-10 PHR format Ericsson, ST-Ericsson Disc
=> Text proposal is agreed to be included in 36.331 CR for CA (R2-106856)

R2-106415: CA and UL/DL MIMO capabilities in REL10 Nokia Corporation, Nokia Siemens Networks CR 36.306 (0036) - B REL-10 LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core
- Related to discussion in R2-106411
- Mediatek thinks the category 7 still depends on RAN4. Nokia only intends to keep the table up to date as much as possible

=> Updated after offline discussion in R2-106893

R2-106893: CA and UL/DL MIMO capabilities in REL10 Nokia Corporation, Nokia Siemens Networks CR 36.306 0036 - B REL-10 LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core
=> Typo in 4.3.5.1.4, remove "not"
- Huawei wonders where the non-CA MIMO capability comes from ? Nokia clarifies the 1.5/1.6 applies when MIMO is not configured. This is a result of RAN4 decision to make MIMO support band specific.

=> Huawei wonders if it is correct that the non-CA MIMO capability is applicable in inter-band CA ? Can be investigated.
=> Numbers for categories does not capture the latest numbers.
- Ericsson would prefer to only list the categories for now in the CR's. Huawei is ok to only category.

=> Will for email approval; at least category should be included. Final version in R2-106933 CR0036 R1 **[EMAIL DISC up to thursday Nokia] [72#01]**

7.1.3 Stage-3 Control Plane

7.1.3.1 Running RRC CR

Rapporteur shall submit in principle agreed 36.331 CR, as well as any further non-contentious clarifications/corrections under this agenda item. Other companies can also submit non-contentious corrections to the 36.331 CR under this agenda item.

In principle agreed CR

R2-106147: Introduction of Carrier Aggregation Rapporteur (Samsung) CR 36.331 0488 - B related to email discussion [71b#07] REL-10 LTE_CA-Core
=> Agreed to be used as baseline for further work
=> Will see update including decision from this meeting in R2-106856. There is a draft available in the draft inbox. Will go for email approval up to thursday **[EMAIL DISC Samsung] [72#02]**
(All agreed 36.331 stage-3 changes will be included in stage-3 CR.)

Other

R2-106207: Clarifications on CA configuration Huawei, HiSilicon CR 36.331 (0495) - F REL-10 LTE_CA-Core
Proposal 1:
- QC thinks already from the scope of the documents, it can be motivated that the definition is different.

=> Agreed
Proposal 2:
=> Agreed
Proposal 3..6:
=> All agreed

R2-106486: Additional Clarifications for CA Running RRC CR Nokia Siemens Networks, Nokia Corporation CR 36.331 (0509) - F REL-10 LTE_CA-Core
5.5.2.1:
- Samsung would prefer not to repeat this "supporting CA" so often

IPR2025-00720, OnePlus Ex. 1004

- QC thinks the note was clearer without the change

=> Change to 5.5.2.1. are not needed

5.5.4.1:

- Samsung thinks talking about "applicable for measurement" makes it less clear and introduces some ambiguity. The term "applicable cell" is also used in the triggering and reporting sections. LG agrees with Samsung: the terminology is mainly used w.r.t. reporting.
- Applicable cell today refers to triggering and reporting. Samsung wonders whether really anything is unclear.
- Ericsson points out that some changes are not related to CA, so it might be so appropriate to makes these changes.

=> Noted

R2-106211: Correction to Inter-node RRC information elementMediaTek CR 36.331 (0496) - B REL-10 LTE_CA-Core

- Samsung assumes there is nothing specific for the Scell information. So maybe it is better to remove the "after the handover is succesfully performed". Mediatek agrees.

=> Rapporteur can remove "after the handover is succesfully performed".

Not available/too late/withdrawn

R2-106413 Signalling of CA and MIMO capabilties in REL10 Nokia Corporation, Nokia Siemens Networks CR 36.331 (0504) - B REL-10 LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core
withdrawn (as not available)

7.1.3.2 Other

Including submission of in principle agreed CR on 36.355.

In principle agreed CR

R2-106156: Update of 'serving cell' terminology in 36.355 Qualcomm Incorporated CR 36.355 0040 - F REL-10 LTE_CA-Core

=> CR is agreed

Independant UL CC addition/release ?

R2-106433: Delta configuration for the common configuration of SCell Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc REL-10 LTE_CA-Core

- NSN thinks add/release UL CC is not really changing system information. NSN wonders if there is e.g. a power saving when we compare a deactivated UL CC or a deconfigured UL CC ?
- ALU assumes in general more DL's than UL's.

R2-106439: Carrier Aggregation: DL/ UL structure common radio configurationSamsungTP 36.331 - REL-10 LTE_CA-Core

-

R2-106539: Handling of UL common configuration of SCell ASUSTeK Disc REL-10 LTE_CA-Core

R2-106591: Miscellaneous corrections related to SCells in 36.331HTC CR 36.331 (0518) - F REL-10 LTE_CA-Core

Allow/not allow independant UL CC addition/removal?

Discussion:

- NSN thinks with the Samsung approach you would have to release the cell and add it again without UL CC, to remove the UL CC. Is this a problem ?
- Samsung wonders if this add/remove is a frequent case. NSN is not against the Samsung proposal, but thinks in practise a network would not release the UL.
- LG thinks we have agreed in the past that we would allow adding an UL CC
- HTC thinks adding/removing UL CC can be seen as changing the common configuration
- Ericsson has no strong opinion, but sees no much complexity for having separate control.
- Samsung wonders if we go the ALU way, would we remove statements that we do not support delta signalling for SI ?

IPR2025-00720, OnePlus Ex. 1004

- Nokia has slight preference for Samsung proposal due to simplicity, e.g. can we remove UL CC for activated cell ?
- CATT thinks from UE point of view this are 2 different resources, but CATT would prefer not stand-alone UL CC addition
- Huawei agrees with Samsung that if we go the ALU proposal, we have to change the SI information handling
- LG thinks both proposals break some previous agreement
- Huawei thinks we have agreed that when we add a cell, the status is deactivated. So what happens at UL CC addition ? Huawei assumes the cell would become deactivated.
- NSN agrees there is more complexity, so maybe we should keep it simple and go for second proposal.
- QC would prefer the simpler proposal from Samsung. QC assumes it is not a frequent event. Also QC does not see much power gain, and the configuration is probably more determined by UE capability.
- HTC also thinks we should not have partial deactivation, so a cell would be deactivated when we add a UL CC.

=> Proposals from R2-106439 are agreed

W.r.t. text proposal in R2-106439:

- NSN would prefer that in RadioResourceConfigCommonSCell, the UL configuration is optionally present (not with "release"). Samsung has no strong opinion but we have used this before.

=> Change to optional presence at Scell addition, without the "release option".

=> With this change, the text proposal can be included in the rapporteur CR.

Measurements

R2-106456: Carrier Aggregation: measurement related issues Samsung TP 36.331 - REL-10 LTE_CA-Core

Proposal 1:

- QC thinks by not specifying, we can confuse the implementer. Also when we have eICIC, the RSRQ could give different results. So QC would like to clarify it is based on RSRP. Ericsson agrees.

=> Not agreed

Proposal 3

- Ericsson agrees: existing fields already address measurement object.
- LG wonders if e.g. for A1/A2, the report might not include other cells on the measurement object. Then the additional measurement reporting might also benefit for the measObject ? Samsung thinks the additional measurement reporting was introduced for handover reasons. LG agrees that proposal 3 is ok if we focus on handover, but if we consider other cases, it might make some sense.
- NSN thinks we should stick to original intention and support the proposal. CATT also agrees. CATT thinks the network should configure A6 if it is interested in intra-neighbours rather than A2.

Proposal 4 is discussed separately after presentation of R2-106434

Proposal 5:

- Asustek wonders if this also applies to other events then A3/A5, e.g. A4. Nokia wonders how this can apply to A4, since A4 is only concerning one cell. Asustek assumes it is only applicable to A3/A5.Nokia thinks the clarification is also applicable to A4: you configure a frequency and if the Scell on that frequency goes below the threshold you report.

After offline discussion:

- The proposal seems acceptable, i.e. A4 is included, but the wording of the bullet might be improved. I.e. in general when the measobject is a serving frequency, also the serving cell can trigger the report.
- QC wonders if Pcell is never a neighbour cell ? Samsung does not see any restrictions. QC thinks for single carrier case (Rel89) the Pcell could never be a neighbour. If the wording is with Scell, it should be ok for now.

After more offline discussion:

Proposal 1:

- Samsung indicates that there are some places where the agreement will have to be added, and the suggestion is to do this. In 5.5.5 we would have to add that the ordering is on RSRP.

Proposal 5:

IPR2025-00720, OnePlus Ex. 1004

- It seems after offline discussion that A4 is probably better to exclude and Scell should not be subject to A4. Samsung proposes to agree on the original proposal 5 text proposal.

=> Proposed text for bullet 5 is agreed.

Agreements:
1: Quantity to determine the best cell is the "RSRP"
2: RSRP should be optional within the IE CandidateCellInfo-r10 as included in the IE RRM-Config.
3: Additional reporting (of the best cell) does not apply for the frequency indicated in the associated measObject.
6: Simplify the field description of MeasResultServFreqList as shown
5: Proposed updated bullet text is agreed, but with modifications:
5> for events involving a serving cell on one frequency and neighbours on another frequency, the UE considers the serving cell on the other frequency as any other neighbouring cell

R2-106434: Additional Measurement Reporting issue Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc REL-10 LTE_CA-Core

-

R2-106386: ASN.1 Issues for Measurement Reporting CATT Disc REL-10 LTE_CA-Core

R2-106489: Stage-3 details of Additional Reporting for CA Ericsson, ST Ericsson Disc REL-10 LTE_CA-Core

Both not treated

Additional reporting configuration:
Option 1: Clarify MeasResultServFreq does not include PCell, and does not include best non-serving neighbour cell on Measobject
Option 2: Remove Neighbourcell from MeasResultServ and handle as separate MeasResult with including objectId as reference

Discussion:
- NSN would like to keep the current structure.
- NSN wonders why there would be duplicate measurements ? ALU thinks since we have agreed to proposal 3 above, this does not happen anymore.
- ALU wonders if the MeasResultServFreq is ordered according to best serving cells, or best neighbour cell quality ? Samsung assumes we have no specific order, since we list the freq.

Agreements:
1) Keep the current structure of MeasResultServFreq
2) Clarify that MeasResultServFreq does not include PCell as "measResultScell", and does not include best non-serving neighbour cell on Measobject

=> Can be included in rapporteur CR.

Other

R2-106465: Physical layer parameters to be configured by RRC Ericsson, ST-Ericsson Disc REL-10 LTE_CA-Core

Proposal 1:
- Nokia wonders if the parameters is independent of CA ? Ericsson agrees.
- Ericsson clarifies that the parameter applies to both Pcell and Scell.

Proposal 3:
- Ericsson has received some comments. It seems now clear that the aperiodic and periodic CSI configuration is per cell. Samsung thinks periodic is still FFS.

Proposal 5:
- Proposal only remove an FFS.
- Samsung thinks it is clearly specified in RAN1 LS that this is cell specific information. Samsung thinks it might make more sense to include this in system information. Ericsson agrees it is cell specific information. Ericsson thinks anyway it might be good to have it in dedicated signalling since it is only for a Rel-10 UE with TM9 and SIB2 is transmitted quite frequently.

IPR2025-00720, OnePlus Ex. 1004

=> Leave FFS for now and comeback next meeting

Proposal 6:

- Samsung thinks RAN1 has agreed on 2 additional parameters as indicated in the RAN1 LS (different periodicity/offset for different muting patterns). Ericsson understands there is still some uncertainty

Proposal 11:

- Samsung wonders we need separate SORTD activation for AN repetition and SPS. Ericsson agrees this was not clearly indicated in the RAN1 LS.

=> Only one 2-antenna port activation for AN/SPS

=> Additional parameter for 2 antenna port activation for CQI

=> Additional parameter to configure the second layer resource for CQI

Agreements:

1: Introduce a new parameter simultaneousPUCCH-PUSCH in PUCCH-ConfigDedicated-v10x0. It is a common parameter and applies to both Pcell and Scells once configured.
2: Introduce deltaF-PUCCH-Format3 as an extension to the current UplinkPowerControlCommon and included in both RadioResourceConfigCommonSIB and RadioResourceConfigCommon. This parameter is applicable to Pcell only.
3: Update the value range of csi-RS-Ports and locationIndex based on RAN1 agreements and align the parameter name csi-RS-ConfigIndex to csi-RS-SubframeConfig from RAN1.
3a: Can we remove FFS on whether on whether aperiodic CSI configuration is per cell, since it is now clear that the configuration is per cell.
4: Update the parameter name alpha to rho-C and include the value range INTEGER (-8..15) in dB.
6: Introduce the parameter csi-RS-WithZeroTransmissionPower of 16-bit bit string in csi-RS-Config.
7: Introduce the parameter ri-ReportMode ENUMERATED {riWithW1, riWithoutW1} in cqi-ReportConfig-v10x0. It is UE specific configuration and applicable for all cells.
8: Introduce the UE specific SGH configuration, i.e. groupHoppingDisabled in the PUSCH-ConfigDedicated-v10x0 and this configuration is applicable for all cells.
9: Introduce the UE specific parameter dmrs-withOCC-Activated and included in the PUSCH-ConfigDedicated-v10x0 and this configuration is applicable for all cells.
10: Introduce the fourAntennaPortActivated in UL-AntennaInfo.
11: Only one 2-antenna port activation for AN/SPS
Additional parameter for 2 antenna port activation for CQI
Additional parameter to configure the second layer resource for CQI
12: Introduce srs-AntennaPort in SoundingRS-UL-ConfigDedicated-v10x0 and srs-AntennaPortAp in SoundingRS-UL-ConfigDedicatedAperiodic. The value range is ENUMERATED {1,2,4}. Both parameters are UE specific and configurable per cell.

When the above agreements indicated "applicable for all cells" means a value can be configured per cell.

=> Will see updated text proposal in R2-106877

R2-106877: Physical layer parameters to be configured by RRC Ericsson, ST-Ericsson Disc REL-10 LTE_CA-Core

=> Text proposal is agreed and can be included in rapporteur CR in R2-106856

R2-106457: Carrier Aggregation: Radio configuration signalling details Samsung TP 36.331 - REL-10 LTE_CA-Core

Proposal 7 already covered before

Proposal 3:

- Huawei wonders if the cross carrier scheduling is ON, how do we signal stopping of cross carrier scheduling ? Samsung thinks we still can signal "own" or "other"

Agreements:

1 Remove the comment indicating that ASN.1 for IE CrossCarrierSchedulingConfig is merely a potential signalling approach.
2 Signal cif-Presence by means of a Boolean that is mandatory for SCells and optional, need ON for the PCell.

IPR2025-00720, OnePlus Ex. 1004

3	Fields schedulingCellId-r10 and pdsch-Start-r10 should be mandatory present within IE CrossCarrierSchedulingConfig-r10, while field crossCarrierSchedulingConfig-r10 should be optional with need ON within IE PhysicalConfigDedicatedSCell-r10.
4	Introduce conditions to clarify the UE action upon presence/ absence of the different versions of the field antennaInfoDedicated
5	Update the need codes and field descriptions in accordance with the table
6	Clarify that TAT timer is applicable for all cells
8	Remove the occurances of 'Further details are TBS' in subclause 5.3.10.3a and 5.3.10.3b.

R2-106205: Further consideration on cross-scheduling configuration Huawei, HiSilicon Disc REL-10 LTE_CA-Core
=> Not treated (already covered)

R2-106222: Measurements of deactivated SCells Nokia Corporation, Nokia Siemens Networks Disc REL-10 LTE_CA-Core
- Ericsson thinks has only agreed that period for deactivated Scell could be a bit longer, but RAN4 has not agreed it has to be a configurable variable. Motorola has the same understanding. Nokia agrees that this has not been agreed.

=> Stage-3 text is too early.
- Nokia thinks we could have the stage-2 text on this
- Motorola thinks we have so far never indicated the measurement periodic in Stage-2; Motorola sees no reason to signal it since we have not signalled it in Rel89, so why now ?
- Huawei thinks it is better to wait for RAN4 input.

=> Noted

R2-106329: Some clarifications of CA ZTE Disc REL-10 LTE_CA-Core
Proposal 1:
- Samsung thinks this is all eNB implementation ? Nothing for the spec. ZTE agrees this is eNB implementation.

=> Not needed
Proposal 2:
- CATT wonders when this would happen ? ZTE thinks this is in case of erroneous network implementation.
- NSN thinks we have something similar for DRB's (UE missed the reconfiguration message).
- CATT thinks this is different case; for the DRB case you failed during the reconfiguration and then the network might release again after the re-establsihment. But here the Scells are already released at re-establishment

=> Not needed
Proposal 5:
- Samsung thinks this is clear from ASN.1. NSN agrees.

Agreements:
3: It's proposed that eNB should also perform the operation described in 5.5.2.2a.
4: It's proposed to remove Ofn and Ofs from the Inequality A6-1 and A6-2.

=> Corresponding text proposals can be included in rapporteur CR

R2-106215: Clarification on measurement reporting in CA HTC TP 36.331 - REL-10 LTE_CA-Core
- Samsung thinks we have other text to denote this clearing in some other cases, so maybe we can align.

=> Principle seems agreeable; will see updated text proposal in R2-106878

R2-106878: Clarification on measurement reporting in CA HTC TP 36.331 - REL-10 LTE_CA-Core
=> Text is agreed to be included in rapporteur CR R2-106856

R2-106556: Clarification on Scell configuration failure HTC Disc REL-10 LTE_CA-Core
- CATT wonders in which scenario there will be a frequent Scell configuration failure ?
- HTC thinks if the network will not know the cause, the network might try again multiple times.

IPR2025-00720, OnePlus Ex. 1004

- NSN thinks this is a network error case and the re-establishment is rare. We should not optimise for an error case. QC agrees with NSN.

=> Noted

R2-106558: Clarification on Scell configuration failure HTC CR 36.331 (0516) - F REL-10 LTE_CA-Core
R2-106595: Type confusion between non-CA and CA configurations HTC TP 36.331 - REL-10 LTE_CA-Core

7.1.4 Stage-3 User Plane

Agenda item was handled in a parallel session on Wednesday of RAN2 #72, see Annex A or report R2-106862.

7.2 WI: Relays (RP-100953)

(LTE_Relay-Core, leading WG: RAN1, started: Dec. 09, target: Dec. 10, WID: RP-100953)

7.2.1 Stage-2

7.2.1.1 Stage-2 Corrections

Rapporteur shall submit in principle agreed stage-2 CR, as well as any further non-contentious clarifications/corrections under this agenda item. Other companies can also submit non-contentious corrections to the stage-2 CR under this agenda item. Note that focus will be on finalising stage-3 rather than adding details to the stage-2.

In principle agreed CR

R2-106128: Additions and corrections to relaying description Ericsson, ST-Ericsson CR 36.300 0274
- Ericsson indicates the CR is not the same as before
- ALU liked the previous text in the brackets better

=> Will not have the additional highlighted changes to 4.7.5., but can include the additional highlighted changes in 4.7.6.. This document will be provided in R2-106858 CR0274 R1, and will be used as baseline for further changes.
=> Update of R2-106858 to reflect further changes can be provided in R2-106859 CR0274 R2

R2-106859: Additions and corrections to relaying description Ericsson, ST-Ericsson CR 36.300 0274 R2
=> ME/RAN should be ticked
=> Category be "B"
=> Section 10.1.6: the UE is limited to a "cell" from the DeNB cell list
=> With these changes, the CR is agreed in R2-106930 CR0274 R3

7.2.1.2 Stage-2 Other

Phase 1/No cell available

R2-106441: Simplification of RN startup procedure Ericsson, ST-Ericsson CR 36.300 (0281) - C REL-10 LTE_Relay-Core
- QC thinks all the text comes from RAN3 so it is not so appropriate for us to change it. QC thinks also the information on the green bubbles is lost.
- Ericsson assumes this is not a major rewrite, and this is a RAN2 specification. We could check this with RAN3.
- NSN agrees with QC. We would loose quite a lot if we go this way.
- LG thinks this CR will increase the potential misunderstanding.
- ZTE sees some benefit of the CR. Phase 1 will often not be required.
- Huawei also thinks the Ericsson CR has some benefits.
- NSN thinks is somebody really likes this, they should go to RAN3.
- ALU agrees that we should not change.
- Samsung wonders what is wrong if we do not have this change ? Ericsson would prefer not to always have to refer to "phase2" of RN operation.
- NewPostCom agrees with NSN, and the change is not necessary.
- Ericsson wonders if we could agree that phase1 is optional ? QC thinks there should be a discussion on what it helps to make this phase optional.

IPR2025-00720, OnePlus Ex. 1004

=> Noted (insufficient support for the change)

R2-106569: RRC reestablishment procedure for relay NTT DOCOMO, INC. Disc
General
- QC supports the proposals, and assumes that the proposals are implicit in what we have agreed so far. So is there a need for capturing something new in stage-2 or stage-3 ?

Proposal 1:
- NPC wonders how the UE can judge whether the DeNB cell list is valid ? NTT DCM thinks if the RN can find a cell which is included in the cell list, it can skip phase 1.
- Ericsson thinks it is obvious you do not perform an ATTACH inbetween the re-establishment.
- Chairman wonders what happens if the RN experiences an RLF and then cannot select to a cell in the DeNB list ? ALU assumes the RN performs a local detach since in phase2 it is only allowed to connect to cells in the list, and then start from phase 1 again.
- QC wonders if there is anything to capture.
- ALU thinks as long as it is specified that the RN in phase 2 can only access a cell which is in the DeNB list there is no other behaviour possible.
- Ericsson wonders why it would not be possible to re-establish to a cell not in the list: the re-establishment might succeed or not.
- QC thinks now that in phase2 an RN should only connect to a cell in the DeNB list. DT agrees with QC.
- ALU thinks we should limit the RN to the DeNB cell list.
  - FFS whether RN in phase 2 is limited to DeNB cell list for re-estasblishment
  - FFS whether RN in phase 2 is limited to DeNB cell list for NAS recover

=> After offline discussion, it seems clear that DeNB cell list should be honoured for connection establishment and re-establishment (i.e. only cells from the cell list are accessed)

=> Conclusion to be included in Stage-2.

R2-106494: Unavailable DeNB cells at phase II LG Electronics Inc. Disc

Integrity on DRB?

R2-106469: Integrity protection on Un Ericsson, ST-Ericsson Disc
General
- NSN wonders if the proposal would change if SA3 would agree that only S1/X2 traffic needs to be protected ? Vdf would prefer is only S1/X2 traffic needs to be protected, maybe an AS solution is not so logical. If we need full integrity protection, the AS solution seems the only solution. Vdf thinks we could maybe work on the assumption that full protection is required.
- LG thinks we should wait for SA3 response. We can only discuss if there is IP in AS, what the impacts are.

Proposal 2:
- ALU wonders if even S1/X2 would be mandatory ?

Proposal 4:
- NSN wonders if this leads to interoperability problems ? Ericsson thinks the main point is that it is not necessarily re-establishment.
- LG thinks it should not be left to implementation. LG sees no reason to have the RN behaviour deviate from the Rel89 behaviour.

Agreements:
1: Integrity protection will be performed in the PDCP layer.
2b: It should be possible to configure integrity per DRB.

R2-106503: Issues in Integrity Protection on DRB LG Electronics Inc. Disc
- Ericsson wonders when we would have a PDCP re-establishment ? Only when we perform a re-establishment at IP integrity failure ? But then we should discuss first whether this is true ?
- NSN thinks that IP failure could also be caused by other reasons, most likely e.g. based on attack and there is no problem with the variables. LG thinks we don't know which one is most probable.

IPR2025-00720, OnePlus Ex. 1004

- NSN thinks already today when the IP fails, you do not update the SN/HFN, so then the SN/HFN can still be used for valid traffic. LG indicates we re-establish based on a single failure.
- QC thinks we normally do not optimise for robustness against the case of the attacked being present
- Ericsson thinks if we trigger re-establishment at integrity protection failure, then we have the indicated problem. But we could also do other behaviour.
- Chairman wonders if we could perform connection establishment ? Ericsson thinks the same TEID's could be selected and the problem could happen again. NSN thinks if the problem happens again and again, the DeNB could take some sensible action and e.g. no longer accept the RN.
- ALU thinks we do not have to optimise. If the integrity protection failure results in a re-establishment, the only thing the attacker has achieved is a denial of service attack.

=> Noted; can think more about this; maybe current behaviour with re-establishment is sufficient i.e. continue with SN/HFN on DRB.

R2-106228: Relay security solution and impact to eNB Nokia Siemens Networks, Nokia Corporation Disc
- Nokia points out that also solution 5 is based on IPSEC but it is not listed here.
- Vdf thinks we could list the impacts of the different IPSEC solutions we see in RAN2.
- QC assumes it would take much more time to come to a RAN2 common understanding and QC assumes we should trust SA2. LG agrees. ALU also agrees.
- NSN is worried about SA3 e.g. deciding solution 9 which seems in NSN opinion not feasible in Rel-9. Ericsson thinks these concerns can be raised in SA2.

=> Noted

R2-106589: Integrity protection of DRBs over Un interface Samsung Disc
R2-106593: Supporting integrity protection for DRBs over the Un interface (36.300) Samsung CR 36.300 (0283) - C REL-10 LTE_Relay-Core
Both Tdocs not treated

Optionally configured per DRB ?
Only on at setup of DRB, no reconfiguration ?
Behaviour at re-establishment ?

Other:
R2-106279: Analysis on PDCP and RLC SN lengths on Un link Huawei, HiSilicon Disc
R2-106626: Open issues in QCIuu to DSCP mapping information LG Electronics Inc. Disc
R2-106248: Paging and DRX in Relay Node NEC Disc
All 3 Tdocs not treated

Not available/too late/withdrawn
R2-106169: Discussions on RRC establishment cause for RN New Postcom Disc
not treated

R2-106627 Issue on OAM Signaling in Phase I LG Electronics Inc. Disc
=> Withdrawn

7.2.2 Stage-3

Rapporteur shall submit in principle agreed CRs for 36.321 and 36.331 under this agenda item.

In principle agreed CRs
R2-106134: Introduction of relays in MAC Ericsson CR 36.321 0437 - B CR cover updated? REL-10 LTE_Relay-Core
=> Agreed as baseline for further work. Will see update including all agreed changes from this meeting in R2-106890 CR0437 R1
R2-106890: Introduction of relays in MAC Ericsson CR 36.321 0437 R1 B CR cover updated? REL-10 LTE_Relay-Core
- No further agreements; only unmodified sections are removed, and an attempt is made to have a better separation

=> CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-106148: Introduction of relays in RRC Ericsson CR 36.331 0489 - B REL-10 LTE_Relay-Core
- w.r.t. 5.2.1.1, Huawei assumes that if RLF occurs the UE will obtain broadcast system information. Ericsson thinks that since you have release the RN subframe configuration at that point in time, this section no longer applies. QC agrees the second half of the sentence does not add much, and brings some confusion.
- Ericsson had added this last part to clarify that the sysinfo validity does not apply. NSN thinks it can be removed (we also do not have this sentence for CA)

=> CR is agreed as baseline for further work with removal of "and remains valid until modified by other dedicated signalling." Can consider if further clarifification is needed for w.r.t. not applying sysinfo validity timer.
=> Will see updated CR including agreements from this meeting in R2-106886

R2-106886: Introduction of relays in RRC Ericsson CR 36.331 0489 R1 B REL-10 LTE_Relay-Core
=> CR is agreed

L1 configuration

R2-106440: RN subframe configuration signalling Ericsson, ST-Ericsson Disc
=> NSN wonders about the demodulationRS and the condition: how does the UE know whether interleaving is applicable ? Ericsson thinks interleaving is not applicable when the IE is included. NSN wonders why not a separate indicator ? NSN would prefer to see a choice or separate indicator. Will replace with a mandatory CHOICE.
=> Huawei wonders if we have to point out what the MSB and LSB refer to ? Can check this offline.
=> Remove "Un" from the field descrption of subframeAllocationPattern
=> Samsung wonders if we have talked about "backhaul" before ? Change to the same name as for FDD.
=> Samsung wonders why the PDSCH cannot start from the 4th symbol ? Ericsson thinks this has been excluded by RAN1. NSN has the same understanding as Samsung. Can be checked offline.
=> With these changes, the text proposal can be included in the rapporteur CR which will anyway still be revisited.

R2-106278: 36331_CRxxx_FDD Un Subframe Configuration _REL10 Huawei, HiSilicon CR 36.331 (0503) - B REL-10 LTE_Relay-Core
R2-106187: R-PDCCH Configuration for Type 1 RN LG-Ericsson Disc
R2-106618: Handling layer1 parameters in RNReconfiguration message Samsung Disc

Other Control Plane

R2-106317: RN type change during Un RRC connection re-establishment CATT Disc
- LG assumes the type is related to the DeNB cell list. If the RN wants to change the type, the RN has to start from scratch. So LG assumes option 1 is correct behaviour. NSN has the same understanding. Samsung also has the same understanding.
- CATT wonders if we have option1, should we specify something in stage-2 like "RN type is not allowed to change" ? NSN thinks it is clear from stage-3 if we do not include an indicator in the re-establishment. QC agrees with NSN
- QC thinks the type could be different in different cells of the DeNB cell list, but the type does not need to be changeable at re-establishment
- ZTE wonders why no RN-Type change at re-establishment ?
- Ericsson sees no need for this: we agree the re-establishment would be rare but came for free. So there is no need to optimise it.
- Huawei wonders about the case that 2 cells of the same DeNB are configured which are on different frequencies ? QC thinks the DeNB can decide what it wants to do, but there is no need to get an indication from the RN.
- LG now wonders if the DeNB cell list is based on only 1 RN type, or can be based on multiple RN types ? QC assumes OAM would take into account the capabilities of the RN.

=> Noted (not much support)

R2-106448: Correction on RN indicator Alcatel-Lucent CR 36.331 (0507) -F REL-10 LTE_Relay-Core
Only discuss the change of "may" to "shall" in 5.3.3.4
- Ericsson agrees the RN shall include this in phase 2, but not in phase 1. Ericsson is ok to write "shall" if the RN is only an RN in phase 2. ALU understands that when we talk about RN in 36.331, we mean the RN operating in phase 2. This should be clear.

IPR2025-00720, OnePlus Ex. 1004

- Ericsson thinks we should say "should" because it is a network node. QC thinks "should" seems to leave a choice which there is not. NSN thinks it should be "shall" since that is consistent with the field description

=> Agree to change the "may" into a "shall" in the rapporteur CR

R2-106231: Optionality of SIB1 and SIB2 in RNReconfiguration message Nokia Siemens Networks, Nokia Corporation Disc

=> Samsung wonders why there are no need codes ? Both need codes should be ON.

- QC wonders if we should clarify that at least one of the two should be present ? NSN thinks we do not enforce sensible network implementation with the spec.
- Ericsson wonders how often we expect the SI to change ? Is this really worth the optionality ? NSN points out the optionality bits are not present if you do not include the SystemInfoChange

=> Agree to include this in the rapporteur CR with 2 times need code ON.

R2-106552: Clarification on RN reconfiguration failure HTC Disc

- LG thinks proposal 1 and 2 are contradictionary. Proposal 2 should be "cannot comply with any part of the configuration"
- ZTE thinks the re-establishment should not be performed everytime there is a reconfiguration failure. Instead there should be a failure message.
- Ericsson wonders when the RN would receive a configuration it cannot comply with ? Samsung agrees. Also for the normal reconfiguration we only at a final stage agreed a failure handling. The RNReconfiguration has a much simpler contents.
- NSN could imagine that network nodes are independantly upgrades, and then normally there is error messages.
- Ericsson would prefer no additions.
- ZTE thinks since we have reconfiguration failure for Uu, why not here ?
- NSN thinks the DeNB always knows the release of RN, so we do not need failure handling.

=> No failure handling to be specified

R2-106554: Clarification on RN reconfiguration failure HTC CR 36.331 (0515) - F REL-10 LTE_Relay-Core

=> Noted (related to previous document)

R2-106335: Failure handling for RN reconfiguration ZTE Disc

=> Noted (related to previous document)

Separation in description

R2-106233: Separation of Relay descriptions Nokia Siemens Networks, Nokia Corporation Disc

- NSN feels RN is melting too much into our specifications

R2-106635: Procedural RN Functionality Separation Fujitsu Disc

Discussion

- Ericsson hopes we can keep this separation as simple as possible. We also do not tag e.g. TDD and FDD. We already have a separate procedure for RN. For the rest, we always denot the RN in every RN specific action.
- ALU thinks everybody agrees that clear separation is usefull, question is what is "clear".
- Samsung agrees somewhat with Ericsson and does not see a particular need. If we have a rule, we should apply it consistently. But what about introductionary/descriptive sections ?
- Huawei does not see a big need for this.QC has some sympathy for a tagging, but a bit more lightweight. QC thinks the email is not really needed.Fujitsu supports the proposal of tagging, but would also be ok with "for an RN"

=> Offline activity to try to come to an example lightweight 36.331 CR in R2-106891

R2-106891: Introduction of relays in RRC

- ALU does not like this "when connecting as an RN".

=> Noted: For now no explicit textual rules for RN's: just should make sure that whenever there is RN specific functionality, this is clearly indicated. Can think further about format rules.

IPR2025-00720, OnePlus Ex. 1004

36.314

R2-106472: L2 measurements in DeNB and RN Ericsson, ST-Ericsson Disc
-

R2-106318: L2 measurements of RN CATT Disc

Discussion:
Proposal 1:
- NSN wonders what the intention was for the measurements ?
- Huawei thinks the intention was to have an indication of the average bitrate achieved by a UE. If we treat the RN as one UE, then we might get a strange result.
- Ericsson wonders what the alternative is ? Handle each UE behind the RN separately ? Huawei thinks this would be possible
- NSN has no opinion on how to change, but we should be sure the changes are acceptable for SA5.
- QC thinks maybe we should have some operator input.
- Samsung thinks if we have proposal 4, then proposal 1 should also be acceptable. Samsung thinks this should be the baseline.
- CATT thinks if OAM wants a complete picture, it can look at the measurements from the RN and the DenB cell in combination.

Agreements:
4 The L2 measurements performed by the RN should be the same L2 measurements as performed by any other eNB, without any consideration of the Un link.

FFS whether we need more enhancements/changes for the Un.

No PHICH

R2-106514: HARQ operation for relay and Un subframe configuration Samsung Disc
=> Updated in R2-106679

R2-106679: HARQ operation for relay and Un subframe configuration Samsung Disc
Can skip first part on bitmap/proposal 1.
Proposal 2:
- ZTE agrees with this proposal, but thinks the statement is not so clear. E.g. you would never cleanup the buffer.

R2-106334: HARQ feedback for Relay in MAC ZTE CR 36.321 (0439) -B REL-10 LTE_Relay-Core
-

Discussion:
- Panasonic thinks if the L1 always pretends to have received an ACK, there is no need for a change in MAC. Ericsson agrees with Panasonic and thinks this is more suitably handled in 36.216. ZTE thinks 36.216 already indicates that there is no ACK. NSN thinks this is even already RAN1 understanding.
- Samsung is ok with solving it in RAN1.

=> Will sent small LS to RAN1, asking them to ensure that an RN will always receive an ACK for UL transmissions (modelling issue) in R2-106894

Other

R2-106232: RN Mandatory Functions Nokia Siemens Networks, Nokia Corporation Disc
- ALU wonders why re-establishment is in this list ?
- Ericsson thought we would not provide such a list unless RAN asks.
- NSN is fine without this table
- QC would support a table like this.
- ZTE thinks an "unsupported table" would be more usefull.
- Ericsson thinks RAN2 should not take any action until asked by RAN

=> Noted

Integrity stage-3

R2-106471: Adding Integrity Protection for Relays to PDCP Ericsson, ST-Ericsson Disc

IPR2025-00720, OnePlus Ex. 1004

- CATT wonders about section 4.2.2, and thinks also ciphering for RN's should be listed here. Ericsson indicates there is an "also", so the delta configuration.
- QC wonders if we should not first discuss the aspect of what to do when the checksum fails ?

R2-106498: PDCP impacts with Integrity Protection on DRB LG Electronics Inc. Disc
-

R2-106229: PDCP Impact due to S1/X2 IP Nokia Siemens Networks, Nokia Corporation Disc
R2-106604: Supporting integrity protection for DRBs over the Un interface (36.323) Samsung CR 36.323 (0083) - C REL-10 LTE_Relay-Core
Both Tdocs not treated

1. Only for RLC-AM, or also for RLC-UM ?
2. What to do when integrity fails ?
3. Spell out combination of int+ciph completely ?

Discussion: RLC UM ?
- NSN agrees with LG that this should be supported.
=> Agree we have to support RLC UM

Discussion: What to do when integrity fails ?
- NSN wonders if there is no problem with header decompression ? Ericsson assumes we do not have to do header decompression if IP fails. Chairman assumes an IP failing packet should not be decompressed.
=> IP failing packet should not be decompressed
- LG wonders if the IP failure should be indicated to RRC or not. Ericsson does not indicate. Ericsson assumes that indicating it to RRC is for re-establishment, but Ericsson does not want to perform mandatory re-establishment. Ericsson thinks that if this is just a bit-flip, re-establishment is not needed. QC agrees that this could be left to RN implementation. NSN wonders if this means RN could decide to do/not to do re-establishment. NSN thinks if the RN does the re-establishment we have to be clear what the RN will do with the counters.
- Ericsson agrees re-establishment should be allowed. Can be left to implementation.
- LG thinks we should ask SA3 how to handle IP failure.
- QC thinks now we talk about bulk data (not SRB), so it will happen sometimes.
- ALU thinks it is sufficient for now to say the packet is discarded
=> If we have IP failure on DRB's (no impact on IP failure on SRB), will for now only indicate the packet is discarded in PDCP. Can think further if any implementation guidance/or specification is required.

Discussion: Spell out the detailed handling in combination of int+ciph, or separate section just indicating addition handling ?
- Samsung thinks the corresponding section is already quite complex, and would prefer the Ericsson approach.
- NSN thinks with the Ericsson proposal it is not clear how you handle the variables. It seems that you first update the variables, but later discard the packet because IP failed. Ericsson wonders if any misunderstanding is possible.
- QC supports having a full description; QC thinks since we talk about security, we should be very careful.
- Ericsson sees no possibility for misunderstanding.
- Huawei supports the Ericsson approach
- Ericsson thinks the duplication also make consistent updating more difficult.
- QC thinks the existing text is stable.
- NSN thinks anyway RRC CR is not complete since key information is missing.
=> EMAIL DISC one week, to try to come to PDCP CR. Email discussion will try to use "Ericsson approach" and only if that is not possible, come with CR based on full description **[EMAIL DISC Ericsson] [72#03]**

R2-106230: RRC Impact due to S1/X2 IP Nokia Siemens Networks, Nokia Corporation Disc
- NSN proposes to allow some more offline for this up to next meeting
- Vdf would like to have CR with the 1 bit configuration per DRB

IPR2025-00720, OnePlus Ex. 1004

- NSN thinks one issue is e.g. when to derive the key. Do you already derive it at SMC even when you have no Un bearer, and only apply it later.

=> Email discussion up to next meeting to make the RRC CR for the security part **[EMAIL DISC NSN]**

R2-106609: Supporting integrity protection for DRBs over the Un interface (36.331) SamsungCR 36.331 (0521) - C REL-10 LTE_Relay-Core
not treated

Not available/too late/withdrawn:
R2-106333 HARQ RTT for Relay in MAC ZTE CR 36.321 (0438) -B REL-10 LTE_Relay-Core
=> Withdrawn

7.3 WI: MBMS enhancements (RP-100691)

(MBMS_LTE_enh-Core, leading WG: RAN2, started: June 10, target: Dec. 10, WID: RP-100691)

7.3.1 Stage-2

7.3.1.1 Stage-2 Corrections

Rapporteur shall submit in principle agreed stage-2 CR, as well as any further non-contentious clarifications/corrections under this agenda item. Other companies can also submit non-contentious corrections to the stage-2 CR under this agenda item.

In principle agreed CR:
R2-106129 LTE - Stage 2 agreements on MBMS enhancement Huawei (Rapporteur) CR 36.300 0275 - B REL-10 MBMS_LTE_enh-Core
=> Will see update reflecting agreements from this meeting in R2-106880 CR0275 R1
R2-106880 LTE - Stage 2 agreements on MBMS enhancement Huawei (Rapporteur) CR 36.300 0275 R1 B REL-10 MBMS_LTE_enh-Core
=> CR is agreed

7.3.1.2 Stage-2 Other

Interaction with unicast
R2-106488: DISC on MBMS service activation/deactivation further to counting NEC Disc
- Asustek thinks MBMS service over unicast might exist before counting. So Asustek assumes proposal 1 cannot cover all cases. But Asustek thinks also proposal 2 is not sufficient.
- QC thought we had already agreed on proposal 1, because we have agreed that there is no RAN involvement in the unicast.
- Huawei agrees with QC and Huawei was also assuming a UE based solution. Ericsson has the same understanding. Also the other proposal is not in RAN2 domain. Orange agrees also with QC.

=> Confirm our understanding that the RAN is not aware of the unicast provisioning.
- NEC wonders whether this basically means option 1, and should this not be clarified in the specification ? Orange thinks we can look at the next document.

=> Noted

R2-106650: Counting request reception clarification Orange SA Disc
=> Updated in R2-106873
R2-106873: Counting request reception clarification Orange SA Disc
- Huawei supports both the stage-2 and stage-3 changes.
- IPW clarified the stage-3 change is proposed for 36.331.

=> Agree to include stage-2 text proposal in rapporteur CR.
Stage-3:
- Ericsson wonders if this means the UE has to store the TMGI's in RRC. Why should RRC store this, i.e. why can higher layers not store this ? Orange thinks anyway somewhere it has to be stored.
- ALU agrees with Ericsson, and sees no strong need to detail the inter-layer actions.

IPR2025-00720, OnePlus Ex. 1004

- QC agrees that this type of inter-layer interaction should probably not be specified in detail.
- Huawei thinks it is good to clarify "interested"
- IPW indicates the text does not try to detail the timing, but clarifies it is the TMGI that is exchanged.

=> Stage-3 text can be discussed offline and will see update in R2-106881 => Updated before presentation in R2-106905

R2-106905: Counting request reception clarification Orange SA Disc
=> Text proposal is agreed to be included in R2-106882

R2-106541: Clarification on Session Start for MBMS Service over Unicast ASUSTeK Disc

Not available/too late/withdrawn:

R2-106647 Counting request reception clarification Orange SA Disc
R2-106648 Counting request reception clarification Orange SA Disc
R2-106649 Counting request reception clarification Orange SA Disc
=> All 3 Tdocs are withdrawn

7.3.2 Stage-3

Rapporteur shall submit in principle agreed CR for 36.331 under this agenda item.

In principle agreed CR

R2-106151: Stage-3 CR for MBMS enhancement Huawei (Rapporteur) CR 36.331 0492 - B REL-10 MBMS_LTE_enh-Core
=> Agree to use as baseline for further work. Will see update in R2-106882 CR0492 R1

R2-106882: Stage-3 CR for MBMS enhancement Huawei (Rapporteur) CR 36.331 0492 R1 B REL-10 MBMS_LTE_enh-Core
=> CR is agreed

Counting

R2-106236: Outstanding Counting Issues IPWireless Inc. Disc
Proposal 3:

- QC wonders with a modification period of 320ms, would really the response ever be received after the modification period ? IPW could agree, so this is just to be very carefull to avoid confusion. IPW has not strong opinion.
- QC can agree that if there is miscounting it is not nice, but assumes it will not really happen
- Chairman wonders if there is confusion possible if there is any "timespace" between subsequent countings ? IPW agrees but it would bring some restrictions to counting.
- QC wonders if we assume user involvement in counting ? Chairman thinks at least when we discussed this in the past, this was not considered.
- Huawei assumes most UE's can respond quickly. Huawei thinks we could forbid responding after modification period in which the counting request was received.

R2-106336: Discussion on MBMS Counting Procedure ZTE Disc

- Orange wonders if there is RAN3 impact ? ZTE sees no RAN3 impact. UE will know from TMGI it is the same counting
- Huawei thinks "duration" is network issue. ZTE thinks it is RAN2 issue. For Rel-10 maybe 1 MP is enough, but maybe more MP's for Rel-11. Huawei thinks it is operator decision for how long to broadcast the counting. ZTE thinks it might depend on the number of UE's that need to respond.
- Samsung thinks this was discussed in the last meeting, and there is no real benefit of counting in subsequent modification periods since UE's interest does not change so frequent.

No change of MCCH in modification period?
The information carried in the countingRequest IE which constitutes a single counting request shall be broadcast for one and only one MCCH modification period?
SN/feedback window/ network implementation (leave some time inbetween different counting)?

Discussion

IPR2025-00720, OnePlus Ex. 1004

- ZTE is worried about Rel-11 if we would add IDLE mode counting. Nokia assumes IDLE mode UE's would receive MCCH modification indications, and thus would not miss an indication. QC thinks if the paging cycle is larger then the modification period, then the Rel-11 network might have to broadcast the information during multiple modification periods. Nokia indicates that the MCCH modification cycle is at least 5s, so longer than paging cycle.

Solutions for resolving potential ambiguity:
3a: Network should leave some room between subsequent counting
3b: SN
3c: Timewindow
3d: UE has to respond within same modification period
- Huawei is ok with 3a.
- Samsung thinks since the counting request can handle 16 services, 3a is sufficient. LG agrees

Agreements:
1: The information carried in the countingRequest IE shall only change at MCCH modification period boundaries.
2: The information carried in the countingRequest IE which constitutes a single counting request shall be broadcast for one and only one MCCH modification period.
3: No additional UE based mechanism foreseen for correlating request and response.
=> Rapporteur can think how to capture in stage-3 (R2-106882)

Other

R2-106219: Clarification on transmission of CoutingResponse HTC TP 36.331 - REL-10 MBMS_LTE_enh-Core
- Samsung wonders about the counting request ? HTC assumes it should be handled the same. IPW clarifies the counting request is on MCCH.
=> Agree to include in rapporteur Stage-3 update
=> Counting request should also be included, with three times "+"

R2-106235: Stage-3 CR describing the interactions between RRC and the upper layers for MBMS IPWireless Inc. CR 36.331 (0499) - F REL-10 MBMS_LTE_enh-Core
=> Based on offline discussion, IPW decided to withdraw the contribution from this meeting.

7.4 WI: Minimisation of Drive Test (RP-100360)

(MDT_UMTSLTE-Core, leading WG: RAN2, started: Dec. 09, target: Dec. 10, WID: RP-100360)

7.4.1 LTE specific Stage-2 aspects

RLF survives other RAT ?

R2-106311: LTE RLF information survival in UTRAN NTT DOCOMO, INC. Disc
-

R2-106312: RLF Report Mediatek Disc
not treated

If survives, for how long does the UE maintain?

Discussion:
- DT thinks LTE will mainly start in rural areas, but still supports the proposal.
- NTT DCM clarifies their proposal is that the UE does not clear the information when entering another RAT
- NTT DCM thinks storing for 48hours is ok.
- NSN wonders what OAM entity should receive this information ? E.g. if the UE goes to a new eNB and this eNB was not configured for MDT trace ? So how to find the OAM entity ? NTT DCM assumes this kind of linking is not needed.
- Mediatek thinks that since the report is not configured, the network can always fetch it when it wants.

IPR2025-00720, OnePlus Ex. 1004

- Mediatek supports this and thinks there should be a timer. Mediatek thinks we also need a timestamp.
- Vdf supports storing the log for some time.
- NSN thinks this is not so clear w.r.t. trace functionality. Is this still immediate trace ? So would the reporting still be in the same area as where trace was started. NSN would prefer to have this introduced potentially only in next Rel. Mediatek sees no additional complexity to trace.
- STE wonders why this is discussed in MDT. STE wonders what the timestamp would be ? Mediatek thinks different options would exist.
- Motorola thinks we go in the direction of 2 logs. If we do this, we should go to only 1 log. DT thinks this is more SON ANR, and thinks this is statistical anyway.
- DT/Vdf/NTT DCM consider this very important.
- Samsung thinks this is different from MDT logging, and a much smaller timer seems defendable.
- LG thinks we already have IMM MDT and LOG MDT.
- NSN thinks this is quite late proposal and should be considered together with SON-ANR enhancements from RAN3.
- Mediatek thinks also without timer would work.
- LG would like one more meeting to think about this.
- QC thinks even if we define this in Rel-11, it could still be done by a Rel-10 UE. NSN would prefer to discuss this in next release, but otherwise in next meeting at least. NTT DCM is ok to come next meeting with detailed CR's and then take final decision
- ZTE assumes that even without the survival in another RAT, we will have to do most of the work anyway. ZTE supports the proposal.

=> Will see detailed stage-2/3 impacts in next meeting and then take final decision.

RLF other

R2-106580: RLF PLMN Identity SamsungDisc

- DT wonders if this is related to inter-PLMN handover ? Samsung points out that we also report RLF at a new RRC connection.
- NSN wonders how the UE knows the pPLMN at RLF ? Samsung clarifies the UE would have to store.
- DT thinks this is not so dangerous. Samsung does not understand this for the case of going via IDLE.
- NSN thinks this is only a small amount of data.
- NTT DCM thinks also for LOG-MDT this PLMN checking needs to be solved.
- Huawei thinks if the ECGI of the conection failure cell is known, you know the PLMN.
- NSN wonders if it is really a problem if another operator would receive this information. This is only a small part of information.

=> Can be discussed as part of the LOG_MDT PLMN checking, but can be handled as a separate scenario.

R2-106347: Considerations on RLF Reporting Ericsson, ST-Ericsson Disc

Proposal 1 will be discussed next meeting

Proposal 2:

- Samsung thinks we should only delete after delivery. If we do the same as for LOG_MDT, then it would mean 48hours and deletion after retrieval. Ericsson thinks we should be very clear.
- Mediatek thinks it would be good to store the information for more than 1 RRC connection.
- NSN thinks if we only report related at the next RRC connection, the UE might be allowed to release if not retrieved before connection release.

=> Noted

R2-106331: RLF enhancement for immediate MDT ZTE Disc

Proposal 1,2,3 are remaining now for discussion:

Proposal 1,2:

- Samsung assumes one-short report is sufficient. Then proposal 2 is not needed.
- Mediatek wonders why we would have multiple measurements. Maybe only if we want to optimise L3 filtering, or what is the reason ? ZTE agrees this is one possibility.
- DT supports this enhancement but it could be for a later release.

=> For Rel-10, this is one-shot reporting i.e. only 1 measurement from a certain cell.

Proposal 3:

IPR2025-00720, OnePlus Ex. 1004

- NSN thinks since it is already part of RLF reporting, it will just remain.

=> Neighbouring cell reporting will remain as in Rel9.

=> For next meetings, we will discuss the RLF enhancements under the SON agenda item. Will take RLF enhancements out of MDT CR. However continue in next meeting based on decisions already made.

=> Issues identified **EMAIL DISC [NTT DCM]:**
- Contents of the report based on RAN3 input
- When to release the information ?
- PLMN checking for reporting ?
- Survive selection/active on other RAT ?

Email discussion should try to conclude above issues and provide stage-3 CR.

7.4.2 LTE Stage-3

Rapporteur shall submit in principle agreed CR for 36.304 and 36.331 under this agenda item.

In principle agreed CRs

R2-106132: 36.304 CR on MDT NSN CR 36.304 0140 - B REL-10 MDT_UMTSLTE-Core (related to email discussion [71b#03])
=> Agree this CR as baseline for further updates, with moving the last bullet of the second bullet list to be first in that list
=> Will see update of the CR capturing agreements from this meeting in R2-106883 CR0140 R1

R2-106883: 36.304 CR on MDT NSN CR 36.304 0140 R1 B REL-10
=> In the last list, time information should be listed before location information
=> Impacted specifications should be ticked correctly
=> With these 2 changes, the CR is agreed in R2-106900 CR0140 R2

R2-106135: 36.331 CR on MDT NSN CR 36.331 0476 - B REL-10 MDT_UMTSLTE-Core (related to email discussion [71b#03])
=> Agreed as CR baseline, with removal of RLF enhancements
=> Will see update of the CR capturing agreements from this meeting in R2-106884 CR 0476 R1 => updated before presentation in R2-106931

R2-106931: 36.331 CR on MDT NSN CR 36.331 0476 R2 B REL-10 MDT_UMTSLTE-Core
=> Square brackets around "3" can be removed in 5.6.8.2
=> Reference [54] can probably be removed
=> 5.3.5.8, remove one "and" and introduce ","
=> 5.5.5, added bullet 1> should talk about "detailed location information available"
=> 5.6.8.2 should talk about "detailed location information" instead of "GNSS location information"
=> Will go for email approval up to thursday next week. final version in R2-106937 CR 0476 R3 **[EMAIL DISC NSN] [72#04]**

Other

R2-106295: Clarification for timer T330 in Logged MDT NEC Disc
=> Text proposal is agreed to be included in rapporteur CR

R2-106458: MDT stage 3 details related to 36.331 SamsungTP 36.331 - REL-10 MDT_UMTSLTE-Core
Still need to discuss proposal 4:
- NSN thinks there was a concern from operators not to include CGI for GERAN. Samsung thinks we can reuse the same information structure, but still make it clear these optional IE's should not be included.
- STE wonders if this way forward would mean there are optional IE's that the UE shall not include ? Samsung assumes in general we specify what the UE shall include. STE wonders if there is procedure text that makes it clear what parts need to be included ? Samsung indicates we specify the fields that the UE shall log.
- NSN supports the proposal.

=> Agree to proposal 4; can be included in rapporteur CR

IPR2025-00720, OnePlus Ex. 1004

R2-106461: MDT stage 3 terminology consistency Samsung TP 36.331 - REL-10 MDT_UMTSLTE-Core
- Mediatek supports the proposal
=> Text proposal is agreed and can be included in rapporteur CR (R2-106884)

R2-106536: Some Corrections for MDT in 36.331 ZTE CR 36.331 (0512) - F
Proposal 1:
- HTC wonders what is "setting empty" ? Is the Rel-10 MDT report included but not contents, of the Rel-10 MDT report is not even included ? Samsung wonders why do we have to included anything, i.e. as in current status a response message with no information.
=> Not needed
Proposal 2:
- NSN thinks this is not in line with current contents of the variables (there are some parameters in the VarlogMeasConfig that are needed for reporting)
=> Not agreed
Proposal 3:
- Samsung wonders if any additional clarification is really needed ? ZTE agrees it is not absolutely needed, but it was just intended for clarification.
- STE thinks in general all mandatory UE behaviour has to be in the stage-3.
=> Not needed.

R2-106202: Clarification on MDT section in 36.304 Huawei, HiSilicon CR 36.304 (0141) - F REL-10 MDT_UMTSLTE-Core
- LG thinks we have already discussed a similar text proposal for the stage-2 and it was not agreed
- NSN wonders if the "otherwise" makes it sufficiently clear when the MDT is suspended ?
=> HTC thinks the last update should be changed to "if the logging configuration valid and the logging is not suspended"
=> Change first sentence to "while the duration timer is running"
=> With these two changes, the text can be included in rapporteur CR (R2-106883)

R2-106605: Fingerprint for Immediate MDT LG Electronics Inc. CR 36.331 (0520) - F
- NSN assumes something is misunderstood. This is mainly related to measurement triggering. E.g. only the serving cell should be compared to the threshold.
- DT thinks this is beneficial
- Chairman is confused about the RxTxdifference now also to be applicable for neughbouring cells
- Huawei wonders if the change is only for immediate MDT ?
- Samsung indicates that the "include location information" is only allowed for A2 and periodical. Samsung thinks there are simpler ways to specify this if we want this functionality.
- CATT thinks the fingerprint is decoupled from the configuration. Neighbour cells should not trigger the event, but that does not have any meaning for fingerprint. NSN agrees.
=> Noted (can think if further clarification is needed that RF fingerprint can include other cells than the "applicable cells")

R2-106574: UE-originated RLF reporting Samsung Disc
R2-106565: Alignment of stage2 and 3 on UE behavior at duration timer expiry LG Electronics Inc. Disc
R2-106617: Clarification on location information in measurement reporting LG Electronics Inc. Disc
R2-106600: Fingerprint for Immediate MDT LG Electronics Inc. Disc
All 4 Tdocs not treated

7.5 WI: Network based positioning support for LTE (RP-100135)

(LCS_LTE-NBPS, leading WG: RAN2, started: March 09, target: March 11, WID: RP-100135)

=> Including email discussion outcome for [71b#25]: LTE: Network based positioning [Trueposition]

=> Email discussion outcome [71b#25]: Network based positioning [Trueposition]

IPR2025-00720, OnePlus Ex. 1004

R2-106324: LTE: Network Based Positioning TruePositionReport REL-10 LCS_LTE-NBPS
related to email discussion [71b#25]

- Trueposition would prefer to discuss the SPS aspect based on this report and would prefer to go for option 1.
- QC wonders if proposals 1 & 2 do not imply some LMU behaviour and does this thus imply we have to standaride the LMU ? Trueposition agrees that especially proposal 2 implies some LMU behaviour, but is not sure it directly relates to whether we have to standardise the LMU.
- Ericsson agrees that if we specify the eNB, then we also start to specify the LMU.
- Ericsson agrees with NSN from the email discussion that option 1 places severe restrictions on the eNB scheduler. Especially when there would be many positioning attempts (disaster/many emergency calls), then load is probably high and eNB scheduler restrictions are not welcome.
- Trueposition assumes with a 20ms periodicity, you need something like 100 accumulations of 1ms transmissions, i.e. 2s of speech burst in the worst case.
- QC wonders if SPS works at all if there is no UL transmisions in the SPS allocation ? Trueposition thinks in this case only SRS is possible. SPS was mainly for emergency call as additional UL transmissions.
- QC wonders what is the benefit of using SPS compared to SRS only ? Trueposition indicates that RAN1 is still collecting this information.
- AndrewCorp thinks with 200 SRS transmission on 5Mhz/100 SRS transmission on 10Mhz as being sufficient for an accurate position determination, wideband SRS;
- NSN wonders if we are going to specify this option 1 in the spec ? E.g. LPPa would have to indicate the scheduler restriction.
- Ericsson wonders if SRS is about equally good to SPS, why can we not only have SRS ? Trueposition considers the SRS as potentially additional transmission to be made by the UE.
- NSN would prefer we have 1 option for this and maybe it would be good to focus on SRS only. QC agrees.
- Trueposition can agree that SRS is a good approach.
- Trueposition proposes that eNB only informs the LMU about current SPS configuration, and then if it is deactivated it is deactivated (bad luck if this happens fast)
- Trueposition clarifies the DMRS symbols are scrambled with the SPS CRNTI, so the LMU can distinghuish if somebody else start to use these resources
- NSN wonders if all LMU's will be able to handle both SRS and SPS ? Trueposition thinks you cannot rely. Trueposition proposes that the request to the eNB would indicate what the LMU supports. If we agree SPS is best effort addition, then all LMU's will have to support SRS.
- QC wonders if we would test SPS behaviour.

=> It seems possible to have a solution based on SRS, with SPS as a best-effort addition i.e. eNB only provides current UL SPS configuration to the SMLC, no updates and no indication of SPS release.

R2-106323: UTDOA Architecture TruePositionDisc

- In the TruePosition proposed architecture, the LMU gets the radio information via the SMLC via a proprietary interface.

R2-106427: Specification Impact Analysis of UTDOAAlcatel-Lucent Disc

General

- ALU indicates they have not discussed the interface to a stand-alone LMU.

Proposal 1:

1. The UTDOA technology should be specified as one of the eNB-assisted positioning methods after the endorsement from RAN plenary. The UE positioning architecture, protocol, interface, and procedures for UTDOA should be included in the stage 2 specification in TS36.305

- Trueposition is ok with this proposal.
- NSN wonders what "eNB assisted positioning". QC clarifies not direct information from UE.

=> Proposal is agreed.

Proposal 2:

2. The measurement, measurement report, and accuracy requirement of UL TDOA need to be specified in the standard specification for full inter-operability regardless the measurements are performed at the LMU or eNB.

IPR2025-00720, OnePlus Ex. 1004

- Trueposition wonders if we really want to specify the LMU, and also in Rel-10 ?
- ALU assumes if we have no accuracy requiremens, this method is not sufficient reliable for operators to use. NSN supports the ALU proposal
- QC wonders if operators care ? QC assumes operators would like ensured performance, but what does that actually imply ? QC sees no real direct relation to RAN2 work.
- AndrewCorp thinks this is more FCC requirements. NSN assumes we are talking about detection performance.

=> Can be discussed in other fora, e.g. RAN.

Proposal 3:
3. The LPPa protocol (respectively X2AP protocol) are used for the information transfer between the e-SMLC and the eNB (respectively between eNBs) for all UTDOA required measurements, control information, and assistant data.

- Trueposition wonders where X2 comes in ?
- ALU thinks in case of colocated LMU's it seems much quicker to go via X2 to a neighbouring eNB's. Trueposition wonders if this would mean that the serving eNB would determine which eNB's to involve in this ? ALU thinks SMLC could decide and inform the serving eNB.
- ALU clarifies this proposal is not related to stand-alone LMU's.
- ALU clarifies that the LMU measurement reports from the different eNB's could go directly to the SMLC, or via the serving eNB.
- AndrewCorp wonders whether since we have now agreed SPS is only best effort, the need for X2 is reduced (time delay is not such an issue anymore) ? ALU thinks anyway the signalling is much more direct if X2 is used
- NSN thinks we have now 2 options for the architecture for colocated LMU handling
- QC wonders if it is clear we need something like the Trueposition architecture for the standalone case ? AndrewCorp agrees.
- Trueposition thinks it is quite agreed that the LMU is a "black box" for network based positioning. QC indicates we have agreed this for Rel-9, but said we could revisit in a future release. ALU thinks for UTDOA, the LMU is an integral part of the solution. For OTDOA the LMU is an optional element.
- AndrewCorp thinks with the proposed architecture, we can stil standardise the interface to the LMU and what paths the messages take.
- Trueposition hopes we can agree on the Trueposition architecture. ALU thinks it is not a real architecture if the interfaces are not standardised.
- ALU could thinks about the Trueposition architeture if the LMU-SMLC interface would be fully standardised. Still ALU would like to think about the message paths.

Proposal 4:
4. The procedures for UTDOA measurement triggering, information transfer for measurement configuration, assistant data transfer, and measurement report transfer need to be specified.

- Seems to be the same topic, i.e. what parts we standardise.

Agreements:
1. The UTDOA technology should be specified as one of the eNB-assisted positioning methods after the endorsement from RAN plenary. The UE positioning architecture, protocol, interface, and procedures for UTDOA should be included in the stage 2 specification in TS36.305
2. At least LPPa protocol impact needs to be standardised.
3. No agreement yet what other protocols/interfaces needs to be standardised; will also depend on selected architecture.f

R2-106322: UTDOA Support TruePosition CR 36.305 (0020) - B REL-10 LCS_LTE-NBPS

Not available/too late/withdrawn:
R2-106373 Addition of uplink positioning to 36.305 Andrew Corporation Disc
=> Withdrawn

7.6 WI: eICIC (RP-100383)

(eICIC_LTE-Core, leading WG: RAN1, started: March 10, target: Dec.10, WID: RP-100383)

IPR2025-00720, OnePlus Ex. 1004

7.6.1 Stage-2

7.6.1.1 Stage-2: Connected mode handling

E.g. macro<->pico and macro-femto scenarios
=> Including email discussion outcome for [71b#26]: LTE: Enhanced ICIC - Mobility scenarios [QC] (connected mode aspects)

=> Email discussion outcome [71b#26]: Enhanced ICIC [QC]

R2-106244: Email discussion [71b#26]: LTE: Enhanced ICIC - Mobility scenarios Qualcomm Incorporated Report
- Nokia thinks approach 2 might still be feasible. Nokia would like to have a little more time for discussion.
- Motorola wonders what the status of this work in RAN4 is ? There seems to be big issues that still need to be resolved, and the signalling is probably quite a minor issue E.g. SCH collision, PBCH collision.
- ZTE indicates that RAN1 has not agreed any CRE yet. QC assumes WG's will proceed in parallel. We have received the LS so should work from there. ZTE thinks if there is no CRE, there is no large interference issues. QC thinks CRE with CSI-RS is not agreed.
- Ericsson thinks we have received the LS so should base our work on that. Motorola thinks it is in RAN4 not even clear whether MBSFN subframes can be ABS subframes or not. Nokia tends to agree with Motorola, but anyway RAN2 will have to continue in parallel.
- Motorola thinks the RAN1 LS does not list all assumptions, and thinks this should be made more clear.
- Intel thinks the unclear part if whether a large bias CRE is needed. If it is a small bias CRE, then the macro-pico case might not be so important
- Nokia indicates there will be an LS from RAN1 on CSI-RS patterns.
- Samsung thinks medium bias (up to 10dB) was agreed by RAN1 and will require the ABS. The large bias case (with CRS cancellation) was not yet agreed. Motorola thinks RAN1 has not agreed what "medium bias" is. Could be e.g. 6-8dB. Motorola thinks there is also some confusion on whether RAN1 really agreed that ABS is beneficial for medium bias. Samsung thinks this was clearly agreed in RAN1: in medium bias, the PDCCH will have problems and ABS will solve.

=> Noted

Scenarios/Requirements

R2-106654: On signalling in eICIC scenarios Ericsson, ST-Ericsson Disc
- Nokia wonders for proposal 2 why we would need both UE specific and cell specific signalling ? Ericsson assumes in connected mode it would be good to have dedicated signalling: probably few UE's will be subject to the femto interference. Ericsson assumes e.g. in macro-pico scenario, quite many UE's might have to use the pattern and then cell specific signalling should be considered. Ericsson could agree that this is a kind of optimisation for connected mode. For IDLE mode Ericsson assumes the only solution is cell specific signalling.
- RIM wonders how cell specific signalling works for a pico-cell at macro cell boundary where the macro's use different ABS. Ericsson thinks cell specific signalling could be used if there are many UE's with the same pattern
- Huawei agrees that specification should not limit macro's having different patterns. Huawei wonders if we could agree that they always need to have a common subset ?
- QC agrees with Ericsson on proposal 1. QC thinks the UE does not need to be aware of the different macro's having a different pattern if they have a common subset.
- Motorola wonders if any solution we have is intended for both connected and IDLE ?
- ALU supports proposal 1. ALU wonders if there is also the case of more than 2 macros ? Ericsson thinks as long as there is a common subset, the number of macro's is not limited.

R2-106636: Connected-mode eICIC handling under mixed deployment Intel Corporation (UK) Ltd. Disc

Discussion:
- DT wonders how likely the macro-femto-pico would be ? Intel is not sure, and thinks it is more an operator question. DT assumes the scenarios where you place pico and where you place femto are quite different. QC shares the DT understanding. We talk about traffic

IPR2025-00720, OnePlus Ex. 1004

offloading for pico, and QC assumes it is not so important to have pico-CRE in case of closeby femto.
- Motorola thinks if the femto's can be placed everywhere, why would this not happen ? ZTE has the same understanding as Motorola. DT assumes femto's are mainly placed indoor, and pico's are outdoor. Femto's should not create major interference to pico's.
- CMCC thinks interference between pico and femto is realistic, but not a very important scenario.
- QC thinks the only drawback is that you loose offloading possibility for MUE's to pico-cells in the neighbourhood of a femto.
- DT thinks we should primarily focus on pico, then on femto and pico-femto has lowest priority.
- Samsung anyway assumes femtos have low power and low coverage.
- Ericsson also thinks macro-pico-femto case is not so important.
- ChinaMobile thinks RAN1 has not considered macro-femto-pico case so much.
- ZTE wonders if we have to discriminate the PUE at the edge and in the pico-cell enter. Nokia thinks not all PUE's have to be configured with the eiCIC. Samsung agrees with Nokia. Motorola also agrees. QC agrees that there is already ICIC in Rel8, and then configured UE's specifically.
- Huawei wonders about the macro-femto case, whether all MUE's have to be configured with femto-ABS ?

Agreements related to scope of the work: The solution should address the following deployment scenarios: 1) Neighbour macro cells having different ABS - might require macro cells to have common ABS subset (FFS) 2) Femto cells with different ABS in one macro - might require femto cells to have common ABS subset (FFS) 3) Macro-pico-femto scenario is considered lower priority. I.e. it is not so important to have pico CRE support in the neighbourhood of femto cell in Rel-10. Connected mode: 4) Not all PUE's have to be configured with eICIC. I.e. PUE's in the pico-cell center might be configured differently from UE's at the cell edge. 5) Not all MUE's have to be configured with femto-ABS, i.e. again network decision

How many patterns for RLM/RRM signalled to one UE?

R2-106381: Considerations on measurement resource restriction for eICIC CMCC Disc
Proposal 2:
- Motorola wonders why ABSF selected by victim: it should be the ABS of the aggressor to measure the victim ? CMCC prefers ABS selected by victim because the pico might be in overlapping area of different macro's. Then the pico cell can make the final selection (e.g. common subset). CMCC thinks for PUE, the pico-cell will configure the ABS to the UE.
- Nokia wonders how many patterns would be signalled to the UE ?
- Ericsson thinks you should not sent the ABS pattern to the UE, but the pattern that the UE should use to perform measurements.
- QC wonders if the main concern is about the RSRQ measurement ? CMCC can agree that for inter-freq the RSRQ might not be so important, but for inter-freq it is important. Why can we not deploy hetnet in more than 1 frequency.
- ALU wonder if we can have a macro neighbouring cells, where one macro has no ABS at all ?
- Huawei wonders who decides on the pattern for the UE ?
- ChinaMobile thinks macro will just give a recommendation to the pico/femto.

R2-106245: Way forward for connected mode eICIC Qualcomm Incorporated Disc
-

R2-106332: Discussion on measurement restriction for eICIC ZTE Disc
R2-106223: Network-to-UE signalling for TDM eICIC Nokia Corporation, Nokia Siement Networks Disc
R2-106419: eICIC ABS Patterns InterDigital Disc
R2-106534: Discussion on measurement restriction requirement of eICIC CATT Disc
All 4 Tdocs not treated

Will control pattern for Serving cell RLM/RRM separately ?

IPR2025-00720, OnePlus Ex. 1004

Will have at least one separately configured pattern for neighhouring cell measurements: ?
- *Only 1 ?*
  - *For Macro-femto, use ABS related to actually interfering femto*
  - *For Macro-pico, network configures subframe subset common for relevant macros*
- *Multiple linked to PCI/PCI groups ?*

Discussion
- ALU wonders about the signalling complexity of approach 1 compared to approach 3. ALU sees not so much difference from a signalling wise. QC is not sure for which cases we would use the PCI range. Only for neighbour macros, or also for pico's ?
- Nokia wonders in table 1 case2, why macro-ABS is used for all cases. QC agrees it is only needed for the pico-cells, but wants to use one pattern for all neighbours.
- NTT DCM wonders if we talk about measurements, do we mean RSRP/RSRQ, or does it also include cell search ? You might not be able to find the cell ? QC assumes the restriction is only for the measurement.
- NTT DCM wonders if the approach 3 requires the network (all cells) to be synchronised. QC assumes for all solutions all cells need to be synchronised. NTT DCM wonders if neighbouring macros need to be synchronised i.e. not only macro and impacted pico's, but also neighbouring macros. QC sees benefits especially if you want to have a common subset in a edge pico. Ericsson assumes all TDM solutions require time synchronisation.
- Nokia agrees with Motorola that we should not have unnecessary measurement restrictions. IDT agrees.
- Nokia thinks in table 1, there is always only 1 pattern really used.
- ZTE thinks after cell search the UE knows the PCI of the neighbours, so there is no problem for the UE to apply a resource restriction per PCI.
- IDT wonders why 2 patterns are needed. QC refers to the "deadlock" if using macro ABS for MUE.
- NTT DCM wonders what the concern is with PCI specific measurements ? Is it signalling or UE impact ? As an operator, if there is no large UE complexity for flexibility NTT DCM would prefer the PCI solution. Nokia has some implementation concerns when having many patterns.
- CMCC wonders if only 1 NCL-RRM requires that if we have no pico in overlapping area, still we need overlapping macro ABS patterns ? Samsung wonders why have not overlapping patterns in neighbouring macro cells ?
- Intel thinks inter-freq RSRQ is important.

After offline discussion:
- Proposal is that pattern2 would consist of one pattern, but with a list of PCI's.
- CMCC wonders about inter-frequency. Would different frequencies have a different restriction pattern ? QC wonders if we could agree to have eICIC only intra-freq, and for CA only for Pcell ? Nokia thinks this would be good. Nokia thinks there is additional complexity if we consider inter-freq because there is interaction with measurement gaps. QC thinks the consequences is that the coverage you see is the same as Rel89 UE.
- CMCC does not care so much about CA case.
- QC wonders why it is so critical for inter-freq ? E.g. why is it important to handover into a pico-cell with CRE ? Meditek agrees it is not so important for the pico case, but for femto case it might be more critical, but also in that case the handover can probably be avoided.

Agreements: Pattern1: 1) Will signal one pattern to the UE for RLM/RRM measurements on the serving Pattern(s)2: 2) Will have at least one pattern to the UE for neighbouring cell RRM measurements 3) FFS whether a PCI range linked to this one pattern; details of PCI signalling Pattern(s)3: 4) Will have separate signalling for patterns relevant for CQI

=> EMAIL DISC to discuss the details of pattern2, also looking at inter-freq case **[EMAIL DISC QC]**

IPR2025-00720, OnePlus Ex. 1004

CQI pattern?

R2-106582: Need of separate resource restriction information for CSI SamsungDisc
- ALU thinks RAN1 has agreed to multiple CSI patterns this week, and these patterns might be different from RRM patterns. Samsung is not sure.
- QC clarifies that RAN1 has agreed to have a separate restriction for CSI, and there is either no restriction or there are two pattens.
- This is kind of "pattern3" in our discussion

=> Assume we will have a "pattern3" for CQI

R2-106453: Need for multiple ABS patterns for CQI measurements Alcatel-Lucent Disc
not treated

Signalling:

R2-106449: Signalling support for Almost Blank Subframe patterns Alcatel-Lucent Disc
-

R2-106579: Measurement restriction for macro-pico scenario LG Electronics Inc. Disc
R2-106622: Measurement configuration for eICICResearch In Motion UK Limited Disc
Both not treated

Discussion
- Huawei thinks if we discus IDLE mode, maybe a broadcast solution is more preferable. LG thinks dedicated signaling is baseline.

Agreements: 1) Baseline is to use dedicated signalling to inform UE's in connected about patterns1,2,3

Femto specific enhancements

R2-106577: Femto ABS pattern: Femto cell specific or common? LG Electronics Inc. Disc
Proposal 1: Macro-cell broadcast pattern to be used by femto cells
- Mediatek wonders how it works if the femto cell does not need a pattern at all because there is very little macro coverage ?
- Mediatek wonders up to what extend common channels need to be protected ? Would that not mean we have fixed positions that are always silenced ?
- Nokia thinks this is SON and quite new.
- Ericsson agrees with Nokia that this is maybe something more for later release

=> Noted; probably not in Rel-10

Proposal 3:MUE read femto-cell ABS and reports to macro cell
- Nokia thinks this is against principle that UE's do not read SI from neighbouring cells. So far we only do this in exceptional cases like ANR. LG thinks this is needed if femto cells use different ABS patterns. Nokia wonders why the UE would be involved in this ? Nokia assumes this is OAM.
- Intel wonders when the UE does this ? The UE might obtain this information too late (already to much interference) ? LG thinks it can be done on time.
- RIM is also worried about this neighbouring cell SI reading. It is true that it can be done by current SI reading.
- Motorola thinks this is not the same as today because we have to read the SI for a non-allowed cell. LG thinks this is intra-freq, so it should be possible and can be handled the same as inbound mobility to CSG.
- Mediatek thinks it is very similar as inbound CSG mobility. Mediatek thinks the benefit of this type of solution is that it is scalable. Ericsson thinks this should be done over OAM.
- Nokia thinks there is a difference, because this reading would be triggered autonomously by the UE ? QC agrees with Nokia/Ericsson. RAN3 is assuming OAM and QC thinks this is sufficient.
- Huawei thinks OAM is sufficient. NSN agrees.
- ZTE thinks OAM is not that easy.

=> Noted (not so much support)

R2-106195: Fast response eICIC approaches Telefonica Disc
R2-106293: eICIC impact on Connected mode UEs MediaTek Disc
Both Tdocs not treated

IPR2025-00720, OnePlus Ex. 1004

- Macro broadcasts ABSF?
- UE report ANSF of femto?

Other

R2-106576: Trigger of Pattern Use in eICIC SamsungDisc
- Huawei thinks the paper focusses on connected mode ? Samsung confirms.
- It is clarified that the suitable restriction needs to be configured before A3 is close to triggering. Motorola thinks there is still the case of CRS collision.

=> Noted

R2-106246: Introduction of enhanced ICIC Qualcomm Incorporated CR 36.300 (0278) - B REL-10 eICIC_LTE-Core
=> Should cover all agreements so far (e.g. scope, 3 patterns will be signalled to UE)
=> Motorola would prefer to have more details on the assumptions w.r.t. synchronisation, DL receives in HeNB's, PCI's coordinated,... Can try to see if what is possible in this meeting, and leave the rest of next meeting.
=> Potentially update IDLE part after discussion on IDLE
=> Will see update in R2-106897 CR0278

R2-106897: Introduction of enhanced ICIC Qualcomm Incorporated CR 36.300 0278 - B REL-10 eICIC_LTE-Core
- Ericsson would like to put this work on hold until next meeting because RAN1 is working on an LS that changes the definition of ABS
- Nokia has some small comments.

=> Should indicate that pattern2 could be multiple patterns
=> Will go for email review up to Monday 29th midnight, and can try to take latest decision into account as far as they impact this text. Final version in R2-106943 **[EMAIL DISC QC]** [72#21]

Not available/too late/withdrawn

R2-106170: Resource-specific measurement in Connected Mode for eICIC New Postcom Disc
not treated

R2-106474 eICIC ABSF subframe configuration Motorola Disc
withdrawn

7.6.1.2 Stage-2: IDLE mode handling

E.g. macro<->pico and macro-femto scenarios
=> Including email discussion outcome for [71b#26]: LTE: Enhanced ICIC - Mobility scenarios [QC] (idle mode aspects)

Scenarios

R2-106637: Idle-mode eICIC handling under mixed deployment Intel Corporation (UK) Ltd. Disc
Proposal 1:
- DT thinks macro-pico is more important than macro-femto. Vdf also would like macro-pico handled in Rel-10. Intel thinks there is no major problem if we do not support the macro-pico case.
- Motorola thinks for IDLE we can anyway use Qoffsets to bias pico selection.
- LG thinks macro-femto is more important because we talk about service denial. For macro-pico it is "nice to have". Ericsson agrees.
- CMCC thinks there is no need to have pico-CRE for IDLE; we can follow Rel89 behaviour.
- Huawei agrees that the problem is less relevant for the macro-pico, but sees no reason to limit.
- NSN would prefer not to have the whole IDLE mode in Rel10

Proposal 2:

Agreements related to the scope of the work: 1) RAN2 will suspend work on IDLE mode eICIC for Rel-10, unless RAN4 comes with input that this is feasible in Rel-10 timeframe.

Solutions

IPR2025-00720, OnePlus Ex. 1004

R2-106473: eICIC Idle mode considerations Motorola Disc
- Intel thinks there is a frame-shifting solution also for TDD, maybe not so efficient and you might loose some subframe, but it is still possible. CMCC has the same understanding and has proposals in RAN1. Motorola thinks further work is still needed on this

R2-106344: eICIC Idle Mode discussion Qualcomm Incorporated Disc
- QC assumes no RAN2 changes might be required to support network coordination option for paging (ABS of femto cell would allow UE to receive paging on macro)
- Motorola wonders how a 10ms shift helps to receive paging ? Then if you have pages sent every 2 or 4 frames, would solve the collisions.
- Huawei wonders whether both macro and femto broadcast the same information ? QC assumes so. QC thinks the spec does not need to say they are the same, but QC assumes typically they would be the same. The macro would provide the information for the cell reselection case (note that we can use PCI ranges in Rel89 to make the UE aware he has not access to that cell for the UE with the empty whitelist), the femto would provide it for the cell selection case. QC thinks also based on autonomous search the UE could upfront decide this is a non-allowed cell.
- Nokia wonders why proposal2 is required ? QC clarifies that when a UE powers on, this broadcast indicates "if you cannot camp on me, please use this ABS pattern to look for other cells". Nokia thinks this will have impact to cell selection. QC thinks already today the UE ignores a non-allowed cell and goes to second best cell. The only addition is that the UE takes the subframe restriction into account.
- QC clarifies proposal 1 is for reselection. The macro cell is saying "if you want to camp on me and get strong interference, please use this restriction pattern".
- Intel wonders if proposal 1 is assuming one and the same pattern in all femto's under one macro ? QC is assuming a common minimum subset.
- NSN wonders in which SIB's this is included ? QC assumes SIB1 for femto cell. For macro cell it could be intra-freq NCL (SIB3).

R2-106224: Discussion on eICIC scenarios Nokia Corporation, Nokia Siemens Networks Disc
R2-106280: Idle Mode Use Case and Handling on eICIC Huawei, HiSilicon Disc
R2-106314: eICIC in Idle Mode Mediatek Disc
R2-106450: Idle mode and eICIC enhancements in Rel-10 Alcatel-Lucent Disc
R2-106578: Detection of Femto cell interference LG Electronics Inc. Disc
All 5 Tdocs not treated

Discussion :
- Mediatek support the proposals from the QC paper.
- Motorola thinks we should at least wait for some RAN4 progress before progressing IDLE.
- Nokia wonders if this is not a bit too much work for Rel-10, also considering that legacy UE's will have to be able to work without any of this. Motorola would be quite ok to not have a solution in Rel-10 for IDLE.
- Intel understands that RAN4 is already discussing IDLE mode aspects, so maybe we can just wait for RAN4.
- NSN thinks a lot of coordination is required in the network. NSN thinks it is acceptable to excluded IDLE for Rel-10. NSN thinks as long as there is another freq/RAT, Rel89 behaviour will be sufficient.
- Huawei thinks more than 10% of UE's are impacted if we do not address this.
- ALU thinks connected mode is service continuity aspect, but IDLE is not service continuity and Rel89 is sufficient.
- Intel thinks IDLE mode is important. QC proposes to suspend work until we get input from RAN4 on feasiblity in Rel-10.

Not available/too late/withdrawn:
R2-106171: Resource-specific measurement in Idle Mode for eICIC New Postcom Disc
not treated

7.6.2 Stage-3

R2-106247: Stage-3 text proposal on RRM/RLM restriction for eICIC Qualcomm Incorporated TP 36.331 - REL-10 eICIC_LTE-Core
R2-106345: eICIC Idle Mode stage 3 Qualcomm Incorporated Disc

IPR2025-00720, OnePlus Ex. 1004

R2-106451: RRC signalling design for Almost Blank Subframe patterns Alcatel-Lucent Disc
All 3 not treated

Not available/too late/withdrawn:
R2-106452 Introduction of ABS restriction for RRM, RLM and CSI measurements Alcatel-Lucent CR 36.331 (0508) - B REL-10 eICIC_LTE-Core
withdrawn (as not available)

7.7 WI: TEI10

7.7.1 In principle agreed CRs

Corrections
R2-106137: Addition of UE-EUTRA-Capability descriptions Research In Motion UK Limited CR 36.331 0478 - F REL-10 TEI10, LTE-L23
=> CR is agreed

R2-106140: Clarification on Default Configuration for CQI-ReportConfig CATT CR 36.331 0481 - F REL-10 TEI10, LTE-L23
=> CR is agreed

R2-106150: SIB Size Limitations Nokia Siemens Networks CR 36.331 0491 - F REL-10 TEI10, LTE-L23
=> CR is agreed

New functionality
R2-106136: AC-Barring for Mobile Originating CSFB call NTT DOCOMO, INC., NEC, Qualcomm Incorporated, Panasonic, ZTE CR 36.331 0477 - B REL-10 TEI10, LTE-L23
=> Included changes from R2-106586
=> NTT DCM has found an additional problem in 5.3.3.7, first bullet 2> related to T306 expiry (last in the list), there also a check on whether T303 is running (related to network being Rel89 and T303 is running). NTT DCM wants to remember for what purpose T303 was started. add "if T303 is running for an attempt for an MO-data-call", and then you can alleviate the CSFB alleviation. Now NTT DCM is thinking it might be simpler to always use T306 for CSFB. QC supports to always use T306. NSN wonders whether there was not a problem with T306 always ? NTT DCM thinks there is minor impact if we use always T306 (UE could try MO-data-call when already barred for CSFB). Alternative is to use the SIB2 information. Can be discussed offline (also proposal 2 from Samsung paper).
=> Will see update in R2-106904 CR 0477 R1; alternative in R2-106928
R2-106904: AC-Barring for Mobile Originating CSFB call CR0477 R1
R2-106928: AC-Barring for Mobile Originating CSFB call CR0477 R2
- NTT DCM would prefer to go with the alternative in R2-106904
- NSN would like to go for email approval.
- QC supports the NTT DCM proposal
=> Email approval up to thursday **[EMAIL DISC NTT DCM] [72#05]**. Final version can be provided in R2-106940

R2-106130: CR to 36.300 adding e1xCSFB support for dual Rx/Tx UE Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated CR 36.300 0276 - B REL-10 TEI10, LTE-L23
=> Updated in R2-106887
R2-106887: CR to 36.300 adding e1xCSFB support for dual Rx/Tx UE Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated CR 36.300 0276 R1 B REL-10 TEI10, LTE-L23
=> CR is agreed

R2-106146: CR to 36.331 adding e1xCSFB support for dual Rx/Tx UE Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated CR 36.331 0487 - B REL-10 TEI10, LTE-L23
=> CR is agreed

R2-106149: Priority indication for CSFB with re-direction ZTE CR 36.331 0490 - F REL-10 TEI10, LTE-L23, eMPS

IPR2025-00720, OnePlus Ex. 1004

=> CR category should be "B"
=> CR is agreed with change of category in R2-106906 CR0490 R1

7.7.2 Other

Corrections

R2-106185: Editorial Clean-Up Nokia Siemens Networks (Rapporteur) CR 36.300 (0277) - F REL-10 TEI10, LTE-L23
- Ericsson would prefer not to have the change in clause 12. Chairman thinks the sentence is old remains from Rel-8. Mediatek agrees.

=> CR is agreed in R2-106907 CR0277 (conflicts with similar RAN3 CR can be handled offline)

R2-106634: Clean up of ACB related procedures NTT DOCOMO, INC. Disc
- NTT DCM indicates there is no functional change.
- ZTE supports the cleanup, but would like to check detailed CR for next meeting
- STE is a bit concerned about make a lot of changes to the spec although there is no functional change. So all design will have to do thorough checking to ensure they still comply
- QC support this type of approach, but shares the STE concern.

=> Quite some support. Invite NTT DCM to bring the complete CR to next meeting after CSFB ACB is included.

New functionality: ACB correction for MO CSFB

R2-106586: AC-Barring for Mobile Originating CSFB call SamsungCR 36.331 (0517) - B replacing R2-106136 (not from original company) REL-10 TEI10, LTE-L23

First change:
- NTT DCM is ok with the first change

=> Change agreed

Second change:
- NTT DCM thinks the checking should be based on if T306 is running rather than SIB2 contents. Samsung would be ok with this change.

=> Agree to include the T306 is running check
=> Both changes will be included in update of R2-106136

New functionality: MBR>GBR (will be discussed in joint session)

R2-106645: Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side. Orange SA, Deutsche Telekom, Telecom Italia CR 36.300 (0285) - C REL-10 TEI10, LTE-L23
- ALU thinks the text for UL seems to suggest that the eNB can control the MBR for each DRB individually which is not correct. Ericsson agrees this is not correct. You can only directly control the MBR of the highest priority bearer.
- Ericsson could live with a note saying that MBR can enforced by congestion notification between endpoints.
- NSN would prefer not have no note, so no changes to the UL text
- Mediatek thinks the case of the single MBR bearer could be mentioned.
- ALU would prefer to wait for the GBR/MBR discussion, so maybe it is good to not have UL changes
- Nokia thinks the second note is already capturing this total grant aspect

=> Discuss offline whether an acceptable note can be found, and otherwise the changes to the UL section should be removed

- NSN is fine with other changes

=> Should remove changes on change
=> Will see update in R2-106908 CR0285

R2-106908: Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side. Orange SA, Deutsche Telekom, Telecom Italia CR 36.300 0285 - C REL-10 TEI10, LTE-L23

=> Cover page still talks about UL
=> Nokia assumes UE box should not be ticked.
=> Remove double ".."
=> CR number should be added
=> Specification number should be updated

IPR2025-00720, OnePlus Ex. 1004

=> We will see update in R2-106922 CR0285 R1

R2-106922: Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side. Orange SA, Deutsche Telekom, Telecom Italia CR 36.300 0285 R1 C REL-10 TEI10, LTE-L23
=> ME box should be unticked
=> CR is agreed with adding CR and revision number and ME box unticked in R2-106924 CR0285 R2

R2-106287: MBR greater than GBR handling in the UE Qualcomm Incorporated, Orange, Telecom Italia, Deutsche Telekom Disc
=> Updated before presentation in R2-106669

R2-106669: MBR greater than GBR handling in the UE Qualcomm Incorporated, Orange, Telecom Italia, Deutsche Telekom Disc
not treated

R2-106424: Where to enforce Uplink MBR Ericsson, ST-Ericsson Disc
R2-106646: Handling of MBR Greater than GBR in eNB Orange SA Disc
Both not treated

R2-106643: Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at UE side. Orange, Deutsche Telekom, Telecom Italia, Qualcomm CR 36.300 (0284) - C REL-10 TEI10, LTE-L23
not treated (also input to joint session with SA2)

New functionality: Fast dormancy

R2-106285: LTE Fast Dormancy Intel Corporation UK Disc
- DT agrees that different applications benefit from different DRX settings. But since different applications can be active in parallel, would the network not have a kind of compromise DRX setting ? Or would Intel like to go to bearer specific DRX ? Intel thinks you could maybe group different applications and have settings for different settings for a group.
- RIM agrees that different applications need different DRX settings. RIM thinks often there is no mix of applications.
- Intel clarifies that "DRX events" corresponds to "inactivity timer expirations"
- DT wonders what is the standard impact ? RIM thinks the device can help the eNB. Also RIM expects we do not see super-clever eNB implementations
- Ericsson wonders what really the problem is ? Ericsson thinks with an RRC reconfiguration and MAC CE, eNB has sufficient control
- Nokia thinks from this we can learn that a good network would use a quite aggressive DRX and the penalty from a quite aggressive DRX is small.
- QC agrees with DT that if there a multiple applications, it is not so easy for the eNB to have good DRX settings.
- Huawei wonders if the UE has e.g. a game and FTP, how can the eNB configure ?
- Mediatek thinks having multiple DRX timers running would complicate things.
- RIM thinks most of the time there is only 1 application running. RIM hopes that the DRX is tuned to that one application then
- DT thinks this is important and hopes all UE/network vendors implement both short and long DRX so that the network can optimise this. DT would prefer not autonomous UE action.
- NTT DCM thinks from network point of view, the eNB knows the QCI's, knows thus some characteristics and can use that in determining the DRX settings. NTT DCM wonders if this application is suggesting that the UE would at setup help the eNB with information on what application is used on the radio bearer.

=> Noted

R2-106289: Fast Dormancy and Long DRX Qualcomm Incorporated Disc
- DT wonders how realistic the power savings are ?
- IDT wonders what cycle length and on-duration is ? QC did not model the full DRX, so no on-duration: when packet is sent it is active until inactivity timer after packet transmission.
- IDT wonders how relevant the simulations are if you do not model on-duration and cycle.#
- Ericsson wonders what signallig overhead is when changing DRX state ?

IPR2025-00720, OnePlus Ex. 1004

- QC clarifies the red line could be seen as the overhead corresponding to UE indications for going to dormant.
- RIM wonders how the power saving gain is computed ? QC indicates the basic case is inactivity timer set to 2.56s
- Mediatek wonders if we need SA4 involvement
- Nokia wonders if the DRX is to aggresive the delay could be 640ms. But will that not always happen if you go to DRX ? Nokia thinks network can only try to avoid going to DRX inbetween 2 packets that are very close together.
- ALU wonder whether in the 2 applications listed, the UE will really have better information than the network since it depends largely on user activity ?
- NSN thinks eNB's will not go as far as looking into packets to find out the application
- RIM thinks both last papers have provided insight in DRX settings. RIM assumes most network will use quite stable DRX settings, and thus RIM thinks additional battery gains would be good to have.
- NTT DCM wonders what part of the UE uses most battery: RF or display ? RIM indicates some applications run in the background

=> Noted

R2-106234: UE power saving in LTE network Nokia Siemens Networks Disc

- Samsung wonders what the "upper layer" is ? NSN is not sure. Samsung thinks NAS layer can know what AS layer is there and should not sent such an indication to the LTE AS layer.
- TIM wonders if the AS is able to release the connection unilaterly. QC indicates there is a local release which is used in rare cases like PLMN selection, CSG selection and authentication failure.

R2-106487: DISC on the UE fast dormancy controlled by the network NEC Disc
R2-106620: Battery Impacts from DRX ConfigurationResearch In Motion UK Limited Disc
Both not treated

Discussion:

- RIM thinks since the DRX configurations from the network will be a compromise, it would be good to have UE indication to indicate when the UE could benefit from a long DRX. RIM thinks a similar mechanisms as in UMTS can be used
- NSN thinks network is in control
- DT thinks the indicator is better that UE autonomous release. If DRX is LTE is anyway much better and UE's will not locally release, then DT is fine not to have the indicator.
- QC is not convinced that smart networks will solve all isues, but QC realises that time is running out for Rel-10. QC would like to study more for Rel-11.
- Samsung thinks we see from both papers that if the eNB knows the application (from QCI) and UE supports short-DRX, we can use quite aggresive DRX. This should be sufficient for Rel-10, and we can study further for Rel-11.

=> Will not have a UE release request indication in Rel-10

How to capture ?

- RIM thinks such an indication should come from applications.
- DT thinks it would be good to have some text. QC wonders how to test. RIM sees no so much reason for text. NTT DCM thinks it would be good to capture. Samsung wonders if it would be more appropriate in the stage-2.

=> Can offline discuss best place to capture. Will see text proposal in R2-106911

R2-106911: UE power saving and Local release CR0527

- RIM thinks this change is not necessary. Also not all cases are listed (e.g. re-establsihment failure)
- TIM would like to have the list of cases when the UE is allowed to release locally, or list this case as not allowed.
- ALU now prefers to capture this in the stage-3 based on this discussion.
- Huawei thinks it is strange to specify what the UE should not do.

=> One week EMAIL DISC; final version in R2-106941 CR0527 R1 [EMAIL DISC NSN]

New functionality: SAR

R2-106288: LTE SAR issues and PHR Qualcomm Incorporated Disc
=> Updated in R2-106899
R2-106899: LTE SAR issues and PHR Qualcomm Incorporated Disc

IPR2025-00720, OnePlus Ex. 1004

- QC points out there is a slightly different wording proposal
- NSN wonders why an additional trigger is needed ? Is it not enough with the current triggers ? QC thinks it would be good to inform the eNB asap when the Pmax has changed so much
- NSN could understand that there is a trigger when Pcmaxc decreases, but when it increases we can wait. QC thinks the Pcmaxc increase case is more important than Pcmaxc decrease.
- NSN thinks we had the same discussion yesterday when removing an Scell.
- QC thinks the SAR could change every 20ms.
- NSN thinks in both cases you have more power available, so NSN assumes it is not so urgent also in this case. Panasonic thinks in this case the eNB would not know.
- Samsung thinks the discussion is not so relevant
- IDT thinks the eNB would have to know when the Pcmaxc changes significantly.
- NTT DCM wonders how frequent this SAR would change ? QC thinks for voice it would not be more frequent then every 20ms. NTT DCM wonders if voice on CDMA is not a continuous transmission like CS voice in W-CDMA ? In W-CDMA you would backoff the whole talkspurt. QC confirms the transmission is continuous, but you could get radio condition changes in 1xRTT. I.e. there is no indication at every speech packet transmission.
- NTT DCM thinks if you e.g. have a periodic PHR of 200s, you might max be wrong during 200ms. QC indicates the eNB does not know what UE's are having the 1x call in case of independant 1xRTT operation (also speech call paging is in 1xRTT)
- QC wonders if all UE's would be configured with a 200ms PHR ? NTT DCM assumes this is quite a normal setting.
- Samsung thinks the length of speech burst could be quite short, and then having suboptimal operation every talk spurt during 200ms is not so nice.
- RIM points out that the prohibit timer also delays the indication. QC thinks it depends on the length of the prohibit timer
- NTT DCM thinks maybe some more study would be good to have. NTT DCM wonders if CDMA only has transmission in talkspurt, or even outside talkspurt ?
- Ericsson hopes this power backoff happens as little as possible, but if it happens it would be good to know it asap.
- NSN assumes that if the eNB cannot decode the transmission for some time, it would decrease the allocation.
- Panasonic sees a benefit with this proposal.
- NSN wonders if the resource location will not trigger this trigger ? QC assumes the SAR backoff would be 6dB. If the MPR already has a large value, then the SAR will be no issue.
- QC clarifies this proposal uses the fact that the Pcmax can also be reported in the single carrier case.
- NSN thinks when the eNB first schedules 1 Scell, and then schedules 2 Scells, this trigger might also be triggered. Ericsson thinks this could happen and it would not be so good. Then it might be better to have the trigger only when the SAR caused reduction changes with a certain amount. IDT thinks the scheduler only cares about the resulting Pcmax.

=> Will have to make sure the eNB is quite accurately aware of Pcmax changes due to terminal power management (not including (A)MPR) changes in Rel-10. Can study further whether this requires additional PHR triggering and how the trigger would look in detail.

R2-106446: UE power variation resulted due to dual transmission Alcatel-Lucent Disc
not treated

R2-106447: Introduction of new PHR trigger to indicate the configured maximum UE power variation resulted due to dual transmission Alcatel-Lucent CR 36.321 (0443) - B REL-10 TEI10, LTE-L23
revised in R2-106896

R2-106896 Introduction of new PHR trigger to indicate the configured maximum UE power variation resulted due to dual transmission Alcatel-Lucent CR 36.321 0443 - B REL-10 TEI10, LTE-L23
revised in R2-106909

R2-106909 Introduction of new PHR trigger to indicate the configured maximum UE power variation resulted due to dual transmission Alcatel-Lucent CR 36.321 0443 1 B REL-10 TEI10, LTE-L23

IPR2025-00720, OnePlus Ex. 1004

not treated

R2-106478: PHR and Pcmax Motorola Disc
not treated

New functionality: Other

R2-106590: Reception of unicast data over MBSFN subframes SamsungDisc
- ZTE wonders if the frames are indicated in broadcast, why did the eNB just not denote these subframes as normal subframes ? Huawei has similar question.
- Samsung clarifies that RAN1 has specified unicast transmission in MBSFN subframes because it would allow lower amount of CRS
- Ericsson thinks RAN1 has discussed this and saw not much gain in informing the UE whether/which DL MBSFN subframes could contain DL grants. This because the UE anyway already has to receive UL grants in these subframes.

=> Noted (can check with RAN1 delegates)

R2-106425: Max number of reported cells for SON ANR for UMTS and CDMA Alcatel-Lucent Disc

R2-106426: Reporting more than one cell for SON ANR towards UMTS/CDMA Alcatel-Lucent CR 36.331 (0505) - C REL-10 TEI10, LTE-L23
- Nokia wonders if for SON-ANR the UE has to read the SI from the target cell ? Nokia assume the restriction exists because reading system information from weak cells is time consuming ? ALU thought for "reportStrongestCellsForSON" there is no SIB reading.
- QC thinks we anyway have the 2 step. So after the cell is reported, you would like to read the SI but still it might be difficult for a weak cell.
- DT supports the proposal
- Panasonic supports the proposal.
- Nokia sees a relation to the UMTS inter-freq detected set discusion, so wonders if this is not better discussed in the common session. ALU thinks so far we never had a common session for LTE SON ANR for UMTS.
- Nokia would like to think a bit more about this. ALU points out that this document was already submitted 2 meetings ago.

After offline discussion:
- Nokia still does not see a big need. Nokia indicates that in RAN4 only has reporting requirements for reporting one cell, so also RAN4 would have to be enhanced. ALU thinks RAN4 only indicates a time requirement. This is not proposed to be changed. So if the UE detected multiple in this time, why not report it ? Nokia wonders if we do not change anything in RAN4, are the performance requirements valid for the reporting of other cells ? Nokia is still checking if new performance requirements would be needed. ALU was assuming that no CR was needed in RAN4.

=> Will sent LS to RAN4 to indicate we are considering, and whether in this case additional performance requirements would have to be specified; R2-106932

R2-106464: Measurement gap configuration for inter-freq RSTD measurementEricsson, ST-Ericsson Disc
- Huawei why solution 1 cannot be applicable for SUPL ? Ericsson thinks for pure user plane positioning, there is no interface to ESMLC. Huawei thinks SUPL anyway has to get the OTDOA assistance information from the ESMLC. Ericsson thinks the assistance data could also be obtained from an OAM system rather than from an eSMLC.
- Ericsson is also not so font of this solution (scheduler restriction), but sees no better solution for the user plane positioning case.
- You have to rely also the UE will inform the network when it no longer needs the gaps.
- Huawei thinks there is an interface between SUPL server and SMLC, and then this approach is not needed.
- NSN remarks that LPPa is optional for OTDOA if OAM is used for assistance data. CATT also thinks the interface between SUPL and SMLC is optional
- Chairman wonders if the network woudl have to allow these requests ? Maybe the UE can always sent because anyway the network can ignore
- NSN would like to have this for Rel-10

=> Agree to intention to finalise this type of solution in Rel-10 (still look at details)

R2-106546: Combined Quantity Report for IRAT measurement of UTRAN Huawei, HiSilicon, Deutsche Telekom, Ericsson, ST-Ericsson, TeliaSonera, Nokia Siemens Networks Disc

IPR2025-00720, OnePlus Ex. 1004

R2-106548: Combined Quantity Report for IRAT measurement of UTRAN Huawei, HiSilicon, Deutsche Telekom, Ericsson, ST-Ericsson, TeliaSonera, Nokia Siemens Networks CR 36.331 (0513) - C REL-10 TEI10, LTE-L23
- ZTE wonders what is normal for inter-RAT mobility: one quantity is used or both ? Huawei thinks this depends on operator implementation. DT prefers both
- Nokia also supports the CR
- Chairman wonders whether the quantityConfigUTRA does not need to be extended ?
- RIM assumes you need a second filtercoeficient

=> Agree to the principle of this proposal and include this functionality in Rel-10. Will see update in R2-106912 CR0513

R2-106912: Combined Quantity Report for IRAT measurement of UTRAN Huawei, HiSilicon, Deutsche Telekom, Ericsson, ST-Ericsson, TeliaSonera, Nokia Siemens Networks, ZTE CR 36.331 0513

=> CR is agreed

R2-106414: UE capabilities in REL10 Nokia Corporation, Nokia Siemens Networks Disc
- QC wonders about the timeline: UE capability bits have to exist in June, but FGI bits might be defined later. Nokia was more thinking that there would be capability bits for the bigger features, but then FGI bits for subfeatures.
- QC thinks we have 5 FGI bits remaining. So maybe we should consider adding new ones before freezing.
- NSN was e.g. thinking to have a bit for cross carrier scheduling ?
- Chairman assumes RAN2 would do the preparation work, but RAN would take final decisions
- STE thinks if we introduce FGI bits for Rel-10, we should make it clear from the beginning if they have the same meaning as in Rel-8, i.e. mandatory but IOT not possible
- ALU is not too enthusiastic about FGI bits. Also NTT DCM would prefer not to have FGI bits. NTT DCM thinks they bring a lot of problems. In Rel-8 we had them to allow quick introduction of LTE. Now this is not so much an issue.
- Nokia clarifies this is not an attempt to introduce late features.

=> Noted (something to think about)

Not available/too late/withdrawn

R2-106445 UE power variation resulted due to dual transmission Alcatel-Lucent Disc withdrawn

R2-106621 LTE impacts for Large numbers of connected devices Research In Motion UK Limited Disc withdrawn

R2-106644 Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side. Orange SA, Deutsch Telekom CR 36.300 - - C REL-10 TEI10, LTE-L23

=> Withdrawn, see R2-106645 instead

7.8 WI: Other LTE Rel-10 WIs

New functionality: Cochannel deployment:

R2-106225: Further results on HetNet mobility Nokia Corporation, Nokia Siemens Networks Disc REL-10 ?
R2-106550: Handover Performance and Improvements in Co-channel HetNet Alcatel-Lucent Disc
R2-106607: Mobility issues under pico cell deployment Samsung Disc
All 3 Tdocs not treated

Note: Heterogenous networks have no own WI (apart from "Core part: Enhanced ICIC for non-CA based deployments of heterogeneous networks for LTE"), so all 3 Tdocs should not be placed under this agenda item.

7.9 SI: In-device coexistence interference avoidance (RP-100671)

(FS_SPIA_IDC, leading WG: RAN2, started: June 10, target: Dec. 10, WID: RP-100671)

IPR2025-00720, OnePlus Ex. 1004

7.9.1 FDM

=> Including email discussion outcome for [71b#27]: LTE: ICO - Information from UE for FDM solution [Mediatek]

=> Email discussion outcome [71b#27]: FDM ICO [Mediatek]

R2-106291: Email discussion on information from UE for FDM solution MediaTek Disc

FDM info would be based on UE judgement
UE informs eNB about non-usable frequencies?

Discussion:

- LG wonders what the criteria is for the UE to decide on an "unusable frequency" ? Mediatek indicates this was not discussed in the email discussion and can be separately treated.
- Huawei thinks current measurements are not sufficient to detect unuseability. Huawei assumes it is based on internal UE assesment.
- Huawei assumes this information is only used by the eNB about the frequency not useable due to ICO. Huawei assumes that any further action by the eNB will still be based on normal RRM measurements
- QC thinks it would be good if the UE also reports the type of interference (e.g. BT, Wifi), and then the eNB can decide if handover is needed.
- Huawei thinks if UE informs non-useable frequency, the type of interference is no longer relevant.
- QC wonders up to what extend this be testable ? I.e. if the UE only allowed to sent this message in certain situations ? CMCC assumes UE internal assesment will determine whether a frequency is useable/unuseable.
- ZTE also thinks it is eNB decision to where to handover the UE. For this decision it might be useful to include additional information. DT agrees it is not a indication for handover, but a request only.
- Motorola agrees that it is UE assesment, and Motorola sees no real need for additional information.
- DT thinks we should prevent unnecessary/invalid requests.
- QC tihnks the policy for judgement is quite important. Maybe an operator does not want to perform handover for BT, but would like to do it for Wifi. QC wonders who decides what interference level is acceptable ?
- Samsung thinks the request indicates what the UE wants. eNB can make a general judgement to honour or not, but no detailed policy based on different cases is needed in the eNB.

Agreements:

1: Will as a baseline take the UE judgement as the approach for FDM solution: the UE will indicate which frequencies are (not) useable due to in-device coexistence.

FFS if additional information would be useful to report to enable different handover policies in the eNB based on the actual interferer

FFS how this indication is transmitted (e.g. new report, CQI dummy values, dummy RSRP measurement,...)

=> Above agreements shall be capture in the TR (R2-106925).

CONNECTED

R2-106563: Necessity of on off indication for avoiding in-device coexistence interference LG Electronics Inc. Disc

- Mediatek wonders what the definition of activation/deactivation is ? LG thinks it could be mobile turn on/off, or service on/off
- QC wonders what the link is between this proposal and pervious agreement ? Samsung agrees with QC. Samsung assumes the indication is only sent when the interference

IPR2025-00720, OnePlus Ex. 1004

situation actually exists. Huawei agrees. Huawei thinks the UE should also inform the eNB about when the interference is removed
- CMCC thinks it is up to UE implementation when to sent what indication. E.g. even if ISM transmission is turned on, the UE might be able to handle it internally.
- CATT thinks it is totally up to UE implementation.
- Motorola agrees with CMCC. You should not sent the indication unnecessarily.
- Motorola indicates the UE might even take measurements above Smeas
- Ericsson assumes that internally in the UE most of this can already be triggered based on existing UE measurements.

=> Noted

R2-106475: Discussion on FDM approach for In device coexistence Motorola Disc
- LG wonders what type of metrics are used for triggering the measurement report ? E.g. an RSRP measurement report might not reflect DL LTE problems. Motorola agrees RSRQ is a better metric
- QC thinks even for the DL case it is not clear the existing measurements are enough. For RSRQ the averaging might be a problem due to burstyness of interfererer. Mediatek agrees with QC and we cannot rely on RSRQ although it can still be used.
- Telephonica wonders if since the traffic is from the same device and very bursty, is it not possible to in advance estimate the interference ? Motorola thinks if the ISM transmissions are bursty and RSRQ does not detect, maybe there is no real problem.
- Intel thinks the UE could maybe predict some cases in advance and sent the indication.

Reduced power headroom
- Intel wonders if this can be handled by not useable freq singnaling ?
- Chairman wonders if the UE would this by itself or commanded by the network ? Motorola thinks it is the same as the SAR issue. QC indicates that power reduction is no longer included in the TR as a family of solutions. QC agrees that for a UE not at cell edge this might be a solution, especially if no other frequency is available.
- UE could indicate power reduction and then network could decide whether to live with the power reduction or to move the UE.
- CMCC wonders whether the below agreement would be applicable for both TDM and FDM solutions. Mediatk agrees.

=> Noted; Power reduction aspect probably deserves more study.

R2-106400: Further consideration on FDM solution Huawei, HiSilicon Disc
not treated

Agreements (FDM):
1) Indication can be used by the UE whenever it has problems in ISM DL reception it cannot solve by itself.
2) Indication can be used by the UE whenever it has problems in LTE DL reception it cannot solve by itself, and the eNB did not take action yet based on RRM measurements
   - FFS up to what extend DL LTE measurements can detect LTE DL reception problems due to in device coexistence.

=> Above agreements shall be capture in the TR (R2-106925).

IDLE

R2-106564: Possible enhancement for idle mode UE to avoid in-device coexistence interference LG Electronics Inc. Disc
- Mediatek assumes UE would have internal coordinator, so then why would the UE not stop the ISM transmissions at important LTE reception moments (e.g. paging). Huawei agrees with Mediatek. CMCC agrees with Mediatek.
- QC agrees that IDLE mode operation itself might not be a problem but if the subsequent connection establishment there would always be a handover/connection problem, then maybe cell reselection enhancements/autonomous UE freedom could be considered.

=> IDLE mode operation itself is not considered a problem (UE can just stop ISM transmissions when relevant for LTE (e.g. when receiving LTE paging)), but cell reselection enhancements/freedom could still be considered in order for IDLE to avoid problems at every subsequent transition to connected.

Not available/too late/withdrawn:

IPR2025-00720, OnePlus Ex. 1004

R2-106390 Consideration on FDM solution CATT Disc
=> Withdrawn
R2-106581 Understanding the nature of LTE and BT in-device coexistence for VOIP service Samsung Disc
=> Withdrawn

7.9.2 TDM

7.9.2.1 LTE <-> WiFi

R2-106399: Potential mechanism to realize TDM pattern Huawei, HiSilicon Disc
- Mediatek agrees DRX is a valid option to consider.
- CMCC wonders if the UE is allowed to initiate UL transmissions during the sleep time ? Huawei thinks it is up to UE implementation.
- ZTE wonders if we have DRX, how do we avoid the interference from Wifi to LTE e.g. in offload case. I.e. how do we stop WiFi during LTE-ON period ? Huawei assumes the coordinator in the UE can control this if the UE knows upfront when it is allowed to use WIFi
- QC assumes on Wifi a power save mode would be used.
- QC assumes in this solution it would be up to the eNB to ensure the ON period is ended at a correct moment in time. How would the eNB know when to end ? Huawei assumes assistance data from UE
- Intel wonders about the beacon reception: the beacon will be shifting. Huawei thinks whether we can extend the current LTE period (alternating DRX period between e.g. 102 and 103), or enB can avoid UE scheduling in beacon time. Samsung thinks 102.4 will sometimes fall in UL, sometimes in DL subframe. Samsung thinks it might be simpler to miss the beacon in some cases.
- Motorola thinks it would be good to see more details on how this works before deciding on baseline: issues identified:
  - beacon handling
  - UE not transmitting during some periods
  - how is eNB aware of ending time
- QC thinks given the alternatives (CQI based gaps, or measurement gaps) do not seem to have much support, it seems we can make DRX the baseline. Motorola agrees this is the most natural baseline
- Ericsson would prefer a single solution for all cases, not to many different solutions.

=> A DRX based approach seems at this point in time the most promising direction but many issues still to be resolved. Could be good direction for further work.

R2-106476: Discussion on TDM approach for In device coexistence Motorola Disc
- MT wonders if the rescheduling in proposal2 is done autonomous by the UE or on eNB control. Motorola replies entirely under control by eNB, but the eNB might need to know.
- Huawei wonders if a special CQI value is used ? Motorola thinks a normal wideband CQI could be used.
- QC wonders how the DRX period is extended with the CQI reporting ? Motorola wants to use the CQI to stop activity in LTE.
- Motorola indicates fake-values are possible (band7), but for some bands real values could be used. Intel thinks that the CQI reporting is only related to one subframe. If there is no interference in that subframe, then the eNB is not aware.

R2-106431: TDM solution with dynamic patterns Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
- QC assumes that the DRX solution does not need this type of problem. However from BT QC has seen that the need of sleep might vary quite wisely. So QC wonders if a combined solution of DRX and CQI would be possible ? DRX as baseline, and CQI for fine adjustments. ALU assumes that is better, but is not sure whether it would be possible to meet the QCI.

=> Noted

R2-106584: Timeline analysis of TDM solutions for coexistence with WiFi Intel Corporation (UK) Ltd Disc
R2-106348: Gap Analysis for LTE-WiFi Coexistence by Legacy Solutions MediaTek Disc
Both not treated

IPR2025-00720, OnePlus Ex. 1004

Baseline approach?

7.9.2.2 LTE <-> BT

R2-106585: Timeline analysis of TDM solutions for coexistence with Bluetooth Intel Corporation (UK) Ltd Disc
- CMCC wonders if there is other confgurations then special subframe case 4 ? Intel thinks other cases would even be better
- Mediatek wonders if this analysis assumes that boundary of BT and LTE can be aligned. Intel confirms. Intel thinks any master can force this enhancement by its self. For a slave, it can use role switching.
- QC thinks from this contribution we can conclude that even with role switch and BT being master, still a TDM is needed for certain scenarios.
- Motorola thought for TDD there is no problem for BT. We should also take into account that BT is using lower power. Intel thinks that also in RAN4 there was a joint contribution from several companies that showed there is a problem.
- Nokia wonders if some companies want to now remove TDD solutoins for BT ? Motorola thinks if BT is generally not considered a problem, then we might focus on TDD solutions for WiFi
- Samsung points out that voice activity is quite low, and thus the situation might be better than shown.
- QC thinks RAN4 can look at the RF aspect, and we can look at the slotting structure. Huawei thinks different configurations have different results.
- Motorola assumes that UE is mainly master. QC thinks in car this will not be the case.

=> Will sent LS to RAN4 indicate that even in the best "time-plan" cases there will be some time overlap where UE is receiving and transmitting in parallel in different technologies (attach contribution). Then ask up to what extend these cases can be handled by RF and L1 mechanisms like BT hopping in R2-106927. Can indicate two scenarios (only voice, voice and data on LTE)

=> Can include results from this contribution in the TR.

R2-106342: Time variations of gap patterns with bluetooth streaming Qualcomm Incorporated Disc
- Note that this is bluetooth streaming, not conversational voice.
- QC clarifies that the LOW states corresponds to lowest 33% of active time needed, and HIGH states for the top 33%. Then QC looked at how quickly the UE goes from LOW to HIGH and vice versa

=> Activity time on BT can be very dynamic for BT streaming.

R2-106343: Solutions for bluetooth conversational voice Qualcomm Incorporated Disc
- QC is proposing "autonomous denial" where the UE would periodically report a "collision rate"
- QC think a car is designed to handle multiple devices and might thus denial a role switch. Motorola wonders how important this case is ? QC indicates there are legal requirements in certain areas for using handsfree. Motorola thinks we now talk about a number of conditions, e.g. certain band combinations, in car,...
- QC thinks it is still valuable to continue studying the TDM pattern solution, but thinks if we cannot easily solve this, this periodically loss rate reporting might be an alternative
- Huawei thinks this solution would be very complex for the eNB scheduler. It will also impact the LTE performance severely.
- Nokia wonders if we could not have autonomous denial of BT activity ? QC is not sure how that works. In LTE you have to continuously receive PDCCH so you do not know when the packet is coming. In BT the UE knows when the SCO packet is supposed to come.
- QC thinks this solution is simpler than a TDM solution.
- QC indicates you do not know when to receive in LTE upfront, so a "denial in BT solution" does not work. Huawei thinks in LTE TDD this could work

=> Noted; interesting alternative direction but more study is needed

IPR2025-00720, OnePlus Ex. 1004

7.9.2.3 LTE <-> GNSS

7.9.2.4 Other

General

R2-106292: Clarification on Working Assumptions for ISM Radios MediaTek Disc

General
- CMCC agrees it is important to have a common understanding on what features are supported.

Proposal 1
=> Agreed

Proposal 2
- Intel wonders if proposal 2 means we have to do nothing for coexistence with BT ? Mediatek clarifies that the latest BT spec has some nice features (clock tracking), but is not sure this would avoid any LTE impact.
- Motorola agrees with the proposal
- Intel indicates that BT has in general consider LTE, but for eSCO they have not considered LTE.
- QC thinks it is unclear how widely the new BT standard is supported
- QC would prefer to not take this decision; it sound ok but QC would like some time to check also related to commercial expectations of such a standard
- Ericsson would be ok to accept this proposal, and be fine to stop looking at BT if it is expected that this BT work would solve the issue.
- Huawei supports the proposal.

=> Allow some time to check

Proposal 3
- Samsung wonders why U-APSD is not considered ? Mediatek thinks there is no so high availability in the market. QC assumes anyway this is not so relevant. Samsung assumes this is important feature to make sure you are stopped being scheduled. Motorola is not sure.

=> Agreed

Agreements
1: RAN2 assumes SCO, eSCO, A2DP and ACL protocols are supported by in-device BT when analyzing the TDM solutions for LTE-BT coexistence
3: RAN2 assumes beacon, power saving and DCF protocols are supported by in-device WiFi when analyzing the TDM solutions for LTE-WiFi existence

=> Agreements 1 and 3 can be included in TR.

R2-106200: Problem Scenarios and Proposed Solutions for Home BS Coexistence Telefonica Disc
R2-106382: Framework and procedure of in-device coexistence interference avoidance CMCC Disc
R2-106210: Discussion on Release indepenednt in-device Coexistence and compatibility issues MediaTek Disc

All 3 Tdocs not treated

TDM

R2-106516: Discussion on controlling ON/OFF period using CQI and BSR Samsung Disc
R2-106389: The general principles of the TDM solution CATT Disc
R2-106398: General consideration on TDM Huawei, HiSilicon Disc
R2-106583: General analysis of TDM solutions for coexistence Intel Corporation (UK) Ltd Disc

All 4 Tdocs not treated

Not available/too late/withdrawn

R2-106242 Intermodulation problem with LTE Band 7 and ISM Band Nokia Corporation Disc

=> Withdrawn

TR update

R2-106925: Updated version TR (v0.3.1)

=> Email discussion to try to agree come to agreed version v0.3.1; Joern will provide Tdoc number for copying this version without revision marks into v0.4.0 later one week **[EMAIL DISC CMCC] [72#07]**

IPR2025-00720, OnePlus Ex. 1004

7.10 SI: Other LTE Rel-10 SIs

E.g. contributions related to SI on intra-eNB energy saving can be submitted under this agenda item.

No contributions.

8 UTRA Release 8 and earlier releases

8.1 In principle agreed CRs

REL-7 RANimp-CPC (RAN1):

R2-106076 Clarification to the default SG in DTX Cycle 2 Qualcomm Incorporated CR 25.321 0704 - F REL-7RANimp-CPC
=> The CR is agreed

R2-106077 Clarification to the default SG in DTX Cycle 2 Qualcomm Incorporated CR 25.321 0705 - A implicitly in principle agreed at RAN2 #71bis REL-8RANimp-CPC
=> The CR is agreed

R2-106078 Clarification to the default SG in DTX Cycle 2 Qualcomm Incorporated CR 25.321 0706 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-CPC
=> The CR is agreed

R2-106079 Clarification to the default SG in DTX Cycle 2 Qualcomm Incorporated CR 25.321 0707 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-CPC
=> The CR is agreed

REL-7 LCRTDD-EDCH-L23 (RAN2):

R2-106641 correction on equal priority in E-TFC selection for 1.28Mcps TDD TD Tech CR 25.321 (0721) - F REL-8LCRTDD-EDCH-L23
=> The CR is agreed in R2-106739

R2-106642 correction on equal priority in E-TFC selection for 1.28Mcps TDD TD Tech CR 25.321 (0722) - A REL-9LCRTDD-EDCH-L23
=> The CR is agreed in R2-106740

R2-106653 correction on equal priority in E-TFC selection for 1.28Mcps TDD TD Tech CR 25.321 (0723) - A REL-10 LCRTDD-EDCH-L23
=> The CR is agreed in R2-106741

REL-7 RANimp-EnhState (RAN2):

R2-106083 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0711 - F REL-7RANimp-EnhState
- NSN: there is an extra space after “cell-pch”.
- Ericsson: would like to check the removal of ura-pch statement
=> With this change the CR is revised in R2-106702 R1

R2-106702 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0711 1 F REL-7RANimp-EnhState
=> The CR is agreed

R2-106084 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0712 - A implicitly in principle agreed at RAN2 #71bis REL-8RANimp-EnhState
- Difference between cat F and A should be mentioned in “other comments”
=> With this change the CR is revised in R2-106703 R1

R2-106703 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0712 1 A implicitly in principle agreed at RAN2 #71bis REL-8RANimp-EnhState
- The reference in other comments need to be updated
=> With this change the CR is agreed in R2-106766 R2

IPR2025-00720, OnePlus Ex. 1004

R2-106085 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0713 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-EnhState
- Difference between cat F and A should be mentioned in “other comments”
=> The CR is revised in R2-106704

R2-106704 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0713 1 A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-EnhState
- The reference in other comments need to be updated
=> With this change the CR is agreed in R2-106767 R2

R2-106086 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0714 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-EnhState
- Difference between cat F and A should be mentioned in “other comments”
=> The CR is revised in R2-106705

R2-106705 Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH ZTE CR 25.321 0714 1 A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-EnhState
- The reference in other comments need to be updated
=> With this change the CR is agreed in R2-106768 R2

R2-106087 HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH Qualcomm Incorporated CR 25.321 0715 - F REL-7RANimp-EnhState
- First change was modified compared to last meeting because of clash between spec versions
=> The CR is agreed

R2-106088 HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH Qualcomm Incorporated CR 25.321 0716 - A implicitly in principle agreed at RAN2 #71bis REL-8RANimp-EnhState
=> The CR is agreed

R2-106089 HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH Qualcomm Incorporated CR 25.321 0717 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-EnhState
=> The CR is agreed

R2-106090 HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH Qualcomm Incorporated CR 25.321 0718 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-EnhState
=> The CR is agreed

REL-8 RANimp-UplinkEnhState (RAN2):

R2-106080 Correction in release of common E-DCH resources Ericsson, ST-Ericsson CR 25.321 0708 - F REL-8RANimp-UplinkEnhState
=> The CR is agreed

R2-106081 Correction in release of common E-DCH resources Ericsson, ST-Ericsson CR 25.321 0709 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-UplinkEnhState
=> The CR is agreed

R2-106082 Correction in release of common E-DCH resources Ericsson, ST-Ericsson CR 25.321 0710 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-UplinkEnhState
=> The CR is agreed

R2-106099 Correction on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic, Broadcom CR 25.331 4335 - F REL-8RANimp-UplinkEnhState
=> The CR is agreed

R2-106100 Correction on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic, Broadcom CR 25.331 4336 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-UplinkEnhState
=> The CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-106101 Correction on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic, Broadcom CR 25.331 4337 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-UplinkEnhState
=> The CR is agreed

R2-106104 Correction on READY_FOR_COMMON_EDCH definition Ericsson, ST-Ericsson CR 25.331 4340 - F REL-8RANimp-UplinkEnhState
=> The CR is agreed

R2-106105 Correction on READY_FOR_COMMON_EDCH definition Ericsson, ST-Ericsson CR 25.331 4341 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-UplinkEnhState
=> The CR is agreed

R2-106106 Correction on READY_FOR_COMMON_EDCH definition Ericsson, ST-Ericsson CR 25.331 4342 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-UplinkEnhState
=> The CR is agreed

REL-8 MBSFN-DOB (RAN1):

R2-106096 Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN IPWireless Inc. CR 25.331 4332 - F REL-8MBSFN-DOB
=> The CR is agreed

R2-106097 Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN IPWireless Inc. CR 25.331 4333 - A implicitly in principle agreed at RAN2 #71bis REL-9MBSFN-DOB
=> The CR is agreed

R2-106098 Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN IPWireless Inc. CR 25.331 4334 - A implicitly in principle agreed at RAN2 #71bis REL-10 MBSFN-DOB
=> The CR is agreed

REL-8 RInImp8-CsHspa (RAN2):

R2-106102 Correction on CS voice over HSPA SDU discard timer configuration Huawei, HiSilicon CR 25.331 4338 - F REL-9 CR for REL-8 WI REL-9RInImp8-CsHspa
- Infineon: why is the version 9.3.0? It should be 9.4.0.
=> With this change the CR is agreed in R2-106706 R1

R2-106103 Correction on CS voice over HSPA SDU discard timer configuration Huawei, HiSilicon CR 25.331 4339 - A implicitly in principle agreed at RAN2 #71bis REL-10 RInImp8-CsHspa
=> The CR is agreed

REL-8 RANimp-HSDSCH (RAN2):

R2-106110 CR on T324 timer usage Huawei, HiSilicon CR 25.331 4346 - F REL-8RANimp-HSDSCH
=> The CR is agreed

R2-106111 CR on T324 timer usage Huawei, HiSilicon CR 25.331 4347 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-HSDSCH
=> The CR is agreed

R2-106112 CR on T324 timer usage Huawei, HiSilicon CR 25.331 4348 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-HSDSCH
=> The CR is agreed

REL-8 RANimp-UplinkL2dataRates (RAN2):

R2-106113 Power offset for Scheduling Info in MAC-i Ericsson, ST-Ericsson CR 25.331 4349 - F REL-8RANimp-UplinkL2dataRates
=> The CR is agreed

IPR2025-00720, OnePlus Ex. 1004

R2-106114 Power offset for Scheduling Info in MAC-i Ericsson, ST-Ericsson CR 25.331 4350 - A implicitly in principle agreed at RAN2 #71bis REL-9RANimp-UplinkL2dataRates
=> The CR is agreed

R2-106115 Power offset for Scheduling Info in MAC-i Ericsson, ST-Ericsson CR 25.331 4351 - A implicitly in principle agreed at RAN2 #71bis REL-10 RANimp-UplinkL2dataRates
=> The CR is agreed

REL-8 PPACR (SA1):

R2-106119 UE behaviour when PPAC and DSAC parameters not present in SIB3 NEC CR 25.331 4355 - F REL-8PPACR
=> The CR is agreed

R2-106120 UE behaviour when PPAC and DSAC parameters not present in SIB3 NEC CR 25.331 4356 - A REL-9PPACR
=> The CR is agreed

R2-106121 UE behaviour when PPAC and DSAC parameters not present in SIB3 NEC CR 25.331 4357 - A REL-10 PPACR
=> The CR is agreed

REL-8 TEI8:

R2-106093 Addition of ROHC target mode in SRNS relocation message Alcatel-Lucent CR 25.331 4329 - F REL-8TEI8
- The import in asn.1 was missing in agreed in principle CR and has been added in this CR.
=> The CR is agreed

R2-106094 Addition of ROHC target mode in SRNS relocation message Alcatel-Lucent CR 25.331 4330 - A REL-9TEI8
- The import in asn.1 was missing in agreed in principle CR and has been added in this CR.
=> The CR is agreed

R2-106095 Addition of ROHC target mode in SRNS relocation message Alcatel-Lucent CR 25.331 4331 - A implicitly in principle agreed at RAN2 #71bis REL-10 TEI8
- The rel'10 CE have been added in a TEI10 CR R2-106401
=> The CR is agreed

8.2 Others

REL-7 RANimp-CPC (RAN1):

R2-106360 DTX-DRX status after a reconfiguration message Ericsson, ST-Ericsson CR 25.331 (4388) - F REL-7RANimp-CPC
- Collides with R2-106559
- Ericsson: Aligned with HW proposal from last meeting
- Samsung: this is not what was decided at the last meeting, why do we have this CR.
- QC: agree with Samsung
- Infineon: agree with Samsung
- Infineon: why isn't is possible for NW to send the order to synchronize all UEs?
- Chairman: How to capture a NW workaround in the spec? Infineon: a note can be added in spec to say that if order isn't sent then UE behavior is unspecified.
- HW: Note can be in spec or meeting minutes. We can align UE behaviors starting from rel'8.
- Nokia: There is nothing wrong in the spec why have a change? HW: to ensure there is no issue moving forward. QC: fact that there are different UE implementations mean there is something unclear in spec.
- HW: Why isn't release 8 acceptable? Samsung: there needs to be a workaround in rel'7 anyways, no need to focus on aligning UE behavior.
- Qualcomm will provide a proposal to discuss offline:
  -What note and where to capture the note to explain rel'7 behavior: No conclusion offline
  -starting at which release should UE behavior be aligned: No conclusion on rel'8/9

IPR2025-00720, OnePlus Ex. 1004

-No agreement on what behavior

=> The CR is postponed to the next meeting

R2-106361 DTX-DRX status after a reconfiguration message Ericsson, ST-Ericsson CR 25.331 (4389) - A REL-8RANimp-CPC
=> The CR is postponed to the next meeting

R2-106363 DTX-DRX status after a reconfiguration message Ericsson, ST-Ericsson CR 25.331 (4390) - A REL-9RANimp-CPC
=> The CR is postponed to the next meeting

R2-106364 DTX-DRX status after a reconfiguration message Ericsson, ST-Ericsson CR 25.331 (4391) - A REL-10 RANimp-CPC
=> The CR is postponed to the next meeting

R2-106559 CR on CPC issues Huawei, HiSilicon CR 25.331 (4420) - F REL-7RANimp-CPC
- Collides with R2-106360
- Need to fill in "other specs impact"

=> The CR is postponed to the next meeting

R2-106560 CR on CPC issues Huawei, HiSilicon CR 25.331 (4421) - F REL-8RANimp-CPC
- wrong CR category?
- HS-SCCH-Less correction should be in a different CR, with TEI8 WI.
- Need to fill in "other specs impact"
- Nokia: added text isn't needed. HW: goal was to make it more clear.
- HW: let's discuss whether we need to extend the CPC changes to HS-scch-less

=> The CR is postponed to the next meeting

R2-106561 CR on CPC issues Huawei, HiSilicon CR 25.331 (4422) - A REL-9RANimp-CPC
- HS-SCCH-Less correction should be in a different CR, with TEI8 WI.
- Need to fill in "other specs impact"

=> The CR is postponed to the next meeting

R2-106562 CR on CPC issues Huawei, HiSilicon CR 25.331 (4423) - A REL-10 RANimp-CPC
- HS-SCCH-Less correction should be in a different CR, with TEI8 WI.
- Need to fill in "other specs impact"

=> The CR is postponed to the next meeting

REL-7 RANimp-EnhState (RAN2):

R2-106163 Clarification of the applicability of IE Number of PCCH transmissions Infineon Technologies, Qualcomm IncorporatedCR 25.331 (4361) - F REL-7RANimp-EnhState
- Infineon: there is an on-going discussion in RAN1 that could impact this discussion.
- QC: are the companies who disputed this CR at the last meeting still of the same opinion?
- Ericsson: agree we need to discuss it in RAN1 first.
- Status in RAN1: RAN1 has changed their decision and made other changes. This will impact RAN2 and the CRs can be provided at a subsequent meeting.

=> The CR is withdrawn

R2-106164 Clarification of the applicability of IE Number of PCCH transmissions Infineon Technologies, Qualcomm IncorporatedCR 25.331 (4362) - A REL-8RANimp-EnhState
=> The CR is withdrawn

R2-106165 Clarification of the applicability of IE Number of PCCH transmissions Infineon Technologies, Qualcomm IncorporatedCR 25.331 (4363) - A REL-9RANimp-EnhState
=> The CR is withdrawn

R2-106166 Clarification of the applicability of IE Number of PCCH transmissions Infineon Technologies, Qualcomm IncorporatedCR 25.331 (4364) - A REL-10 RANimp-EnhState
=> The CR is withdrawn

R2-106454 Removal of HARQ reset upon Treset expiry Nokia Corporation, Nokia Siemens Networks Disc REL-7RANimp-EnhState

IPR2025-00720, OnePlus Ex. 1004

- HW: in scenario 1, when new data arrives, how can the UE do combining? Nokia; that depends on NDI set by NW and in this case there is no stored data. HW: if we don't tell UE to flush the buffers, there may be data there and it may be combined. QC: That situation shouldn't happen if UE judiciously selects when to flush the buffer. HW: also questioning what the gains are in scenario 2, the combination gains on UE side aren't guaranteed and that depends on NW implementation
- Chairman: is this a critical correction for release 7? QC: this is correcting a bad behavior.
- Chairman: we should not be discussing proposals providing some gains for rel'7, those are improvments and can be proposed in TEI10.

=> Noted

R2-106455 Removal of HARQ reset upon Treset expiry Nokia Corporation, Nokia Siemens Networks CR 25.321 (0720) - F REL-7RANimp-EnhState

cat.A CRs missing?

=> Withdrawn

REL-8 RANimp-UplinkEnhState (RAN2):

R2-106349 Evaluation of SIB5 length and impact for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson Disc REL-8RANimp-UplinkEnhState

- QC: fine with the principle of the proposals. Would like to go further in the changes some existing Ies to MD instead of defining a new structure. E///: Goal was to give freedom to NW to use existing mechanism or use a new mechanism all together; that would provide more flexibility. The proposal was also to minimize removal of Ies in RRC because that can have impact. QC: proposal is to change MP->MD, not to remove Ies.
- NSN: When can those QC proposals be seen? QC: we don't need to decide on the dflt value, just to agree on which values are MD. NSN: changing to MD will not really help because different values are expected to be used in the field. Would be good to see the proposal from QC. NSN has already made other comments to E/// on MD values.
- Panasonic: does this proposal affect UEs not supporitng the feature? No.
- Should we consider further changes: QC: not much support seen offline.
- NSN: have comments in the CR

Agreements

=> Change the coding for the IE "Common E-DCH System Info" in SIB5 to minimize the impact of this IE in the number of segments used by SIB5.

=> Adopt the encoding suggested for the IE "Common E-DCH System Info" and captured in the CR R2-106352. We need to look at comments on details of the CR.

R2-106350 E-DCH transmission continuation back off and Maximum E-DCH resource allocation for CCCH values Ericsson, ST-Ericsson Disc REL-8RANimp-UplinkEnhState

- HW: If the issue is not critical, would prefer to not have this CR. This is an improvement that isn't critical

=> Noted

R2-106352 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 (4384) - F REL-8RANimp-UplinkEnhState

- NSN: Title page doesn't reflect the changes, that will need to be fixed depending on outcome of 6350 discussion.
- NSN: Scrambling code number = offset + common E-DCH resource list position missing modulo operation.
- NSN: 10.3.6.99: current default might not help because it depends on the table used for UL tx (value 1 is 120 or 180 depending on table used).
- Broadcom: Normative notes should be inside the table. We can check whether that would make a difference.
- Broadcom: need to clarify what is meant by "inverse" . QC: what is understood by inverse? "1's complement". Infineon: should check the spec for mathematical operations in 25.201… no definition for inverse there, we can choose.
- QC: Why is the redefined IE missing TDD? E///: commonsystemedchinfo doesn't impact TDD.
- HW: Why isn't E-RGCH info optimized as well? The same optimizations done for E-HICH can be ported to E-RGCH. That can be checked in a revision

=> The CR is revised in R2-106707

R2-106707 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4384 - F REL-8RANimp-UplinkEnhState

IPR2025-00720, OnePlus Ex. 1004

- Infineon: why is 120 removed? E///: It was agreed offline to finally remove this value as the company who expressed concerns finally agreed.
- Panasonic: this is a non-backward compatible change for eul-cell-fach. It should be highlighted in the RAN2 report. Chairman will highlight this in the report.
- QC: why is the cell considered barred if UE doesn't implement the CR? E///: there is change after change in TDD. With this change, the UE implementing eul in cell fach has to implement the CR. QC: with the exclusion of the FDD/TDD the change becomes non-backward compatible for rel'8 which isn't acceptable. Nokia agrees.
- QC: in order to solve this we need to copy the first 2 Ies of the common edch info into the FDD part.
- Nokia: should we add TEI8 to the WI code? This improves all UEs.
- Nokia: the consequences if not approved should be limited to sib5 repetition factor. The access delay isn't increased since all IEs still fit into the 12.8 s.

=> The CR is revised in R2-106799 R1

R2-106799 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4384 1 F REL-8RANimp-UplinkEnhState

- QC: 10.3.6.64a: Available Signatures => Available Sub channel numbers
- Nokia: The note for the dummy in ASN.1 can be moved above. Instead of treating cell as barred, should say UE behavior is unspecified. NSN: if UE cannot read SIBs, it should be following existing procedures. Nokia: this is to tell NW not to configure wrongly.
- Panasonic: why not leave the Ies? Nokia: if we do we may create confusion in NW.

=> The CR is revised in R2-106807

R2-106807 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4384 2 F REL-8RANimp-UplinkEnhState

=> email discussion [72#09]

R2-106354 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 (4385) - A REL-9RANimp-UplinkEnhState

=> The CR is revised in R2-106722

R2-106722 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4385 - A REL-9RANimp-UplinkEnhState

=> The CR is revised in R2-106800

R2-106800 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4385 1 A REL-9RANimp-UplinkEnhState

=> The CR is revised in R2-106808

R2-106808 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4385 2 A REL-9RANimp-UplinkEnhState

=> email discussion [72#09]

R2-106356 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 (4386) - A REL-10 RANimp-UplinkEnhState

=> The CR is revised in R2-106723

R2-106723 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4386 - A REL-10 RANimp-UplinkEnhState

=> The CR is revised in R2-106801

R2-106801 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4386 1 A REL-10 RANimp-UplinkEnhState

=> The CR is revised in R2-106809

R2-106809 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4386 2 A REL-10 RANimp-UplinkEnhState

=> email discussion [72#09]

R2-106369 RRC procedure performance for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson Disc REL-8RANimp-UplinkEnhState

- Nokia: Ok with adding a UE requirement but why choose the tight requirement of 60ms to perform reconfiguration? Broadcom agrees with Nokia. E/// chose this value because in other cases the N2 (time to send the complete after L1 has applied the config) is 1 or 2 TTIs after N1 (time for UE to apply the config at L1).
- E///: The use case is UE is in sync, already has a resource and needs to reconfigure to the new resource.
- Panasonic: Where is the new requirement intended to be added? E///: all cases where enh. UL in cell-fach applies.

IPR2025-00720, OnePlus Ex. 1004

- Interdigital: agrees with Nokia/Broadcom that requirement is too tight. The UE will have to change more info compared to other cases. Would like to relax n1 compared to what is proposed by E///.
- Panasonic: Before tightening the requirements, need to see that UE delay is the dominant factor.
- Nokia: What is the problem if we don't have the new requirement? E///: The transition delay impacts the dimensioning of the resources. Nokia: is the UE performance the bottleneck?
- QC: supports the principle to add a requirement, the transition is simple to have.
- E///: this proposal shouldn't be new for UEs, we have this in other cases.
- HW: maybe we can discuss N2 only in case of cell-fach to cell-dch transition.
- Offline discussion needs to take place on principle. If that's agreed, then details of requirements will be discussed.
- Consensus on having requirements

=> Noted

R2-106370 RRC procedure performance requirements for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson CR 25.331 (4395) - F REL-8RANimp-UplinkEnhState
=> The CR is revised in R2-106778

R2-106778 RRC procedure performance requirements for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson CR 25.331 4395 - F REL-8RANimp-UplinkEnhState
=>The CR is agreed

R2-106371 RRC procedure performance requirements for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson CR 25.331 (4396) - A REL-9RANimp-UplinkEnhState
=> The CR is revised in R2-106779

R2-106779 RRC procedure performance requirements for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson CR 25.331 4396 - A REL-9RANimp-UplinkEnhState
=> The CR is agreed

R2-106372 RRC procedure performance requirements for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson CR 25.331 (4397) - A REL-10 RANimp-UplinkEnhState
=> The CR is revised in R2-106780

R2-106780 RRC procedure performance requirements for Enhanced Uplink in CELL_FACH Ericsson, ST-Ericsson CR 25.331 4397 - A REL-10 RANimp-UplinkEnhState
=> The CR is agreed

R2-106459 Correction of HSPA_RNTI_STORED_CELL_PCH handling Nokia Corporation, Nokia Siemens Networks CR 25.331 (4404) - F REL-8RANimp-UplinkEnhState
=> The CR is agreed in R2-106708

R2-106462 Correction of HSPA_RNTI_STORED_CELL_PCH handling Nokia Corporation, Nokia Siemens Networks CR 25.331 (4405) - A REL-9RANimp-UplinkEnhState
=> The CR is agreed in R2-106709

R2-106463 Correction of HSPA_RNTI_STORED_CELL_PCH handling Nokia Corporation, Nokia Siemens Networks CR 25.331 (4406) - A REL-10 RANimp-UplinkEnhState
=> The CR is agreed in R2-106710

R2-106518 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic Disc REL-8RANimp-UplinkEnhState

- Nokia: only issue 3 is a real issue. Issue 1-1/1-2/1-3 are not real problems because variable will be set to false anyways. Issue 2 also isn't really a problem; there is already a mention in 8.2.2.3 that variable needs to be updated. Panasonic: need to check on issues 1-x. For issue 2, this was done for alignment for transition into cell dch from various states.
- Nokia: another problem with that variable has been found in case paging is received.
- E///: CR seems to be based on an old template. That can be checked

=> A separate CR needs to be provided in R2-106711

R2-106711 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic CR 25.331 4432 - F REL-8RANimp-UplinkEnhState

- Broadcom: change in 8.1.2.3 isn't needed. If UE has dedicated hrnti, it won't be paged with paging type 1. That change can be removed.

=> The CR is revised in R2-106759 R1

IPR2025-00720, OnePlus Ex. 1004

R2-106759 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4432 1 F REL-8RANimp-UplinkEnhState
- E///: we should renumber the issues
=> With this change the CR is revised in R2-106794

R2-106794 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4432 2 F REL-8RANimp-UplinkEnhState
=> The CR is agreed

R2-106724 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4433 - A REL-9RANimp-UplinkEnhState
=> The CR is revised in R2-106760 R1

R2-106760 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4433 1 A REL-9RANimp-UplinkEnhState
- E///: we should renumber the issues
=> With this change the CR is revised in R2-106795

R2-106795 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4433 2 A REL-9RANimp-UplinkEnhState
=> The CR is agreed

R2-106725 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4434 - A REL-10 RANimp-UplinkEnhState
=> The CR is revised in R2-106761 R1

R2-106761 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4434 1 A REL-10 RANimp-UplinkEnhState
- E///: we should renumber the issues
=> With this change the CR is revised in R2-106796

R2-106796 Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH Panasonic
CR 25.331 4434 2 A REL-10 RANimp-UplinkEnhState
=> The CR is agreed

R2-106597 Correction to the setting of variable READY_FOR_COMMON_EDCH Samsung CR 25.331
(4424) - F REL-8RANimp-UplinkEnhState
- Impact analysis mising
- E///: this is using a wrong version of CR form.
- E///: Is the RAN really impacted?
=> The CR is revised in R2-106712

R2-106712 Correction to the setting of variable READY_FOR_COMMON_EDCH Samsung CR 25.331
4424 - F REL-8RANimp-UplinkEnhState
=> Withdrawn

R2-106598 Correction to the setting of variable READY_FOR_COMMON_EDCH Samsung CR 25.331
(4425) - A REL-9RANimp-UplinkEnhState
- Impact analysis mising
=> The CR is revised in R2-106713

R2-106713 Correction to the setting of variable READY_FOR_COMMON_EDCH Samsung CR 25.331
4425 - A REL-9RANimp-UplinkEnhState
=> Withdrawn

R2-106601 Correction to the setting of variable READY_FOR_COMMON_EDCH Samsung CR 25.331
(4426) - A REL-10 RANimp-UplinkEnhState
- Impact analysis mising
=> The CR is revised in R2-106714

R2-106714 Correction to the setting of variable READY_FOR_COMMON_EDCH Samsung CR 25.331
4426 - A REL-10 RANimp-UplinkEnhState
=> Withdrawn

Late:

R2-106662 Change in the radio bearer mapping due to a system information message Ericsson, ST-Ericsson CR 25.331 (4429) - F REL-8RANimp-UplinkEnhState
- Nokia: What is the use case that causes a change of rlc size? E///: use case is UE is operating with common e-dch and then moves to a cell where common e-dch isn't configured. Interdigital: The UE should be getting the info about the new size in the CUC.
- Broadcom: the proper UE behavior should already been captured.

IPR2025-00720, OnePlus Ex. 1004

- Companies can investigate further offline

=> The CR is revised in R2-106781

R2-106781 Change in the radio bearer mapping due to a system information message Ericsson, ST-Ericsson CR 25.331 4429 - F REL-8RANimp-UplinkEnhState

- QC: UL->Uplink. The CR was provided late, maybe better for email discussion
- Nokia: need to postpone to the next meeting

=> The CR is postponed to the next meeting

R2-106663 Change in the radio bearer mapping due to a system information message Ericsson, ST-Ericsson CR 25.331 (4430) - A REL-9RANimp-UplinkEnhState

=> The CR is revised in R2-106782

R2-106782 Change in the radio bearer mapping due to a system information message Ericsson, ST-Ericsson CR 25.331 4430 - A REL-9RANimp-UplinkEnhState

=> The CR is postponed to the next meeting

R2-106664 Change in the radio bearer mapping due to a system information message Ericsson, ST-Ericsson CR 25.331 (4431) - A REL-10 RANimp-UplinkEnhState

=> The CR is revised in R2-106783

R2-106783 Change in the radio bearer mapping due to a system information message Ericsson, ST-Ericsson CR 25.331 4431 - A REL-10 RANimp-UplinkEnhState

=> The CR is postponed to the next meeting

REL-8 RANimp-HSDSCH (RAN2):

R2-106511 Clarifications for deletion of target cell preconfiguration for existing RL by ASU Panasonic CR 25.331 (4409) - F REL-8RANimp-HSDSCH

- Infineon: would like to keep prose at the beginning of 8.5.52. That can be discussed offline

=> The CR is revised in R2-106715

R2-106715 Clarifications for deletion of target cell preconfiguration for existing RL by ASU Panasonic CR 25.331 4409 - F REL-8RANimp-HSDSCH

- The highlighted text should be removed

=>With this change the CR is agreed in R2-106762 R1

R2-106515 Clarifications for deletion of target cell preconfiguration for existing RL by ASU Panasonic CR 25.331 (4410) - A REL-9RANimp-HSDSCH

=> The CR is revised in R2-106716

R2-106716 Clarifications for deletion of target cell preconfiguration for existing RL by ASU Panasonic CR 25.331 4410 - A REL-9RANimp-HSDSCH

- Other comments should describe difference between cat F and cat A CR

=> With this change the CR is agreed in R2-106763 R1

R2-106517 Clarifications for deletion of target cell preconfiguration for existing RL by ASU Panasonic CR 25.331 (4411) - A REL-10 RANimp-HSDSCH

=> The CR is revised in R2-106717

R2-106717 Clarifications for deletion of target cell preconfiguration for existing RL by ASU Panasonic CR 25.331 4411 - A REL-10 RANimp-HSDSCH

- Other comments should describe difference between cat F and cat A CR

=> With this change the CR is agreed in R2-106764 R1

REL-8 ETWS (SA1):

R2-106160 Corrections to ETWS primary notification with security procedure Infineon Technologies CR 25.331 (4358) - F REL-8ETWS

- Broadcom: first change isn't needed, that is covered by first bullet 1.
- NW should be impacted by first change. Impact analysis as well.

=> The CR is revised in R2-106718

R2-106718 Corrections to ETWS primary notification with security procedure Infineon Technologies CR 25.331 4358 - F REL-8ETWS

=> The CR is agreed

R2-106161 Corrections to ETWS primary notification with security procedure Infineon Technologies CR 25.331 (4359) - A REL-9ETWS

=> The CR is revised in R2-106719

IPR2025-00720, OnePlus Ex. 1004

R2-106719 Corrections to ETWS primary notification with security procedure Infineon Technologies CR 25.331 4359 - A REL-9ETWS
=> The CR is agreed

R2-106162 Corrections to ETWS primary notification with security procedure Infineon Technologies CR 25.331 (4360) - A REL-10 ETWS
=> The CR is revised in R2-106720

R2-106720 Corrections to ETWS primary notification with security procedure Infineon Technologies CR 25.331 4360 - A REL-10 ETWS
=>The CR is agreed

REL-8 TEI8:

R2-106172 RNC ID issue ZTE Disc REL-8TEI8
=> Move to ANR WI.

R2-106180 Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency Qualcomm Incorporated CR 25.331 (4367) - F REL-8TEI8
- HW: Why the new bullet 2 doesn't include inter-RAT? What happens if the new bullet 2 is removed? QC: mostly for clarity. E///: It's more than clarity, it's needed. HW: fine with bullet 2 but should it be made specific to DC?
- E///: need to clarify if there is NW impact or not. The NW impact is that it's more complicated to configure the same measurement. Sentence in impact analysis needs to be revised
- E///: if that bullet 2 isn't needed, we shouldn't have it.
- Changes for revision: Impact analysis for NW not implementing the CR. Added bullet 2 removed in both occurences of changes.

=> The CR is revised in R2-106727

R2-106727 Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency Qualcomm Incorporated CR 25.331 4367 - F REL-8TEI8
- The CR# needs to be added

=> With this change the CR is agreed in R2-106771 R1

R2-106181 Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency Qualcomm Incorporated CR 25.331 (4368) - A REL-9TEI8
=> The CR is revised in R2-106728

R2-106728 Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency Qualcomm Incorporated CR 25.331 4368 - A REL-9TEI8
- The CR# needs to be added

=> With this change the CR is agreed in R2-106772 R1

R2-106182 Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency Qualcomm Incorporated CR 25.331 (4369) - A REL-10 TEI8
=> The CR is revised in R2-106729

R2-106729 Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency Qualcomm Incorporated CR 25.331 4369 - A REL-10 TEI8
- The CR# needs to be added

=> With this change the CR is agreed in R2-106773 R1

R2-106412 Clarification of RAB information for setup ZTE Disc REL-8TEI8
- Samsung: Do we support CS video call in R99 and reconfig to CS voice in R99? The part of keeping the same RB Id should be kept for CsoHS feature.
- ALU: agree with ZTE that the text added in rel'8 for CsoHS makes the rab setup unworkable.
- NSN: If we change as per ZTE proposal, backward compatibility issues can be created.
- RIM: Current text not really clear.
- Samsung: we cannot change the legacy behavior and in particular not for something that NW may not use in practice.
- RIM: the use case brought up by ZTE has been discussed before in RAN2 and at that time it was decided to leave the extra subflows with null config.
- Offline discussion needed to determine what the current UE behavior should be. Legacy behavior is clear until rel'7 but there may be issues starting from release 8.

=> Noted

IPR2025-00720, OnePlus Ex. 1004

R2-106537 Clarification of the RAB handling not indicated in HO TO UTRAN COMMAND NTT DOCOMO, INC. CR 25.331 (4416) - F REL-8TEI8
- Nokia: The established-rabs variable will be setup as UE is moved to UTRAN so it won't contain the RABs which haven't been handed over.
- Samsung: agrees with Nokia nothing needs to be captured. LTE RBs not handed over can be handled by UE implementation.
- DCM: current spec isn't clear as to what UE does with RBs not handed over.
- E///: Variable will be empty coming from LTE, ther eis nothing to remove.

=> The CR is not agreed.

R2-106538 Clarification of the RAB handling not indicated in HO TO UTRAN COMMAND NTT DOCOMO, INC. CR 25.331 (4417) - A REL-9TEI8
=> Not treated

R2-106540 Clarification of the RAB handling not indicated in HO TO UTRAN COMMAND NTT DOCOMO, INC. CR 25.331 (4418) - A REL-10 TEI8
=> Not treated

9 UTRA Release 9

9.1 DC-HSDPA with MIMO (RP-090332)

(RANimp-DC_MIMO, leading WG: RAN1, started: March 09, closed: Dec. 09, WID: RP-090332)

9.1.1 In principle agreed CRs

R2-106068 Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size Nokia Corporation, Nokia Siemens Networks CR 25.306 0277 - F REL-9RANimp-DC_MIMO
=> The CR is agreed

R2-106070 Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size Nokia Corporation, Nokia Siemens Networks CR 25.306 0279 - A REL-10 RANimp-DC_MIMO
=> The CR is agreed

9.1.2 Others

R2-106359 Precoding weight set restriction setting for secondary cell Ericsson, ST-Ericsson CR 25.331 (4387) - F REL-9RANimp-DC_MIMO
- HW: Would prefer to apply the PWR also to the secondary carrier in case MIMO is only configured on secondary. E///: This decision has been made 10 months ago and it was decided not to allow this.
- HW: there has been some changes in the MIMO deployment assumptions, potentially segregating MIMO users to secondary carrier. And for this case it would make sense to have PWR configured to secondary.
- Nokia: agrees with HW it would be preferable to introduce PWR in rel'9.
- QC: Supports the proposal to have full flexibility from rel'9.
- E///: We could also have a solution with same behavior for UE if we use same NCE of rel'10

=> The CR is revised in R2-106731

R2-106731 Precoding weight set restriction setting for secondary cell Ericsson, ST-Ericsson CR 25.331 4387 - F REL-9RANimp-DC_MIMO
=> The CR is revised in R2-106798

R2-106798 Precoding weight set restriction setting for secondary cell Ericsson, ST-Ericsson CR 25.331 4387 1 F REL-9RANimp-DC_MIMO
=>revised in R2-106805

IPR2025-00720, OnePlus Ex. 1004

R2-106805 Precoding weight set restriction setting for secondary cell Ericsson, ST-Ericsson CR 25.331 4387 2 F REL-9RANimp-DC_MIMO
=> The CR is postponed to email discussion (same as R2-106804)

9.2 DC-HSUPA (RP-090014)

(RANimp-DC_HSUPA, leading WG: RAN1, started: March 09, closed: March 10, WID: RP-090014)

R2-106178 Correction of IE handling relevant to DC-HSUPA ZTE CR 25.331 (4365) - F REL-9RANimp-DC_HSUPA
- Replace curly brackets with straight brackets
- Typo: “secodary” -> “secondary”
- HW: This IE is never stored by UE, why clear it?

=> The CR is not agreed

R2-106179 Correction of IE handling relevant to DC-HSUPA ZTE CR 25.331 (4366) - A REL-10 RANimp-DC_HSUPA
=> The CR is not agreed

R2-106366 Procedural text to support measurements in the Secondary UL Frequency Ericsson, ST-Ericsson CR 25.331 (4392) - F REL-9RANimp-DC_HSUPA
- ALU: 14.1.2.1: why use “and/or” in event trigger but not periodic? E///: that was based on early feedback from Nokia. ALU: it would be better to keep consitency.
- QC: 8.6.7.4: should it be an “and” or an “or”? E///: That can be discussed.
- QC: 10.3.7.39: this change looks very different from before.
- QC: 14.1.2: why not include also event 1D in case the 1D on primary is reported? E///: that may be reasonable to report.
- HW: Why force UE to report the measurements on both frequencies together? Both should be kept completely independantly. E///: That was the initial agreement but has been changed during ASN.1 review because we allowed to report together so we need to make use of this. The new method doesn’t prevent NW from doing this independantly. HW: agreement was that NW use the same meas Id for both frequencies. Interdigital: preference for the way E/// proposes in case UE is configured to report both freqs at the same time. NW still has a choice of configuring one way or the other. The needs to be discussed offline.
- The 3 topics can be discussed offline, a revision will be needed

=> The CR is revised in R2-106732

R2-106732 Procedural text to support measurements in the Secondary UL Frequency Ericsson, ST-Ericsson CR 25.331 4392 - F REL-9RANimp-DC_HSUPA
- HW: concern with forcing UE to report both measurements. E///: the reports are triggered independantly hence the amount of reports will be the same, only difference is the payload will be larger.
- HW: would propose to restart the TTT on the other frequency. E///: this is an improvement to reduce the amount of packets sent on the UL. It minimizes the intensity. NSN agrees with E/// it’s a different issue.
- QC: another way would be to indicate to NW that event has triggered but not include in the report. E///: prefers to discuss this in a separate discussion.
- HW: the baseline could be that both frequencies have fully independent reports. E///: The reason we have this is because it’s been allowed as part of ASN.1 review. HW: maybe the ASN.1 is not good enough. Interdigital: agree with E/// that we need to consider UE reporting both measurements. Further offline discussion needed on this

=> email agreement [72#11]

R2-106367 Procedural text to support measurements in the Secondary UL Frequency Ericsson, ST-Ericsson CR 25.331 (4393) - A REL-10 RANimp-DC_HSUPA
=> The CR is revised in R2-106733

R2-106733 Procedural text to support measurements in the Secondary UL Frequency Ericsson, ST-Ericsson CR 25.331 4393 - A REL-10 RANimp-DC_HSUPA
=> email agreement [72#11]

IPR2025-00720, OnePlus Ex. 1004

9.3 Home-NB enhancements (RP-091392)

(EHNB-RAN2, leading WG: RAN2, started: March 09, closed: March 10, WID: RP-091392)

9.3.1 In principle agreed CRs

R2-106108 Correction to the limitation of SI acquisition Huawei, HiSilicon CR 25.331 4344 - F REL-9EHNB-RAN2
- Other comment not valid anymore? Which version of spec is this based on? 9.3.0?
=> revised in R2-106666

R2-106666 Correction to the limitation of SI acquisition Huawei, HiSilicon CR 25.331 4344 1 F REL-9EHNB-RAN2
=> The CR is agreed

R2-106109 Correction to the limitation of SI acquisition Huawei, HiSilicon CR 25.331 4345 - A implicitly in principle agreed at RAN2 #71bis REL-10 EHNB-RAN2
- Other comment not valid anymore?
=> revised in R2-106667

R2-106667 Correction to the limitation of SI acquisition Huawei, HiSilicon CR 25.331 4345 1 A REL-10 EHNB-RAN2
=> The CR is agreed

R2-106122 Correction to the limitation of SI acquisition Huawei, HiSilicon CR 25.367 0019 - F REL-9EHNB-RAN2
=> The CR is agreed

9.3.2 Others

No contributions.

9.4 TEI9

9.4.1 In principle agreed CRs

R2-106072 Introduction of REL-9 access stratum release indicator ZTE CR 25.306 0281 - F REL-9TEI9
=> The CR is agreed

R2-106073 Introduction of REL-9 access stratum release indicator ZTE CR 25.306 0282 - A implicitly in principle agreed at RAN2 #71bis REL-10 TEI9
- Impact analysis missing
- no need to add “other comments”
=> With these changes the CR is agreed in R2-106734 R1

9.4.2 Others

R2-106276 Re-establish RLC entity when the 'Use special value of HE field' is changed to not configured Qualcomm Incorporated, Broadcom Corporation CR 25.331 (4378) - F REL-9 TEI9
=> The CR is postponed to the next meeting

R2-106277 Re-establish RLC entity when the 'Use special value of HE field' is changed to not configured Qualcomm Incorporated, Broadcom Corporation CR 25.331 (4379) - A REL-10 TEI9
=> The CR is postponed to the next meeting

R2-106374 When to discard RLC PDUs with special value HE field set Ericsson, ST-Ericsson, Nokia Corporation, Nokia Siemens Networks, Alcatel-Lucent, InterDigitalCR 25.322 (0389) - F REL-9TEI9
- QC: What is the meaning of “special value of HE” field? Should this be made consistent in 25.331? E///: The text refers to the transmitting entity, the only change is related to the receiving entity. QC: HE field applies to both UL and DL.

IPR2025-00720, OnePlus Ex. 1004

- Nokia: No contradiction between RRC and MAC. Configuration of special HE value and support of receiving it are different. QC: What is the use for that?
-
- Alternative A
  -Receiving RLC entity is able to receive special HE field value
  -Use of special value of HE field for DL is not configurable
- Alternative B
  -Receiving RLC entity is able to receive special HE field value
  -Use of special value of HE field is configurable
- Broadcom: What is the NW behavior in case there are pending retx or packets build ahead of time? E///: NW can use poll bit to figure out whether any packets are pending. Broadcom: why not do a re-establishment in this case.
- E///: without the reconfig we can do early implementation. With the RRC CR no early implementation is possible. QC: Let's not focus on early implementability.
- Nokia: Why is QC CR proposing a new UE requirement?

=> The CR is postponed to the next meeting

R2-106402 Addition of UE ROHC capability in IRAT handover Alcatel-Lucent CR 25.331 (4399) - F REL-9RANimp-RABSE, TEI9

- Nokia: new IE should be included in inter-RAT HO only. The way it's introduced right now, it would be duplicated.

=> The CR is revised in R2-106735

R2-106735 Addition of UE ROHC capability in IRAT handover Alcatel-Lucent CR 25.331 4399 - F REL-9RANimp-RABSE, TEI9

=> The CR is agreed

R2-106403 Addition of UE ROHC capability in IRAT handover Alcatel-Lucent CR 25.331 (4400) - A REL-10 RANimp-RABSE, TEI9

=> The CR is revised in R2-106736

R2-106736 Addition of UE ROHC capability in IRAT handover Alcatel-Lucent CR 25.331 4400 - A REL-10 RANimp-RABSE, TEI9

=> The CR is agreed

R2-106466 Adding support for ECN in UTRA Ericsson, ST-Ericsson CR 25.401 - - B note: 25.401 is a RAN3 TS REL-9TEI9

- If endorsed by RAN2, send to RAN3 for formal agreement.
- SA2: that should be in release 10
- QC: preference for having stage3 in PDCP text rather than stage 2.
- E///: In LTE, this is not stage 3 because there is no requirement for the UE. Also, this ECN is not on PDCP, it operates on top of PDCP SDUs.
- E///: why should UE-RAN be involved? This is captured at higher layers
- NSN: Why are we discussing this in RAN2?
- E///: the node indicating the congestion is RNC which is under RAN2 control.
- NSN: This ECN can be set by any IP node, not only RNC.
- NSN: reference [35] should be [36].
- Broadcom: WI code is not TEI10, needs to be checked.

=> RAN2 endorses the document in R2-106737 with the changes of reference (35=>36), release 9->10, WI code should be corrected

R2-106379 Adding Support for Explicit Congestion Notification Qualcomm Incorporated CR 25.323 (0322) - B REL-10 TEI10, LTE-L23

- Broadcom: rate adaptation is already captured in 26.114
- Panasonic: not clear it's PDCP that is reponsible for this setting
- NSN: this is not a PDCP function, it's IP layer. This is not adding anything in PDCP layer.

=> The CR is not agreed

R2-106521 Clarification of the CSFB procedure not to set â€□Pre-redirection infoâ€□ NTT DOCOMO, INC. CR 25.331 (4412) - F REL-9TEI9

=> Withdrawn

R2-106522 Clarification of the CSFB procedure not to set â€□Pre-redirection infoâ€□ NTT DOCOMO, INC. CR 25.331 (4413) - A REL-10 TEI9

IPR2025-00720, OnePlus Ex. 1004

=> Withdrawn

9.5 Other UTRA Rel-9 WIs

(RANimp-TxAA_nonMIMO; leading WG: RAN1, started: March 08, closed: Dec. 09, WID: RP-090013)

No contributions for WI RANimp-TxAA_nonMIMO.

(RANimp-MultiBand_DC_HSDPA; leading WG: RAN4, started: March 08, closed: Dec. 09, WID: RP-090973)

R2-106299 Discussion on DB-DC+MIMO capability Huawei, HiSilicon Disc REL-9RANimp-MultiBand_DC_HSDPA
- Treat with R2-106269/R2-106365
- Interdigital: DC+MIMO is only for adjacent frequencies. We can't go back to rel'9 and make it mandatory for UEs who support DB-DC and DC+MIMO. HW: there is no new UE requirment for those types of UEs. Nokia: agrees with Interdigital, and this is already clarified in 25.308.
- HW agrees but wants to change the RAN2 spec. QC supports adding a new flag in rel'9.
- Nokia: Rel'9 is a frozen release, that's a new feature.
- ZTE: maybe the new feature can be added in rel'9 without much changes.

=> We won't consider a new feature for release 9. That can be considered for release 10.
=> Noted

R2-106300 Correction for DB-DC+MIMO capability (R9) Huawei, HiSilicon CR 25.331 (4380) - F REL-9RANimp-MultiBand_DC_HSDPA
=> Not treated

R2-106301 Correction for DB-DC+MIMO capability (R10) Huawei, HiSilicon CR 25.331 (4381) - A REL-10 RANimp-MultiBand_DC_HSDPA
=> Not treated

R2-106610 Applicability of Compressed Mode on all Carriers SamsungDisc REL-9RANimp-MultiBand_DC_HSDPA
- QC: not in favor of this proposal, this is assuming a certain UE implementation that doesn't need to be always true. Samsung would like to know more. QC: there is merit on the proposal
- Nokia: current RAN1 assumption is CM pattern applies to all configured patterns. Is there also RAN3 impact, NB would need to know which carrier have CM or not. Samsung: NB shouldn't need further changes if it already knows which carriers are configured with CM.
- Ericsson: Some similar proposal could be considered for rel'10. Potential RAN1 changes should be investigated.
- Offline: there is some support. Companies invited to check with RAN1/3 collegues

=> Noted

10 UTRA Release 10

10.1 WI: LCR TDD MC-HSUPA (RP-090990)

(TDD_MC_HSUPA; leading WG: RAN1, started: Sep. 09, target: Dec. 10, WID: RP-090990)

10.1.1 CRs

Including CRs to stage 2 and stage 3
=> Including email discussion outcome for [71b#22]: UMTS: MC-HSUPA TDD - Verify ASN.1 implementation [ZTE]

10.1.1.1 In principle agreed CRs

R2-106066 Introduction of MC-HSUPA for 1.28Mcps TDD ZTE CR 25.302 0203 - B REL-10 TDD_MC_HSUPA
- Infineon: Table 4 is for combinations in the same frequency. That isn't appropriate for MC-HSUPA. We could instead follow FDD example and use another table. This will be captured in a revision of the CR.

IPR2025-00720, OnePlus Ex. 1004

- Infineon: the combination has DL interaction. Another table can be added to capture this. Do we need to do this now? That can be provided in a separate CR.

=> The CR is revised in R2-106742 R1

R2-106742 Introduction of MC-HSUPA for 1.28Mcps TDD ZTE CR 25.302 0203 1 B REL-10 TDD_MC_HSUPA

=> The CR is agreed (after RAN2 #72 R2-106742 was revised in R2-106983 to use correct CR number 0203 rev 2).

R2-106091 Introduction of LCR TDD MC-HSUPA in 25.322 CATT CR 25.322 0388 - B REL-10 TDD_MC_HSUPA

=> The CR is agreed

10.1.1.2 Others

R2-106410 Introduction of MCHSUPA for 1.28Mcsp TDD ZTE CR 25.331 (4403) - B related to email discussion [71b#22] REL-10 TDD_MC_HSUPA

=> The CR is revised in R2-106726

R2-106726 Introduction of MCHSUPA for 1.28Mcsp TDD ZTE CR 25.331 4403 - B related to email discussion [71b#22] REL-10 TDD_MC_HSUPA

- Ericsson: need more time to check the new changes
- Chairman: do we need all the RLC buffer granularity? This is a lot of values and it impacts FDD as well. That can be discussed offline

=> The CR is revised in R2-106745 R1

R2-106745 Introduction of MCHSUPA for 1.28Mcsp TDD ZTE CR 25.331 4403 1 B related to email discussion [71b#22] REL-10 TDD_MC_HSUPA

- Ericsson: we should add a spare value in ASN.1/Tabular for buffer sizes
- Nokia: inter freq cell info list is changed in asn.1, does the MCM need to be changed as well? MCM already has a rel10 branch, no further impact needed.

=> The CR is revised in R2-106765 R2

R2-106765 Introduction of MCHSUPA for 1.28Mcsp TDD ZTE CR 25.331 4403 2 B related to email discussion [71b#22] REL-10 TDD_MC_HSUPA

=> The CR is agreed

R2-106420 introduction of MC-HSUPA for 1.28Mcps TDD TD Tech CR 25.321 (0719) - B REL-10 TDD_MC_HSUPA

- Coversheet has formatting issues
- Other comments need to be updated
- Remove changes on changes (9.2.6.3, 9.2.6.4.3, 4.2.4.8)

=> The CR is revised in R2-106721

R2-106721 introduction of MC-HSUPA for 1.28Mcps TDD TD Tech CR 25.321 (0719) - B REL-10 TDD_MC_HSUPA

- Remove changes on changes
- E///: space missing in 8.3.2
- Coversheet has formatting issues
- The changes will need to be ported on the new version of the spec
- Chairman: In 9.1.5.2: Need to capture all con SI format conditions captured? This needs to be checked. ZTE confirms all the conditions have been captured.
- Chairman: in 9.2.6.3: “are included” => “may be included”
- Chairman: In 11.9.1.4, there is no UE requirement anywhere. Is this stage 3 text? ZTE: there are some normative requirements. Chairman: should we put the informatvie text in a note?
- ZTE: We could capture in the note how to set the priority and leave as requirement what UE shall do with priority. That can be seen in a revision.

=> The CR is revised in R2-106746

R2-106746 introduction of MC-HSUPA for 1.28Mcps TDD TD Tech CR 25.321 0719 - B REL-10 TDD_MC_HSUPA

=> The CR is agreed

R2-106421 introduction of MC-HSUPA for 1.28Mcps TDD TD Tech CR 25.306 (0284) - B REL-10 TDD_MC_HSUPA

- Remove changes on changes (5.1n-a)
- Infineon: sentence below 5.1m-a isn’t clear. More text can be added to clarify this.

IPR2025-00720, OnePlus Ex. 1004

=> The CR is revised in R2-106744

R2-106744 introduction of MC-HSUPA for 1.28Mcps TDD TD Tech CR 25.306 0284 - B REL-10 TDD_MC_HSUPA
=> The CR is agreed

R2-106640 Modification for MC-HSUPA for 1.28Mcp TDD TD Tech CR 25.319 (0074) - F REL-10 TDD_MC_HSUPA
- remove track changes from coversheet.
=> The CR is revised in R2-106738

R2-106738 Modification for MC-HSUPA for 1.28Mcp TDD TD Tech CR 25.319 (0074) - F REL-10 TDD_MC_HSUPA
- Category should be F
- Title needs to be revised
- Consequences if not approved need to be revised.
=> The CR is revised in R2-106743

R2-106743 Correction on Multi-Carrier E-DCH operation for 1.28Mcp TD TD Tech CR 25.319 0074 - F REL-10 TDD_MC_HSUPA
=> The CR is agreed

10.1.2 E-TFC selection

Details on how to perform sequential power splitting for E-TFC selection, how to allocate power to different channels, how to allocate power between the different carriers

R2-106304 Further discussion on E-TFC selection in MC-HSUPA CATT Disc
=> Not treated

R2-106422 Discussion on E-TFC selection for 1.28Mcps TDDTD Tech Disc
=> Not treated

10.1.3 Others

No contributions.

10.2 WI: 4C-HSDPA (RP-100991)

(4C_HSDPA-Core; leading WG: RAN1, started: Dec. 09, target: Dec. 10, WID: RP-100991)

10.2.1 CRs

Including CRs to stage 2 and 3

10.2.1.1 In principle agreed CRs

R2-106069 Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size Nokia Corporation, Nokia Siemens Networks CR 25.306 0278 - F REL-10 4C_HSDPA-Core
=> The CR had to be revised in R2-106981 since R2-106069 did not use the CR number. R2-106981 is agreed.

R2-106107 Correction to the absence of IE additional Cells in 4C-HSDPA SamsungCR 25.331 4343 - F REL-10 4C_HSDPA-Core
- NSN: should be be forward compatible to >4 carriers? We can keep it for now.
=> The CR is agreed

R2-106116 Some clarifications of 4C-HSDPA behavior ZTE CR 25.331 4352 - F REL-10 4C_HSDPA-Core
- NSN: We should refer to 8.5.51 instead of setting the variable to false in this subclause.
- NSN: section 8.6.6.48 should apply starting from release 9. This should be checked.

IPR2025-00720, OnePlus Ex. 1004

- NSN: Would like to make sure all carrier combination bits are set, not only have a statement in semantics. This can be discussed offline

=> The CR is revised in R2-106747 R1

R2-106747 Some clarifications of 4C-HSDPA behavior ZTE CR 25.331 4352 1 F REL-10 4C_HSDPA-Core

- TURE=>TRUE

=> With this change the CR is agreed in R2-106769 R2

10.2.1.2 Others

R2-106209 Introduction of 4C-HSDPA definitions Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon CR 25.302 (0204) - B REL-10 4C_HSDPA-Core

- Category is F, not B.
- Nokia: Spec is already clear enough. CR not needed. Infineon: the special term "1st/2nd/3rd" are used in the 25.302 body. Nokia thinks the current body of the text is clear enough, there shouldn't be any ambiguity.E///: "the" -> "a" and no need for 1/2/3. Samusng agrees.
- QC: those definitions should be aligned with 25.331. NSN: agrees we can limit the changes.

=> With the change proposed by E/// and aligning with 25.331, the CR is revised in R2-106748

R2-106748 Introduction of 4C-HSDPA definitions Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon CR 25.302 0204 - B REL-10 4C_HSDPA-Core

=> The CR is replaced in R2-106752

R2-106752 Introduction of 4C-HSDPA definitions Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon CR 25.302 0204 - B REL-10 4C_HSDPA-Core

- Nokia: "frequencies are" -> "frequency is" can be corrected in 2 places (at least)

=> With these changes the CR is agreed in R2-106770 R1 (after RAN2 #72 R2-106770 was revised in R2-106984 to use correct CR number 0204 rev 2).

R2-106302 Corrections on 25.331 for 4C-HSDPA Huawei, HiSilicon CR 25.331 (4382) - F REL-10 4C_HSDPA-Core

- Need more descriptive title
- QC: By using "measured frequency" we are introducing a functional change. HW: For 4C UEs with enhanced inter-freq measurement, we shouldn't restrict the frequency to the adjacent freq. This text is for 4C-HSDPA only.
- IDT: first change should refer to frequencies and not only one frequency. The change on the subsequent sentence should be removed.
- Ericsson: agrees with IDT. Changes on measured results aren't clear. What are the "measured" frequencies there? Has UE started measuring? HW: that can be addressed in terminology eg freqs to measure.
- Ericsson: need to clarify what is the UE BW capability? Intention was to clarify what valid configuration refers to.
- QC: adjacent frequency doesn't need to be 5MHz away. It can be any frequency. IDT: Currently there is only one other frequency in 13.4.0. That can be checked. Further offline discusison needed.

=> The CR is revised in R2-106749

R2-106749 Corrections on 25.331 for 4C-HSDPA Huawei, HiSilicon CR 25.331 4382 - F REL-10 4C_HSDPA-Core

=> The CR is agreed

R2-106303 Corrections on 25.306 for 4C-HSDPA Huawei, HiSilicon CR 25.306 (0283) - F REL-10 4C_HSDPA-Core

- Need more descriptive title
- Ericsson: first change is changing a legacy UE behavior. Nokia: what is the point of changing the definition. Samusng: agrees with Nokia and E///, this flag is not helping the NW determine what UE supports. First change can be removed.
- NSN: concerned that with a simple yes/no in the table we don't capture the inter-dependency.
- E///: we don't need to capture the inter-dependency in different places.

=> The CR is revised in R2-106750

R2-106750 Corrections on 25.306 for 4C-HSDPA Huawei, HiSilicon CR 25.306 0283 - F REL-10 4C_HSDPA-Core

IPR2025-00720, OnePlus Ex. 1004

=> The CR is agreed

R2-106368 Precoding weight set restriction setting for secondary cells Ericsson, ST-Ericsson CR 25.331 (4394) - F REL-10 4C_HSDPA-Core
- QC: why do we still need the fallback mechanism in case NW didn't configure the PWRs in rel'9? E///: We cannot make an assumption on what the NW has implemented up to now.
- E///: need to see a revision after offline discussions

=> The CR is revised in R2-106730

R2-106730 Precoding weight set restriction setting for secondary cells Ericsson, ST-Ericsson CR 25.331 4394 - F REL-10 4C_HSDPA-Core
- Samsung: is it possible to configure mimo on both and PWR on the primary only? E///: not sure there is interest but if needed it can be done.
- QC: we should be specific on which PWR is stored
- We need to return to the older logic.
- Nokia: Will this apply to each secondary carrier. We should add "corresponding entry" to clarify that we 're refering to different secondary carriers.

=> The CR is revised in R2-106797 R1

R2-106797 Precoding weight set restriction setting for secondary cells Ericsson, ST-Ericsson CR 25.331 4394 1 F REL-10 4C_HSDPA-Core
- QC: with this approach, the NW needs to configure the PWR on the secondary explicitly.
- E///: that can be done in a revision of the CR

=> The CR is revised in R2-106804

R2-106804 Precoding weight set restriction setting for secondary cells Ericsson, ST-Ericsson CR 25.331 4394 1 F REL-10 4C_HSDPA-Core

=> The CR is postponed to email agreement until Wednesday 24th

R2-106555 Corrections to 4C-HSDPA InterDigital CR 25.331 (4419) - F REL-10 4C_HSDPA-Core
- Need more descriptive title
- Samsung: the first change doesn't modify anything, it shouldn't be needed. The second change can be moved up when entry is checked only once. Same for the bullet above for evaluating 8.5.58
- QC: This second change collides with ZTE CR R2-106116, ZTE's change wouldn't be needed anymore.

=> The CR is revised in R2-106751

R2-106751 Corrections to 4C-HSDPA InterDigital CR 25.331 4419 - F REL-10 4C_HSDPA-Core
- Infineon: UE box should be ticked, revision is 10.1.0

=> With these changes the CR is agreed in R2-106802 R1

10.2.2 Others

R2-106269 Dual Band Dual Cell MIMO only Rel-10 UE not 3C or 4C capable Ericsson, ST-Ericsson Disc REL-10 4C_HSDPA-Core
- Treat with R2-106299
- HW: should we allow for early implementation of this? That can be discussed later in the details of proposal

=> Agreement: The Release 10 UE should be able to signal an ability to only perform DB-DC-HSDPA and MIMO operations (without being capable of 3C/4C).
=> We agree to capture this functionality along option 1 proposal

- NSN: prefer to have a separate bit to indicate support, that's option 1.
- QC: this should be treated in TEI10. Preference for option 1 as well. IDT would be fine with option 1 as well
- QC: there is more support to add this starting in release 9. Nokia doesn't agree. E///: it's too late to decide what rel'9 contains or not. It's too late now.

=>The CR is postponed

10.3 WI: RF pattern matching in UMTS (RP-091427)

(LCS_UMTS_RFPMT-Core; leading WG: RAN2, started: Dec. 09, target: Dec. 10, WID: RP-091427)

No contributions.

IPR2025-00720, OnePlus Ex. 1004

10.4 WI: Minimisation of Drive Test (RP-100360)

(MDT_UMTSLTE-Core, leading WG: RAN2, started: Dec. 09, target: Dec. 10, WID: RP-100360)

10.4.1 UMTS specific Stage-2 aspects

=> Including email discussion outcome for [71b#21]: UMTS: MDT - log availability indication [NSN]

R2-106221 Summary of email discussion [71b#21]: UMTS: MDT - log availability indication Nokia Siemens Networks, Nokia Corporation Report
related to email discussion [71b#21]
- No discussion during online email
- QC: we typically try to keep CU URAU small, why is the rationale for adding this log availability here? NSN: it's only 1 bit and that can save signaling since UE could be put in cell-fach directly instead of putting it back in pch.

- Proposal during offline discussion:
  -Add presence of log availability to CUpdate and URAUpdate
  -Remove presence of log availability in reconfig messages where it would be redundant (keep UTRAN mobility info)

=> The group agrees to the proposal

R2-106530 Inclusion of UTRA LCR TDD metrics for MDT CATT Disc
=> Withdrawn

R2-106531 Inclusion of UTRA LCR TDD metrics for MDT CATT Disc
=> Revised in R2-106701

R2-106701 Inclusion of UTRA LCR TDD metrics for MDT CATT Disc

=> Agreements for TDD
- Proposal 1: UTRA LCR TDD metrics should be included in TS37.320.
- Proposal 2: For immediate MDT, both the P-CCPCH RSCP and Timeslot ISCP are logged and reported for UTRA LCR TDD, and event 1I should be used as one of reporting triggers.
- Proposal 3: For Logged MDT, only P-CCPCH RSCP for UTRA LCR TDD should be logged and reported.

- The text proposal will be captured in an update of the stage 2 by the rapporteur
- NSN: for the stage 3, we can separate the TDD from FDD measurement with a choice at a top level

=> Noted

10.4.2 UMTS Stage-3

Rapporteur shall submit in principle agreed CR for 25.304 and 25.331 under this agenda item.

in principle agreed CRs:

R2-106067 25.304 CR on MDT NSN CR 25.304 0262 - B related to email discussion [71b#04] REL-10 MDT_UMTSLTE-Core
- TIM: language should be made more stage3-ish ("UE may be configured" -> "if the UE is configured", "UE will log"->"UE shall log")
- NSN: can be considered but it is preferable to align the text with LTE as well.
- We can discuss these changes during the common session on Friday when MDT is discussed
- E///: MDT name should be removed, to also align with LTE. That can be done in a revision of the CR.

=> The CR is revised in R2-106791

R2-106791 25.304 CR on MDT NSN CR 25.304 0262 1 B related to email discussion [71b#04] REL-10 MDT_UMTSLTE-Core
- TIM: same stage 3-ish alignments need to be made in LTE.
- NSN: would prefer to wait 1 cycle before agreeing on the CRs. The group agrees to postpone the agreement for the next meeting

=> The CR is postponed to the next meeting

IPR2025-00720, OnePlus Ex. 1004

R2-106092 25.331 CR on MDT NSN CR 25.331 4328 - B related to email discussion [71b#04] REL-10 MDT_UMTSLTE-Core
revised in R2-106553

R2-106553 Introduction of Minimization of Drive Tests Nokia Siemens Networks, Nokia Corporation CR 25.331 4328 1 B REL-10 MDT_UMTSLTE-Core

- TDD parameters will need to be added
- Actual numbers of log entries and neighboring cells need to be recomputed
- GSM non-verified bsic can be removed
- CPICh RSCP / Ec/No can be changed back to MP, if no value is available, minimum value is logged
- Change IE names to remove MDT name and align with LTE
- Some typos (CPICH Ec/No => Rel'10)
- last entry in 10.3.7.yy need to be changed to MP
- What to do now? Try to get CR in shape for plenary or treat at next meeting. In LTE session it was mentioned that stage 2/3 will be sent to plenary.
- E/// has further editorial comments on ASN.1, can be made offline
- QC: in semantics description we should describe "in s"=>"in seconds"
- ALU: no changes related to immediate MDT, there has been offline discussion for how is location reporting done for UMTS and current proposal is to use existing mechanism to do 'forced report' of location.
- Broadcom: what if UE that supports MDT doesn't support positioning? UE would reject the configuration.
- Nokia: for UMTS, we would not change anything compared to existing procedure, it would be a separate measurement

=> For immediate MDT in UMTS, no specific procedure is added for positioning reporting. We rely on existing procedures

=> The CR is revised in R2-106792

R2-106792 Introduction of Minimization of Drive Tests Nokia Siemens Networks, Nokia Corporation CR 25.331 4328 2 B REL-10 MDT_UMTSLTE-Core

- Should we have an email discussion? Ok: to look at the open points listed in the document

=> The CR is postponed to the next meeting

other:

R2-106217 Clarification on timer T326 HTC CR 25.331 - - B REL-10 MDT_UMTSLTE-Core

- NSN: agree with the proposal, that can be captured in the revision of 25.331 CR
- Broadcom: should we make it a requirement? NSN: main goal is to provide an indication that timer shouldn't be stopped. HTC: intention is to make implementation clear. Samsung: no need to make it a requirment.
- E///: text should be clear that when timer expires, it should be stopped even if RAT has changed.
- ALU: why make the note specific to change of RAT? There are other conditions where timer needs to keep running. Panasonic: We have other places where timers are kept across RATs, we can keep the same method and make it a requirement. Nokia: this is not the same as inheritance of dedicated priority.
- Nokia: we can rephrase the note to capture all cases (UE won't stop timer unless explicitly stated)

=> We'll keep this in a note and ensure it captures all cases.

=> Not agreed

R2-106532 Inclusion of UTRA LCR TDD metrics in 25.331 CATT Disc REL-10 MDT_UMTSLTE-Core

=> Noted

R2-106533 Inclusion of UTRA LCR TDD metrics for MDT in 25.331 CATT CR 25.331 - - B REL-10 MDT_UMTSLTE-Core

- This will be merged in on top of R2-106553 revision and aligned with other changes

10.5 ANR for UTRA

(ANR_UTRAN-Core, leading WG: RAN3, started: June 10, target: Dec. 10, WID: RP-100688)

IPR2025-00720, OnePlus Ex. 1004

10.5.1 ANR measurement control and reporting

Including how UE indicates support, how NW configures ANR measurements and how UE reports measurements

Open issues from RAN2#71bis

R2-106167 Clarification of four open issues regarding Cell_DCH based ANRF approach ZTE Disc

- ALU: We should be able to close issue 1. Nokia: This should be also sorted out in RAN3. QC: This was discussed in RAN3, it was clarified the rnc-id exists in LTE. An LS is being sent to RAN2 to clarify this, we could also have a discussion in RAN2 based on ZTE's paper.
- Issue 2: ZTE proposes that RAN4 looks at how much degradation there is for measuring GERAN cells. HW: NW should be able to limit the range of ARFCN that UE needs to look at. There aren't so many GERAN cells to look at in a specific region. The configuration of how many GERAN cells need to be measured would be up to NW configuration.
- Nokia: this issue has not progressed, we still don't know if it's feasible. We still need to define autonomous gaps for SI reading of GERAN cells. E///: some estimates have been provided in a separate document.
- Issue 2 conclusion: further analysis needed to determine how much interruption would occur. According to analysis in R2-106442, SI reading could take multiple seconds.
  -Nokia: with potentially long gaps for certain GERAN cells, autonomous gaps may lead to RLF. HW: why would this lead to loss of sync? NSN: loss of sync can happen on NW side since it's autonomous gaps.
- Issue 3:
  -ZTE: if the impact of SI reading becomes too large for UE, UE should be able to ignore the order. The reading of SI can be picked up by some other UE in similar position
  -DT: Ignoring the order isn't a reasonable way forward, UE should indicate to NW.
  Issue 4:
  -ZTE: this should be a smaller issue compared to issue 3. KPI degradation in a certain area can be a trigger.
  -Nokia: we cannot ignore this issue, this is also in the scope of the discussion. Need to know how the CM will be minimized in this case.
  -QC: if there is no trigger listed to detect other cells, how to prevent multiple useless measures to be made.

=> Noted

R2-106168 Methods for alleviating adverse effects of Cell_DCH based ANRF approach ZTE Disc

=> Not treated

R2-106484 Cell reselection ANR Open issues Nokia Corporation, Nokia Siemens Networks Disc

- ALU: why spend bits on rrc conctn request? Nokia: there are proposals for improving that packet.
- ALU: why not use measurement reports in cell-dch? Nokia: those reports in cell-dch may not be accurate enough for relection. ALU: it may be used… that should be verified.
- ALU: has Nokia considered SHO boundaries? Nokia: that's not the scope of the work. ALU: detecting SHO neighbors is useful for good performance. Nokia: other features are already addressing this case of SHO.
- E///: the goal of ANR is to provide good HO relationships.
- HW: what is the use of the 1-bit indication? Nokia: to indicate to NW a new neigbhor was found
- HW: is the idea to have a 1-shot ANR? Config is off after 1 report? Nokia: that's a small stage 3 detail, initial idea was to turn it off after report.
- HW: when does UE use dedicated ANR parameters? UE normally uses regular parameters.
- ALU: are parameters in proposals 3a all the parameters? What about Treselection? That can be added.
- HW: How is the UE sent to GERAN? Nokia: the UE isn't sent to GERAN, it just reselects there and when it reselects to UTRAN it provides ANR indication.
- CATT: if UE gets to Idle in GERAN, does it need to store info? UE will have to remember that information anyways.
- ALU: Will UE check if IRAT neighbor is missing in UTRA before reporting?
- ZTE: Issue 3 may not be solved if unidirectional relationship only is allowed.
- ZTE: How will UE deal with all different dedicated reselection parameters? UE may not want to move out.

IPR2025-00720, OnePlus Ex. 1004

- DCM: How will UE manage if UE has absolute prio configured for IRAT? No change compared to existing mechanism.
- HW: which RNCs have to be upgraded? All source and target RNCs? Both source and target RNCs in the area where there may be a problem.
- DT: With this method both relative and absolute thresholds will be configured and will impact cell reselection. Nokia: the mechanism shouldn't impact normal reselection, difference is if other cell is detected, UE may end up reselecting to it. DT: it won't be possible to get measurements from all UEs because in some cases, cell reselection may have happened earlier. Nokia: agrees not all UEs will detect the neighbor, idea is to enable ANR on a number of UEs.
- DT: What about abs prio for intra-UTRA? Those won't behave as per regular reselection. Nokia: Why is this negative? DT: because these UEs won't use the abs prio rules. Nokia: in case of cell-dch method UEs create interruption of service, is that a bigger disadvantage? NSN: it could happen anyways that UE would end up in this cell due to loss of service. DT: wants to be able to control connected mode UEs.
- Panasonic: the 1 bit indication could be sent on rrc connection complete? Can be considered.

=> Noted

R2-106212 ANR Reselection Point in Cell_PCH Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Disc
=> Not treated

R2-106408 Triggering UE for ANR Alcatel-Lucent Disc
=> Not treated

Log approach

R2-106442 Method for ANR support in UTRAN Ericsson, ST Ericsson Disc

- ALU: doesn't agree SI3 is every 1.92s, it's every 920ms. The final GERAN SI reading would be around 1-3 seconds instead of 2-4 seconds. E///: agree it's 920ms but SI13 could also be 4x SI3 so full SI reading time could end up around the same total time.
- ALU: has drx cycle been considered to perform SI reading? E///: this is already the case today that UE may miss a drx cycle to perform SI reading.
- TIM: is the assumption that the extra info is added to MDT log, or is it a new log? Assumption is that it's a different feature and log.
- HW: Why is the conclusion that cell reselection is simple? From complexity and signaling point of view.
- Nokia: When is the log reported? Similar to MDT, log presence is in rrc connection complete.
- Nokia: if relation between rnc 1-2 is found and reported to rnc 3, can NW use that? E///: NW may still be able to use it, depending on scenario.
- Nokia: Why not report straight away instead? In either the target or source cell?
- ZTE: log ANR will suffer from too many logging. Nokia: it would be simpler to report the result directly.
- E///: agrees there is higher latency and prefers reselection method but could live with this
- NSN: need precision on which neigbhors are logged, it could be that many neighbors are logged. E///: we could define that UE stops after 1 found neighbor. Nokia: why not report it then? HW: we can also restrict the number of logged neighbors by logging only the best ranked neighbor. NSN: Issue is that you may end up reading different SI often for same PSC. HW: log ANR would be more localized and there shouldn't be too many cells with that PSC.
- TIM: this issue would happen with other methods as well. Regarding log size, that can be configured in an appropriate way.
- Panasonic: latency shouldn't be an issue. Also, CGI should be logged in entry to allow NW to use it.

=> Noted

R2-106257 Discussion on UMTS ANR non CELL_DCH based approach (log approach) Huawei, HiSilicon Disc

- Panasonic: What is the difference with E///'s approach? Difference on the details of logging criteria. Panasonic: why use best ranked cell, this is for HO optimization… HW: main reason was to limit the size of log and SI reading.
- DT: How would this compare to MDT in terms of log size. Issue cannot be only log size. HW: it's also SI reading.

IPR2025-00720, OnePlus Ex. 1004

- Samsung: We need to be realistic on how many neighbors there are that are missing. There shouldn't be many appropriate neighbors. Nokia: maybe 1 neighbor is enough.
- Samsung: UE may store only 1 NR report. It cannot be that the log turns out to be very big until next CU.
- DT: agree there may not be many NRs, but why report only 1? Samsung: 1 cell per frequency could be reported, no need to restrict to 1. We need to consider several UEs will enable this function.
- HW: only difference with cell reselection approach is UE doesn't reselect to detected cell.
- NSN: how does this work for inter-RAT? For GERAN you may end up with a lot of cells. HW: we shouldn't require to read Si for GERAN, UE can detect cell and mapping to cell-id is done by NW. Only in some rare cases will RNC need to ask UE to read SI. NSN: RAN3 asked us to report more then arfcn for GERAN. What criteria will be used to log? NW will need to configure in advance which arfcns need to be reported.
- ZTE: log anr could be use but more work is needed.
- Nokia: concern with this approach is UE power consumption, this method will create a log of SI reading. HW: reading SI shouldn't be a frequent occurrence.
- Samsung: why is irat anr better for cell reselection case? Nokia: in cell reselection only best ranked cell is read. Samsung: same for HW proposal.

=> Noted

Discussion - Show of hands:
Companies are allowed to indicate more than 1 preference.

A: Cell-DCH based
7
B: Cell reselection based
6
C: log ANR based
14

- Nokia: RAN3 has not been focusing on this type of solution up to now. UE may now end up reporting to a third cell. We could indicate our way forward to RAN3 and see if there is a strong problem.
- QC: This could be made to work but there can be situations where the log may have to be discarded.
- NSN: how to handle inter-RAT? There has been no description.
- Nokia: one variation on the log approach is to immediately report to the source cell. That can be considered as part of this focus. QC: needs to be understood that solution is not finalized.

Way forward:
- Draft an LS to RAN3 to indicate what the RAN2 focus is going to be and ask if there is a strong concern.
- Drafted by ZTE in R2-106753 (see agenda item 11.1)

R2-106625 Configuration and Reporting for MDT based ANR SamsungDisc
=> Not treated

R2-106307 Discussion on open issues in UTRAN ANR CATT Disc
=> Not treated

10.5.2 ANR Measurements

Including how UE performs ANR measurements in intra-frequency, inter-frequency and inter-RAT cases, in which states are measurements performed

No contributions.

10.5.3 Other ANR issues

R2-106172 RNC ID issue ZTE Disc REL-8 TEI8

IPR2025-00720, OnePlus Ex. 1004

- E///: the current specification doesn't indicate how to set uc-id. NSN: without ANR procedure there is no need for rrc clarification. ZTE: This alignment is needed even beyond ANR, and beyond ANR-UMTS.
- DCM: what happens if a legacy NW isn't configured according to some assumptions in RRC. ZTE indicates in this case no change ota is needed, other operation would need to be done at NW side.
- HW: This is not an ANR related issue, it's general.
- Samsung: are those rules normative or indications to the NW? 25.999 is a TR.
- QC: 8.1.1.6.5

Conclusion: -The 12 top bit of c-id should correspond to RNC-id and can be reported to NW (that may not be true if extended SRNC is used). -UE will report the full c-id to NW. RAN2 will ask RAN3 is this is sufficient to unambiguously identify RNC-id.

- Nokia: what happens for extended srnc? ZTE: UE doesn't know the difference, that's for NW to do. Nokia: We could also report the full c-id.

=> Noted

R2-106173 Stage 2 description of Cell_DCH based ANRF approach ZTE Disc REL-10 ANR_UTRAN-Core
=> Not treated

R2-106409 Fast dormancy interaction with ANR Alcatel-Lucent Disc REL-10 ANR_UTRAN-Core
=> Not treated

R2-106651 (draft) Introduction of detected set cell reselection for ANR Nokia Corporation, Nokia Siemens Networks CR 25.304 (0264) - B REL-10 ANR_UTRAN-Core
=> withdrawn (as not available)

R2-106652 (draft) Introduction of ANR Nokia Corporation, Nokia Siemens Networks CR 25.331 (4428) - B REL-10 ANR_UTRAN-Core
=> withdrawn (as not available)

10.6 WI: Interfrequency detected set measurements (RP-101015)

(Interf_dset_meas_UMTS, leading WG: RAN2, started: Sep. 10, target: Dec. 10, WID: RP-101015)

=> Including email discussion outcome for [71b#23]: UMTS: Inter-freq detected set measurements [Nokia]

R2-106480 Report on [71b#23]: UMTS: Inter-freq detected set measurements Nokia Corporation Report REL-10 Interf_dset_meas_UMTS
related to email discussion [71b#23]

- ZTE was part of the email discussion as well
- QC: There has been discussion in RAN4 to combine option 2 with an increase of NCL size to provide faster reporting. Would propose to allow for both mechanisms
- DT: the problem indicated in the WI should be solved with the existing proposal and we don't need to extend the current option2, if there is support for extending NCL it could be accepted.
- Nokia (rapporteur): In RAN4 the proposal from QC has been discussed but no conclusion was reached.
- Nokia: if we were to increase NCL, we should increase the scope of the WI.
- QC: TIM did express some support for this extension. E/// confirms TIM would like to see the gains of this extension. E///: where do the improvement of NCL extension come from?
- QC: If we extend the NCL with existing CM patterns we can get detection times of 10 seconds rather than 30s as currently discussed in RAN4. Nokia: We need to consider the RAN4 details and assumptions to get to that number, the CM patterns will have to be extended. E///: If we do that, it means that detection of all cells in the extended NCL will be impacted. E/// doesn't have a strong opinion as of today. DT: extending NCL can be discussed but shouldn't an alternative. We shouldn't couple this with detected cells measurements. QC: Using detected cell set extends CM gaps and impacts service. We

IPR2025-00720, OnePlus Ex. 1004
Page 611 of 700

shouldn't be limited to 64, we can consider 48. Proposal isn't to extend NCL as an alternative.
- Nokia: no need to repeat RAN4 discussion. We need to conclude the RAN2 work.
- E///: would be interested to look at NCL extension as a separate work.
- TIM: No question that detected set cell should be considered as part of this WI. There is also some benefit in at extending the NCL as an enhancement stream. It is not part of this WI but it's related as it's been uncovered during the same discussion and can help solve the same issue.

=> Way forward:
-RAN2 will focus on specifying option 2 of inter-freq detected set and get CRs ready
-Companies are invited to contribute to plenary to extend WI description to cover other means to solve the goal of this WI

- TIM: What is the status in RAN4? Will RAN4 meet the december deadline.
- QC: We cannot agree on CRs if we don't consider NCL. No other company wishes to proceed this way. DT: doesn't understand this position, there is no opposition to consider the NCL extension.-TIM: would be fine to technically endorse the CRs and discuss this at the plenary. Orange: we need to move forward on this WI, and cannot consider extension NCL as part of this WI.

R2-106260 Discussion on inter-feq detected set Huawei, HiSilicon Disc 25.331 REL-10 Interf_dset_meas_UMTS
=> Not treated

R2-106479 Inter-frequency detected set measurement eventsNokia Corporation, Nokia Siemens Networks Disc REL-10 Interf_dset_meas_UMTS
=> Not treated

R2-106481 Introduction of detected set measurements and reporting for Inter-frequency Nokia Corporation, Nokia Siemens Networks CR 25.331 (4407) - B REL-10 Interf_dset_meas_UMTS
- E///: is the CR mandatory for all rel'10 UE? Will there be a different CR for UE capability at plenary later? That can be discussed later when rel'10 is closed.
- E///: 10.3.7.19: why not enumarated(true)? That's consistent with other enumerated where different sets are listed.
- E///: 10.3.7.61: need to add detected set cells for non used freq in first paragraph.
- Further offline comments on ASN.1
- HW: Why define 2 VAS, today it's 1 measurement per freq. What is the need for maintaining 2 of them? QC: not clear in the text that 2 reports will be made.
- E///: we need UE to maintain 2 VAS.
- Samsung: the fact that 2 variable are stored should be clarified in the beginning of 14.2.1. Nokia: this is already clear in the spec. Samsung: situation is not the same, we now keep 2 variables for the same measurement id. That can be clarified.
- HW: What if NW wants to configure UE to measure a freq with only detected set cells? Nokia: not clear current procedure even allows for this case.
- DCM: is periodic reporting supported? It is in 10.3.7.61.
- QC: the text need to ensure that multiple triggers are going to be prevented. The current text in 14.2.1.1 doesn't seem to prevent that
- E///: 14.2.1.1: why not indicate to the UE to create 2 variables or point to the right variable. Nokia choose to capture this text in 14.2.1
- E///: why include 2d/f in ASN.1 but not procedural text? That is still needed as those can be part of other reports.
- QC: 14.2.1 we could point to the flag that triggers the creation of the 2 VAS.
- QC: why list virtual as in 10.3.7.61? That has been done for other reports as well.

=> The CR is revised in R2-106754

R2-106754 Introduction of detected set measurements and reporting for Inter-frequency Nokia Corporation, Nokia Siemens Networks CR 25.331 4407 - B REL-10 Interf_dset_meas_UMTS
- A draft version is available in the inbox.
- QC: need an email discussion to verify the changes in the CR and technically endorse them.

IPR2025-00720, OnePlus Ex. 1004
Page 612 of 700

- DT: other companies didn't have time to check? ALU wants also more time and agrees with QC.

=> CR is postponed to email discussion [72#12] for technical endorsement.
- Deadline: Nov 25th.
- Lead: Nokia
- Outcome: Technically endorsed CR to present at plenary in R2-106806

10.7 WI: TEI10

10.7.1 In principle agreed CRs

R2-106071 Introduction of REL-10 access stratum release indicator ZTE CR 25.306 0280 - F REL-10 TEI10
- Samsung: should the other comment refer to an agreed CR?

=> With the change of 5934 to 6072 the CR is agreed in R2-106755 R1

R2-106117 Some legacy editorial corrections for TEI10 ZTE CR 25.331 4353 - F REL-10 TEI10
- E///: in 8.5.57 first "Secondary" -> "secondary"

=> With this change the CR is agreed in R2-106756 R1

R2-106118 Speed dependent scaling rules in HCS environment Ericsson, ST-Ericsson CR 25.331 4354 - F REL-10 TEI10

=> The CR is agreed

10.7.2 Others

R2-106250 Removal of redundant Cell Update Procedure for CELL_PCH Huawei, HiSilicon CR 25.331 (4370) - F REL-7TEI10
- Samsung: why a rel'7 CR in TEI10? Chairman: we can discuss proposals in TEI10 and early implementability can be discussed.
- Samsung: if we agree on a rel'7 CR, what is different in UE behavior? HW: some UEs won't perform Cu. Samsung: it is possible not to send measurment report?
- Broadcom: in rel'7 if enh. Cell-pch isn't configured, UE has to clear variables so UE has to do CU. In rel'8 it can be stored.
- Samsung: No support for this enhancement in rel'7.
- Panasonic: would prefer not to change UE behavior in those states.
- Nokia: support the proposal to save CU procedure (even in rel'7)
- Broadcom: would be positive for later releases.
- QC: there is already such enhancements covered with other features in the spec, would prefer not to fragment the solution space.
- HW: if it's not for release 7 it makes less sense.

=> The CR is not agreed

R2-106252 Removal of redundant Cell Update Procedure for CELL_PCH Huawei, HiSilicon CR 25.331 (4371) - A REL-8TEI10

=> Not treated

R2-106254 Removal of redundant Cell Update Procedure for CELL_PCH Huawei, HiSilicon CR 25.331 (4372) - A REL-9TEI10

=> Not treated

R2-106255 Removal of redundant Cell Update Procedure for CELL_PCH Huawei, HiSilicon CR 25.331 (4373) - A REL-10 TEI10

=> Not treated

R2-106423 Adding the 12.2/7.4/5.9/4.75 kbps speech without SRB#5 Nokia Siemens Networks, Nokia Corporation CR 25.993 (0118) - B REL-10 TEI10

=> The CR is agreed in R2-106757

IPR2025-00720, OnePlus Ex. 1004

R2-106264 Adding the default Configuration for 12.2/7.4/5.9/4.75 kbps speech + 3.4 kbps (without SRB#5) Ericsson, ST-Ericsson CR 25.331 (4374) - B REL-10 TEI10
- HW: what is the intention for adding this new dflt config? E///: to reduce connection setup delays.
- QC: where is the request coming from? Is there operator demand? NSN supports this.
- ALU: What is the gain? Chairman: there is no question that dflt config saves setup delay. We shouldn't question that part.
- E///: Cannot name operator wanting this.

=> The CR is postponed to the next meeting

R2-106265 RLC reset on a Signalling Radio Bearer Ericsson, ST-Ericsson CR 25.331 (4375) - F REL-10 TEI10
- DCM: Does it change rel'9 UE behavior? No. that's a rel'10 CR.
- Nokia: could it be made early implementable? E///: maybe from release 9?
- RIM: Strange to discuss early implementability since this doesn't change UE behavior, it only gives a guideline to NW configuration.
- E///: would prefer to have this possibility with an early implementability statement (from rel'9).

=> The CR is revised in R2-106758

R2-106758 RLC reset on a Signalling Radio Bearer Ericsson, ST-Ericsson CR 25.331 4375 - F REL-10 TEI10

=> The CR is agreed

R2-106362 Enhanced Security Mode procedure handling upon SRNS relocation Qualcomm Incorporated Disc REL-10 TEI10
- DT: this paper is only talking about the second part of the reason for change in the CR. QC agrees as this part was the most questioned.
- DT: Still sees that introducing signaling for this issue is not very critical.
- HW: alternative 3 creates more complexity in the NW. Would prefer alternative 2. QC: how to handle legacy UEs that don't set this flag today? HW: NW would be able to distinguish from the different cases. ALU: agrees with QC that alternative 2 will be a problem for NW and would prefer alternative 3. E///: agrees with ALU that alternative 3 would be a cleaner solution.
- HW: how should NW behave with combinations of old and new flags? E///: both have precise meaning and it's specified how UE will set those. RIM: the actions for the reconfig are very different from the security reconfig.
- Nokia: agrees with HW that NW know ongoing procedure and can know what to do with it. E///: Much prefer to know exactly what the UE has done to set the flag.
- Samsung: there is no overlap between the two flags. The reconfig indicator doesn't include the SM reconfig.

=> Is Alternative 3 agreeable to the group? Yes.

=> Noted

R2-106619 Enhanced Security Mode procedure handling in case of delayed L2 ACK Research In Motion UK Limited, Qualcomm Incorporated CR 25.331 (4427) - C REL-10 TEI10
- Panasonic: is the indication to the NW mandatory or optional? QC: if UE doesn't implement it, it won't send the flag and behave a legacy so there is no need for indicating support to the NW. Broadcom: the UE behavior is under "the ue shall". QC: we could change it to may. E///: preference should be to keep as in the CR. There is no interop issue anyways. Panasonic: UE should be able to not implement this feature. There is no burden for the NW in this case. E///: much prefer knowing what the UE is doing in all cases.
- E///: there should be a line between last } and CellUpdate-vaxyext-IEs ::=
- HW: should anything be added for NW to help distinguish between both indicators? E///: there are already rules in the spec to set each indicators. It's clear in the spec how to set those fields. We shouldn't force the UE to consider the bits together.

=> With the change of the added line the CR is agreed in R2-106774

IPR2025-00720, OnePlus Ex. 1004

R2-106365 MIMO support for DB-DC-HSDPA UEs Qualcomm Incorporated Disc REL-10 TEI10
- Treat with R2-106299

=> Not treated

R2-106376 Way forward on reducing the size of RRC Connection Request Ericsson, ST-Ericsson Disc REL-10 TEI10

=> Withdrawn

R2-106401 Addition of Rel-10 critical extension in SRNS relocation message adding ROHC target mode Alcatel-Lucent CR 25.331 (4398) - F REL-10 TEI10, RANimp-RABSE
- Refer to R2-106093 in “other comments”. That’s already refered to in the reason for change.

=> The CR is agreed in R2-106775

R2-106482 RACH signalling optimisation Nokia Corporation, Nokia Siemens Networks Disc REL-10 TEI10
- ALU: We use the inter/intra-freq measurement results in rrc connection request, so we need to be able to send those.
- E///: prefers to be able to include the measurements but has not seen solution on how to do this and this is a problem since rel’7. NWs have been able to cope with this absence up to now.
- NSN: we could also include the measurements in a later message like the complete message. RIM: the whole points of adding it in the request was to establish the UE directly in SHO. And inter-freq is used for redirection.
- Nokia: today, we need to drop at least 1 of the two measurements. Today, UE drops inter-freq first.
- QC: supports optimizations but current solutions have not been satisfactory yet to justify implement a new message.
- E///: would be fine with a new message to start with in release 10 timeframe. Concerned about linking feature support to the new message because it would require more logic from the message.
- CATT: supports this solution and would also propose separating TDD/FDD messages.
- E///: currently close to the limit with their configurations. This solution gives some beathing room.
- Enhancing RRC connection request alongside Nokia proposal: 6 support 4 against
- HW: there is no urgency to improve the message now
- ALU: larger improvments should be found

=> Noted

R2-106483 Correction to UE system specific capability for EUTRA Nokia Corporation, Nokia Siemens Networks CR 25.331 (4408) - F REL-10 TEI10
- Panasonic: this CR isn’t solving a critical issue, current NW already can handle the UE today. Nokia: this data is useless in rel’8/9, why add it? Panasonic: this shouldn’t save much BW.
- E///: separate level 3 in 2.
- Panasonic: We can’t exclude the fact that current NW may use the info.
- E///: Is there any NW impact? Nokia agrees the box shouldn’t be checked.

=> The CR is postponed

10.8 Other UTRA Rel-10 WIs/SIs

10.8.1 In principle agreed CRs

R2-106074 Introduction of MU-MIMO for LCR TDD in 25.308 TD Tech CR 25.308 0104 - B REL-10 MUMIMO_LCR_TDD-Core

=> The CR is agreed

R2-106075 Introduction of MU-MIMO for LCR TDD in 25.319 TD Tech CR 25.319 0073 - B REL-10 MUMIMO_LCR_TDD-Core

=> The CR had to be revised in R2-106982 since R2-106075 did not use the CR number. R2-106982 is agreed.

IPR2025-00720, OnePlus Ex. 1004

10.8.2 Others

(MUMIMO_LCR_TDD-Core, leading WG: RAN1, started: March 10, target: Dec. 10, WID: RP-100347)

R2-106305 Discussion on LCR TDD MU-MIMO capability reporting CATT Disc REL-10 MUMIMO_LCR_TDD-Core
- QC: how is this different with features where NW relies on receiving UE category before starting transmission?
- CATT: NB doesn't know about UE capability. QC: why not add it in FP-frame?
- Offline proposal: The "support for multi-cell" bit is proposed to be re-used for TDD to indicate MU-MIMO support in RRC connection request.
  => Proposal is agreed

=> Noted

R2-106306 Introduction of MU-MIMO for LCR TDD in 25.331 CATT CR 25.331 (4383) - B REL-10 MUMIMO_LCR_TDD-Core
=> The CR is revised in R2-106700

R2-106700 Introduction of MU-MIMO for LCR TDD in 25.331 CATT CR 25.331 (4383) - B REL-10 MUMIMO_LCR_TDD-Core
- Still need to CB on the RRC connection request signaling
- MU-MIMO support removed from rrc connection request

=> The CR is revised in R2-106790

R2-106790 Introduction of MU-MIMO for LCR TDD in 25.331 CATT CR 25.331 4383 - B REL-10 MUMIMO_LCR_TDD-Core
- The procedural text for re-using "support for multi-cell"will be provided in a different CR

=> The CR is agreed

(E1900-Core, leading WG: RAN4, started: June 10, target: Dec. 10, WID: RP-100676)

R2-106404 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331 Alcatel-Lucent CR 25.331 (4401) - B REL-9E1900-Core
=> Withdrawn

R2-106405 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331 Alcatel-Lucent CR 25.331 (4402) - A REL-10 E1900-Core
=> The CR is revised in R2-106670

R2-106670 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331 Alcatel-Lucent CR 25.331 4402 - B REL-10 E1900-Core
- NSN: the new indicator needs to be indicated also in SIB5 in band indicator for redirection. That will be added in a revision.
- HW: Why do we define a new extension? ALU: because RAN4 called the band 25.
- QC: should we harmonze the way the sib 5/6 proecedures are written wrt extensions? ALU not keen on taking this on.
- Nokia: want to check ASN.1 a bit more to check correctedness.
- E///: does ASN.1 compile? Yes.
- E///: why not extend further the new band? Panasonic: LTE has defined up to 64 bands. We can define a bigger extension.
- ALU: there may be a better way to define the extension

=> No better way found right now. We'll continue with existing mechanism.
=> Proposal to extend by 64. Can be discussed further during email discussion
- We'll have an email discussion [72#08] to allow checking the ASN.1.
  -Lead: ALU
  -Deadline: 25/11/2010
  -Outcome: Revised CR to RRC in R2-106776 R1 + all 25.307 CRs

R2-106671 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0109 - B REL-8E1900-Core
- Nokia: Why start at rel'8? ALU: because the band is also for LTE and that was discussed in RAN4 but it's up to RAN2 to decide on this. ALU: Early UEs would have to decode all the extensions. E/// would prefer to start from release 4. Nokia agrees. Qualcomm would prefer rel'99.

IPR2025-00720, OnePlus Ex. 1004

- E///: more time needed to check

=> The CR is revised in R2-106777 R1

R2-106777 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0109 1 A REL-8E1900-Core

=> Postponed to email agreement [72#08]

R2-106406 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 (0107) - A REL-9E1900-Core

=> The CR is revised in R2-106784

R2-106784 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0107 - A REL-9E1900-Core

=> Postponed to email agreement [72#08]

R2-106407 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 (0108) - A REL-10 E1900-Core

=> The CR is revised in R2-106785

R2-106785 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0108 - A REL-10 E1900-Core

=> Postponed to email agreement [72#08]

R2-106786 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0110 - B REL-4E1900-Core

=> Postponed to email agreement [72#08]

R2-106787 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0111 - A REL-5E1900-Core

=> Postponed to email agreement [72#08]

R2-106788 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0112 - A REL-6E1900-Core

=> Postponed to email agreement [72#08]

R2-106789 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0113 - A REL-7E1900-Core

=> Postponed to email agreement [72#08]

11 Outgoing LS and email discussions for UTRA

11.1 Agreed outgoing LS for UTRA

R2-106753 DRAFT LS to RAN3 on ANR way forward ZTE LSout REL-10 ANR_UTRAN-Core -

- ALU: we should be more specific on the log-ANR method to allow RAN3 to evaluate impacts.
- HW: we could attach the E/// and HW contributions.
- DT: Should we indicate the states where we log? We should try to stick to what was proposed
- Nokia: maybe misleading to call it log-ANR, we need to tell RAN3 that we may be reporting not only to source or target but also potentially to a third node (so we'll have to report about the full relationship)
- ZTE: would be good to collect the open issues on Log-ANR and run an email discussion to discuss this until the next.
- Samsung: the only thing we should tell RAN3 is the difference with the other methods.
- Nokia: no need to ask for quick investigation. We can ask RAN3 to evaluate.

=> The LS is revised in R2-106793

R2-106793 DRAFT LS to RAN3 on ANR way forward ZTE LSout REL-10 ANR_UTRAN-Core -

=> The LS is agreed in R2-106803

IPR2025-00720, OnePlus Ex. 1004
Page 617 of 700

11.2 Email discussions for UTRA

- Email discussion to verify ASN.1 implementation and 25.307 CRs for expanded 1900MHz Band for UTRA and LTE (related to R2-106670 / R2-106777 / R2-106784/ R2-106785/ R2-106786/ R2-106787/ R2-106788 / R2-106789)
  - Contact: Alcatel-Lucent
  - Deadline: Thursday November 25th
  - Expected output: CR at RRC in R2-106776 R1
- Email discussion on ANR open issues
  - List of open issues: Which states should be applied?
    - What information should be logged?
    - Details of logging criteria
    - How NW restricts logging behavior (to avoid too many log entries)
    - How to perform IRAT logging
    - When should UE report the log (source/target/other)
  - Contact: ZTE
  - Deadline: Submission deadline of RAN2#72bis
  - Expected output: Report at RAN2#72bis
- Email agreement for SIB5 changes for E-DCH in CELL_FACH and Idle Mode (related to R2-106807 / R2-106808 / R2-106809)
  - Contact: Ericsson
  - Deadline: November 25th
  - Output: Final version of CRs
- Email agreement for Precoding weight set restriction setting for secondary cell (related to R2-106804 / R2-106805)
  - Contact: Ericsson
  - Deadline: November 24th
  - Output: Final version of CRs
- Email agreement for Procedural text to support measurements in the Secondary UL Frequency (related to R2-106732 / R2-106733)
  - Contact: Ericsson
  - Deadline: November 25th
  - Output: Final version of CRs
- Email discussion on open issues of MDT as listed in R2-106792 (related to R2-106792)
  - Contact: NSN
  - Deadline: Submission deadline of RAN2#72bis
  - Output: Report to RAN2#72bis
- Email agreement for technical endorsment of “Introduction of detected set measurements and reporting for Inter-frequency” (related to R2-106754)
  - Contact: Nokia
  - Deadline: November 25th
  - Output: Technically endorsable version of CR in R2-106806

12 Left-overs

12.1 LTE User Plane session

R2-106862: Report of LTE User Plane session
=> Report is approved

R2-106860: Update 36.321 CR for CA
- LG points out that the Pcmaxc location was not decided yet. LG is fine with the current format. SK is fine with included format

=> Will see update to include CR number and possibly reflect decision on Pcmax in R2-106917 CR0436 R2

R2-106917: Update 36.321 CR for CA CR0346 R2
=> CR is agreed

R2-106863: HARQ operation for UL multiple antenna transmission CR0447

IPR2025-00720, OnePlus Ex. 1004

- Huawei thinks we should sent an LS to RAN1 to inform to indicate in the case of UL MIMO, the MAC layer receives 1 separate notification for each TB. Ericsson is ok to sent such an LS.
- Will sent LS to RAN1 to ask for 2 notifications in R2-106921; Later it was considered not so necessary to sent the LS (R2-106921 withdrawn).

=> CR is agreed

PCMAX Reporting issue

Two alternatives:
report PCMAX always for PCell (the two) and SCells
report PCMAX depending on whether real or reference format is used for PCell and SCell (virtual indication can then be used to indicate the presence of PCMAX)

- Ericsson assumes that since we have now the bit for the virtual format, there is no additional complexity for not including the Pcmax for the virtual transmissions
- Panasonic thinks the SAR handling might impact this. NSN agrees. NSN thinks we could now agree that we include it always, and can remove it later when the SAR turns out not to be an issue.
- Motorola thinks we should not optimise. Samsung this this is sensible (it is strange to sent information already known to the eNB). LG thinks it is an optimisation

After offline discussion

- No consensus in offline discussion. Ericsson would be happy to not include the Pcmaxc's for now. NSN thinks it is better to remove but no strong preference. LG prefer alternative approach.

=> Leave the CR as is: (clear further work is needed based on the ffs.)

12.2 UMTS

No contributions.

13 Outgoing LS and output to other groups for LTE/joint

To: SA2; Cc: CT1

R2-106378 DRAFT Reply LS to S2-104449 = R2-105299 on Handling of UTRAN Mobility Information Ericsson, ST-Ericsson LSout REL-9SAES-CSFB R2-105299

- If no resolution in common session, see if offline discussion concluded. Will be treated in common session

Question 1/2:

- NEC wonders if we cannot be clearer, and just say "yes" ? Ericsson thinks we cannot specify network behaviour mandatorily.

Question 4:

- RIM wonders if the UE really has to wait on the RLC-ACK of the SMC. Is there a clear requirement for the initial NAS message to be integrity protected ? Ericsson agrees with this, but wonders what would happen after that. RIM thinks there is no requirement today to wait for the RLC-ACK. Ericsson is ok to change "anything" to "anything security protected".
- RIM wonders if LTE->UMTS, there is always an SMC since integrity is already configured at the handover. Nokia thinks we still need a separate SMC to start integrity.

=> Panasonic thinks RAN3 should be CC.

=> Update provided in R2-106926

R2-106926: Reply LS to R2-105299 on Handling of UTRAN Mobility Information

- RIM thinks the answer to question 4 indicates 100ms, but RIM sees typically much larger values (like seconds).

=> LS is approved in R2-106939

To SA2; Cc: RAN3, CT1

R2-106430: Draft Reply LS to S2-105317 = R2-106059 on S1 handover/Iu relocation with LIPA connection removal Alcatel-Lucent LSout REL-10 LIPA_SIPTO

IPR2025-00720, OnePlus Ex. 1004

- NSN thinks releasing in the source means delay for the handover. Why not release the bearer during the handover ? ALU thinks the problem is the target is not aware which bearers are the LIPA bearers.
- Samsung points out that e.g. for emergency call, we remove the other bearers (if they are not allowed in the target area) at the handover, not before. ALU thinks the problem is the target does not know the LIPA bearers (i.e. non-upgraded macro network). Samsung assumed that based on the APN context information, the target CN could know. ALU thinks if the container contains the LIPA bearers, the target RAN node will have to know somehow which ones to continue and which one to release.
- NSN assumes that for intra-RAT, should the target not follow and continue with the information (EPS/RAB's) it needs. NSN assumes CN could know. ALU points out that the behaviour of the target RAN node is not clearly specified when the number of RAB's in the container (mapping) and the RAB's listed is different. ALU thinks currently it is not allowed that the number of RAB's would be different.
- NSN wonders how the source knows that the target would support LIPA or not ?
- QC thinks the ALU proposal is the best we can do.

=> RAN2 chairman will indicate RAN2 would like to part of LIPA joint session. Update of LS was provided in R2-106686

R2-106686: Draft Reply LS to S2-105317 = R2-106059 on S1 handover/Iu relocation with LIPA connection removal Alcatel-Lucent LSout REL-10 LIPA_SIPTO

- QC thinks for re-establishment to work properly, the release would have to be done first and then the re-establishment preparation.

=> After joint session, this LS is no longer considered necessary.

To: RAN4; Cc; RAN1

R2-106855: [DRAFT] Reply LS on Radio Link Monitoring for Carrier Aggregation

=> LS is approved in R2-106902

To: RAN4

R2-106861: DRAFT LS on Power Headroom Reporting

=> Cc to RAN1.

=> With this change the LS is approved in R2-106918

To: RAN1

R2-106894: [DRAFT] LS on HARQ feedback for RNs configured with R-PDCCH

=> LS is approved in R2-106916

To: SA3; Cc: RAN3

R2-106889: Reply LS on relay node security

=> Some rewording can be considered for second paragraph

=> Remove "additional" from last paragraph

=> Will see update in R2-106903

R2-106903: Reply LS on relay node security

=> LS is approved in R2-106913

To: GERAN; Cc: RAN WG3, CT WG1, CT WG4, SA WG1, SA WG2

R2-106910: DRAFT Reply LS on RAN sharing for Home(e)NB cells

- Nokia would like to see shorter response on the first question. Nokia thinks at least the interpretation of "manual selection" is vague. Samsung agrees with Nokia

=> Offline effort to improve wording on first question. Will see update in R2-106938

R2-106938: DRAFT Reply LS on RAN sharing for Home(e)NB cells

=> LS is approved in R2-106942

To: RAN4

R2-106927: [DRAFT] LS on LTE-BT coexistence

=> QC thinks it should be clear that RAN4 does not need to repeat the time level analysis, but just a slot level analysis: if there is an overlap, what is the impact to that transmission. QC thinks we could e.g. ask the question on what is the SNR impact for a slot collision. Can work offline to make this more clear.

- Samsung wonders if scenario is correct ?

IPR2025-00720, OnePlus Ex. 1004

- Ericsson wonders if we should not first look at the interference avoidance solutions in BT. Motorola agrees that maybe we should first study these BT mechanisms.

=> LS is not sent; can first study interference avoidance strategies from BT

To: RAN4

R2-106932: [draft] LS on Report Strongest Cells for SON

=> ALU would like to attached the corresponding CR proposal

=> With this change, the LS is approved in R2-106944

14 Any other business

Meeting schedule 2010/2011/2012:

MEETING	DATES	LOCATION	HOST	CO-LOCATION
RAN2 #68bis	18 Jan – 22 Jan 2010	Valencia, Spain	EF3	RAN 1/2/3
RAN2 #69	22 Feb – 26 Feb 2010	San Francisco, USA	NAF3	RAN1/2/3/4/5 ++
RAN #47	16 March – 19 March 2010	Vienna, Austria	EF3	
RAN2 #69bis	12 April – 16 April 2010	Beijing, China	Huawei	RAN1/2/5
RAN2 #70	10 May – 14 May 2010	Montreal, Canada	RIM	RAN 1/2/3/4/5
RAN #48	1 June – 4 June 2010	Seoul, Korea	TTA	
RAN2 #70bis	28 June – 2 July 2010	Stockholm, Sweden	Ericsson	RAN 2
RAN2 #71	23 Aug. – 27 Aug. 2010	Madrid, Spain	EF3	RAN 1/2/3/4/5
RAN #49	14 Sep. – 17 Sep. 2010	San Antonio, USA	NAF3	
RAN2 #71bis	11 Oct. – 15 Oct. 2010	Xian, China	ZTE	RAN 1/2/3 (RAN4)
RAN2 #72	15 Nov. – 19 Nov. 2010	Jacksonville, USA	NAF3	RAN1/2/3/4 +++
RAN #50	7 Dec. – 10 Dec. 2010	Istanbul, Turkey	EF3	
RAN2 #72bis	17 Jan – 21 Jan 2011	Dublin, Ireland	EF3	RAN1/2/3
RAN2 #73	21 Feb – 25 Feb 2011	Taipei, Taiwan	HTC	RAN 1/2/3/4/5
RAN #51	15 March – 18 March 2011	Kansas City, USA	Sprint Nextel	
RAN2 #73bis	11 April – 15 April 2011	Shanghai (tbc), China	ZTE	RAN 2/4
RAN2 #74	9 May – 13 May 2011	Kobe (tbc), Japan	JF3	RAN 1/2/3/4/5
RAN #52	31 May – 3 June 2011	Bratislava, Slovakia	EF3	
RAN2 #75	22 Aug. – 26 Aug. 2011	Athens, Greece	EF3	RAN 1/2/3/4/5
RAN #53	13 Sep. – 16 Sep. 2011	Japan (tbc)		
RAN2 #75bis	10 Oct. – 14 Oct. 2011	?, China	CATT	RAN1/2/3/4
RAN2 #76	14 Nov. – 18 Nov. 2011	Mega meeting?, USA	NAF3	RAN 1/2/3/4/5
RAN #54	6 Dec. – 9 Dec. 2011	Berlin, Germany	EF3	
RAN2 #77	6 Feb – 10 Feb 2012	Dresden, Germany	EF3	RAN 1/2/3/4/5
RAN #55	28 Feb – 2 March 2012			
RAN2 #77bis	26 March – 30 March 2012		*host requested*	RAN2
RAN2 #78	21 May – 25 May 2012	Rhodes, Greece	EF3	RAN 1/2/3/4/5?
RAN #56	12 June – 15 June 2012	?, Europe	EF3	
RAN2 #79	13 Aug. – 17 Aug. 2012	?, China	Huawei	RAN 1/2/3/4/5
RAN #57	4 Sep. – 7 Sep. 2012			
RAN2 #79bis	8 Oct. – 12 Oct. 2012		*host requested*	RAN2
RAN2 #80	12 Nov. – 16 Nov. 2012	?, India (tbc)		RAN 1/2/3/4/5
RAN #58	4 Dec. – 7 Dec. 2012	?, Europe	EF3	

EF3: European Friends of 3GPP
NAF3: North American Friends of 3GPP
JF3: Japanese Friends of 3GPP

++: SA1, SA2, CT1, CT3, CT4, CT6 also co-located

IPR2025-00720, OnePlus Ex. 1004

+++: SA2, SA5, CT1, CT3, CT4 also co-located

For plans for email discussions after RAN2 #72 see Annex H.

15 Closing of the meeting

The TSG RAN WG2 chairman Gert-Jan van Lieshout thanked the delegates for participating and contributing to RAN WG2 meeting #72. He thanked the North American Friends of 3GPP for hosting this meeting and closed the meeting on Friday November 19th, 2010 at about 17:00.

IPR2025-00720, OnePlus Ex. 1004

Annex A:
Report of LTE Carrier Aggregation Stage 3 User Plane session

This Annex A includes the report of the LTE Carrier Aggregation Stage 3 User Plane session held on Wed (agenda items 7.1.4).
The report of this session in R2-106862 is copied here for convenience (updates are indicated in grey).

7.1.4 Stage-3 User Plane

7.1.4.1 Running MAC CR

Rapporteur shall submit in principle agreed 36.321 CR, as well as any further non-contentious clarifications/corrections under this agenda item. Other companies can also submit non-contentious corrections to the 36.321 CR under this agenda item.

In principle agreed CR:

R2-106133 Introduction of Carrier Aggregation Ericsson CR 36.321 0436 - B related to email discussion [71b#08] REL-10 LTE_CA-Core
- no changes
- LGE would like to change RA to Random Access Procedure in 5.1.2, will be included in an update of the rapporteur CR
- LGE worries that currently it is nowhere mentioned that PCell is always activated and it may impact e.g. PHR reporting. Ericsson believes this should be clear from the Stage 2 document. Samsung agrees that it could be clarified in 5.X. Will add a statement in 5.X saying that PCell is always activated.

⇒ update in R2-106860 **[CB Friday]**

Rapporteur

R2-106628 Rapporteur's proposed update of R2-106133 on Introduction of Carrier Aggregation Rapporteur (Ericsson) CR 36.321 (0445) - B REL-10 LTE_CA-Core

⇒ Agreed and all changes (except #10, which is covered by change #3 of R2-106216) and to be included in R2-106860.

Activation/Deactivation

Do we start the activation/deactivation procedure for a cell only if it is not already in the ordered state (at MAC CE level or procedure itself) or start the timer only if not already running?

R2-106206 Clarification on activation/deactivation procedure MediaTek Disc REL-10 LTE_CA-Core
- NSN asks why would there be a mismatch. MediaTek thinks it could happen. NSN disagrees (as long as UE and eNB share a common understanding, there should not be any problem).
- Ericsson would prefer to avoid the change.
- Panasonic points out that it also impacts CQI reporting.
- Samsung would prefer clarifying it.
- Nokia would like to restart the timer always and think that with sensible implementation there should not be any problem with activating an already activated SCell.
- Huawei would like to restart the timer but avoid activating an already activated SCell. ZTE agrees and is concerned about UE behaviour.
- LGE points out that activating an already activated SCell would trigger a PHR. Mediatek would like to avoid considering reactivation as a PHR trigger. Ericsson does not think this is an issue.
- Alcatel-Lucent would prefer having the activation.
- Panasonic would prefer avoiding introducing two behaviours for activation/deactivation.

⇒ not agreed, keep the text as it is.

IPR2025-00720, OnePlus Ex. 1004

R2-106395 CR for handling of UE deactivation timerFujitsu CR 36.321 (0441) - B REL-10 LTE_CA-Core

R2-106330 Discussion on activation and deactivation MAC CE ZTE Disc

Both Tdocs not treated

PHR

R2-106397 CR for PHR trigger Fujitsu CR 36.321 (0442) - B REL-10 LTE_CA-Core

- Samsung & LGE agree with the intention.
- NSN does not see an issue and thinks a PHR can always be used by the eNB. Ericsson agrees with NSN. Samsung sees no use case. InterDigital believes that was already discussed and would be fine with the change. Huawei agrees with the change.
- Nokia would prefer having one behaviour always i.e. send the PHR always regardless of SCell state.
- Alcatel-Lucent sees no problem with the overhead. Ericsson agrees and also sees some benefit in obtaining a PHR always.

⇒ not agreed.

R2-106216 Text Proposals for clarification of PHR Huawei, HiSilicon Disc REL-10 LTE_CA-Core

Proposal 1:

- Ericsson would prefer having it in the procedural text directly.

⇒ will be discussed with PHR documents.

Proposal 2:

- Samsung, NSN, Mediatek support.
- Ericsson would prefer keeping the existing text.

⇒ agreed and to be included R2-106860 by the removal of “for each activated… uplink”

Proposal 3:

⇒ “which is used as pathloss reference” to be added in R2-106860

Other

R2-106358 Clarifications of running MAC CR New Postcom Disc REL-10 LTE_CA-Core

Proposal 1

- LGE prefers the current text as it is future proof.

⇒ not agreed

Proposal 2

- Ericsson believes it should be clear from RRC.

⇒ not agreed

Proposal 3

⇒ agreed (The naming of *ca-DeactivationTimer* is changed to *sCellDeactivationTimer)*

Proposal 4

- Ericsson, NSN and Samsung think it is clear from “the UE shall not transmit on UL-SCH on a deactivated”. ZTE supports the intention but would like to change it to “Stop uplink PUSCH transmission”. LGE would also prefer having the requirement captured in the procedural part. Alcatel-Lucent agrees.
- Ericsson believes that if we had this change, more might be required. Panasonic agrees with Ericsson.
- Docomo would also prefer having everything in the procedural text e.g. PDCCH monitoring.

⇒ not agreed (companies can think about it for the next meeting).

R2-106394 CR for PCH and BCH reception Fujitsu CR 36.321 (0440) - B REL-10 LTE_CA-Core

R2-106572 BCH and PCH Reception in Scell SamsungDisc

- ZTE would like to have the clarification (similarly as for the random access procedure).
- NSN points out that BCH is on PBCH and has nothing to do with common search space.
- Ericsson does not see any value in the clarification.

⇒ keep the text as it is (R2-106394 is not agreed)

R2-106508 Small corrections on agreed running MAC CR for carrier aggregation SamsungDisc REL-10 LTE_CA-Core

IPR2025-00720, OnePlus Ex. 1004

Proposal 1
- Ericsson supports the change.
- LGE prefers to remove "(including padding BSRs)"

⇒ can think about it for the next meeting.

Proposal 2

⇒ agreed and to be included in R2-106860

Proposal 3 & 4 already covered

Proposal 5
- Ericsson points out that CP is still discussing the exact encoding.
- Huawei supports the change.
- Nokia points out that it is still open whether all Rel-10 UEs will support the table.
- Samsung believes that in any case RRC (of the UE) will always tell MAC.

⇒ can come back once the parameter type is fixed.

R2-106557 Correction to TS36.321 on Random Access Procedure MediaTek CR 36.321 (0444) - B REL-10 LTE_CA-Core

⇒ CR is not agreed as such but "of the Serving Cell performing the Random Access Procedure to be added" and PCMAX,c clarification to be included in R2-106860.

7.1.4.2 MAC PHR reporting

Agreements of previous meetings are that one MAC CE PHR is reported for activated CCs and an L field is included in the subheader. In R2-106046 RAN1 says that PCMAX,c is reported together with all per-CC PHRs but RAN2 can consider overhead reduction methods if PCMAX,c is the same for multiple CCs and if PCMAX,c is the same for simultaneously-transmitted type 1 and type 2 PHRs.

MAC CE

R2-106199 Power Headroom MAC CE format for CA Nokia Siemens Networks, Nokia Corporation Disc
- InterDigital wonders how often is PCmax similar? Nokia thinks for intra case.
- Ericsson comments that only if the SCells are properly ordered we can reduce the overhead and this may not always be feasible.
- Panasonic believes we do not always know which virtual PHR is used (proposal 4). ZTE agrees.
- InterDigital thinks 6 bits do not consider relative values, which would allow fewer bits (4?). Nokia thinks this is up to RAN4. Panasonic agrees with InterDigital but points out that RAN1 has already agreed to send absolute value.

⇒ noted

R2-106214 PHR Related Issues Huawei, HiSilicon Disc

⇒ noted (no question)

R2-106258 PHR MAC CE format in Rel-10 Ericsson, ST-Ericsson Disc
- Mediatek thinks the same PCmax is used for Type 1 and 2. Ericsson and CATT think this is still unclear. Alcatel-Lucent agrees with Mediatek.

LCID

New one or reused the LCID from Rel-8 PHR MAC CE?

⇒ new LCID is introduced for Rel-10 PHR

PCMAX,c length

Proposals are 5, 6 and 7 bits.
- Samsung would like to only reserve 8 bits and ask RAN4 for more details.
- Panasonic supports the Samsung proposal (5 bits).

⇒ reserve 6 bits in MAC and ask RAN4 to agree on an exact number (LS in R2-106861 **[CB Friday]**)

Bitmap or ordering according to Cell Index

Do we need a bitmap to indicate which SCells are being reported in the MAC CE?
- Ericsson does not see any gain in having a bitmap.
- LGE thinks a bitmap can avoid any discrepancies

Bitmap: 16 companies

IPR2025-00720, OnePlus Ex. 1004
Page 625 of 700

no bitmap: 6 companies
⇒ bitmap is used to indicate which SCells are being reported.
- Ericsson points out that if PCmax is agreed to be reported for non-CA rel-10 UEs, they do not want a new PHR format to be introduced.

Type 1-2 indication
During reconfiguration of simultaneous PUSCH/PUCCH transmission, the eNB may not know which types are reported
- CATT thinks the indication comes for free by using one bit of the bitmap. New Postcom agrees.
- Docomo & HTC support.
- ZTE thinks that by comparing the length to the bitmap the eNB can guess.
- LGE does not see the need for the indication. RIM agrees.
- Docomo thinks that since we have one bit free anyway, we can use it. NSN agrees.
- Huawei would not like to use free bit in the bitmap.

⇒ type 1-2 indication is not included.

PCMAX,c for virtual PHR/reference format
Do we reduce the overhead by not reporting PCMAX,c for virtual PHR and if so how its presence is indicated?
- Panasonic thinks that the latest RAN1 agreement makes PCMAX reporting required.
- InterDigital would like to split the question: PCell when simultaneous is not configured and SCell, and PCell with simultaneous.

PCell when simultaneous is not configured and SCell
- InterDigital and Alcatel-Lucent believe it is not needed in that case. Mediatek and Ericsson agree.
- PCMAX for virtual PHR not reported for PCell when simultaneous is not configured and SCell? Also when both PUCCH and PUSCH are virtual, no PCMAX is reported?

[present and discuss R2-106510]
- Samsung proposes to conclude that for SCell, PCMAX is not reported when reference format is used and left it open for PCell.
- CATT would prefer reporting all PCMAX
- InterDigital thinks that to avoid restricting RAN4, we now need to allow for two PCMAX to be reported for PCell.
- Motorola would like to simplify as: for PCell, report PCMAX always (the two) and for SCell, only report when there is a grant.
- Ericsson thinks that the same bit could be used to indicate both the presence of PCMAX and virtual if alt.1 of the Samsung paper is used. Samsung agrees. Panasonic thinks this does not work in case 3.
- Motorola wonders what is the problem with reporting PCMAX always for PCell.
- LGE would like to report PCMAX always for both SCells and PCell. Nokia agrees .with LGE if overhead is not an issue. But if it is, then we should try to minimise the overhead as much as possible. Motorola agrees that it is the simplest from a specification viewpoint.
- RIM thinks we do not need PCMAX for virtual.

Three alternatives
1) report PCMAX always for PCell (the two) and SCells
2) report PCMAX depending on whether real or reference format is used for PCell and SCell (virtual indication can then be used to indicate the presence of PCMAX)
3) report PCMAX for PCell only

- NSN thinks Alt.2 is aligned to RAN1 status. Motorola disagrees.
- Huawei asks if with Alt.2 two PCMAXs are reported in case 1. Samsung confirms.
- Alcatel-Lucent thinks that alt.3 does not provide enough information. Panasonic also thinks this is against RAN1 agreement. Ericsson agrees.
- Samsung thinks that in Rel-10, the typical Rel-10 scenarios would make alt.2 the best.
- Panasonic points out that the first alternative is the RAN1 baseline.

Two alternatives
1) report PCMAX always for PCell (the two) and SCells
2) report PCMAX depending on whether real or reference format is used for PCell and SCell (virtual indication can then be used to indicate the presence of PCMAX)

IPR2025-00720, OnePlus Ex. 1004
Page 626 of 700

Indicative vote:
- First alternative: 11 companies
- Second alternative: 12 companies

Proposal is to report PCMAX always for PCell (the two) and SCells
⇒ Ericsson does not want to take a decision today **[CB Friday]**

Virtual PHR indication
When loosing PDCCH, the eNB cannot tell whether a PHR is virtual or not
- Motorola clarifies that the probability is ~ 10^{-2} x PHR sending probability. Docomo thinks that per TTI it is 10^{-2}. InterDigital agrees and the probability really is 10^{-2} per reported PHR. LGE thinks that in conditions where CA is typically used, it should be less than 10^{-2}.
- CATT supports having the indication.

⇒ virtual PHR indication is included (one of the R bit is used for that)
- For PCell, Ericsson wonders how the R bit would be set? InterDigital believes that each PHR should have its own bit not to restrict RAN4.
- Ericsson asks how the bits would then be set for the PCell?
- Samsung, InterDigital and Ericsson think that for type 1, the bit should indicate whether real PUSCH is used or not and for type 2, it should indicate whether real PUCCH is used or not.
- LGE thinks that for type 2, we do not need the indication as we can reuse the one from type 1. Ericsson believes they are independent.

⇒ for type 1, the bit should indicate whether real PUSCH is used or not and for type 2, it should indicate whether real PUCCH is used or not

PCMAX,c common among PHRs?
Do we reduce the overhead by not reporting similar PCMAX,c?
- Nokia proposes not to discuss this as long as we agree to report PCMAX always for PCell (the two) and SCells.

Agreements
1) new LCID for PHR in Rel-10
2) reserve 6 bits for PCmax and ask RAN4 to agree on an exact number (LS in R2-106861)
3) bitmap is used to indicate which SCells are being reported
4) virtual PHR indication is included (one of the R bit, per PH) and for type 1, the bit indicates whether real PUSCH is used or not and for type 2, it indicates whether real PUCCH is used or not

R2-106204 Indication of virtual PHRNTT DoCoMo, Panasonic, Qualcomm Disc
R2-106237 Discussion on the PHR related issues HTC TP 36.321
R2-106325 PHR MAC CE for Carrier Aggregation Potevio Disc
⇒ all contributions not treated

R2-106328 Discussion on PHR MAC CE design ZTE Disc
revised in R2-106684 which was not treated

R2-106353 Design of PHR MAC CE format for CA New Postcom Disc
R2-106388 PHR Format for Rel-10 CATT Disc
R2-106417 MAC PHR Contents InterDigital Disc
R2-106418 MAC PHR Format InterDigital Disc
R2-106443 remaining open issues on Pcmax signalling Alcatel-Lucent Disc
R2-106444 MAC PHR CE format design for Rel-10 Alcatel-Lucent Disc
R2-106490 Virtual Format Indication LG Electronics Inc. Disc
R2-106492 Pcmax,c Reporting LG Electronics Inc. Disc
R2-106495 PHR Format LG Electronics Inc. Disc
R2-106502 Additional PHR reporting Panasonic Disc
R2-106509 Discussion on PHR format Samsung Disc
R2-106512 Discussion on PCMAX,CC reporting Samsung Disc
R2-106542 Design of PHR MAC CE format for CA New Postcom, CATR Disc
R2-106547 Pcmax format in CA Pantech Disc
R2-106612 PHR MAC CE formats Research In Motion UK Limited Disc

IPR2025-00720, OnePlus Ex. 1004

R2-106203 Discussion on Open issues for Pcmax reporting MediaTek Disc
R2-106665 Text Proposal for the introduction of PHR MAC CE for CA New Postcom TP 36.321
⇒ all contributions not treated ~~noted without presentation.~~

PCMAX reporting configuration

R2-106632 Consideration on Pcmax Reporting HT mMobile Inc. Disc
- Huawei wonders how this works together with MAC CE. ZTE thinks this requires a new MAC CE.
- NSN believes there is no need to configure it, as per RAN1 agreement. Ericsson agrees.

⇒ noted, proposal not agreed.

New Trigger

R2-106587 PHR and SCell deactivation/removal HTC TP 36.321
- Panasonic thinks this is already covered by the agreement that we always report a PHR when activating (or reactivating a cell). Mediatek agrees.
- Panasonic thinks the proposal is about informing changes in MBR.
- ZTE thinks that when removing an SCell, potentially more power could be used but sees no hurry in sending a PHR for that.
- Huawei believes that PHR is more about quickly informing increased power limitation.
- Ericsson does not think this is required.

⇒ not agreed.

PCMAX Calculation

R2-106510 PCMAX and PH determination for type 2 PHR Samsung Disc
- Panasonic believes that for cases 2 and 3 RAN1 has already agreed Alt.2. NSN thinks that as a consequence, PCMAX is only needed once (e.g. Type 1).
- Ericsson asks if one assumption was that PCMAX is the same for type 1 and type 2. Samsung agrees. Ericsson thinks that for case 3, the PCMAX of type 2 should be reported while for case 2, the PCMAX of type 1 should be reported i.e. the PCMAX of the "real". InterDigital agrees but thinks that for case 1, it is not yet clear.

⇒ agree that in some cases, PCMAX is not needed.

R2-106387 Additional Information for PHR CATT Disc
⇒ not treated (already covered by previous discussion).

R2-106603 Considerations on PCMAX,c report ITRI Disc
⇒ not treated (already covered by previous discussion).

Procedure

R2-106259 Power Headroom Reporting in Rel-10 Ericsson, ST-Ericsson Disc

Proposal 1
⇒ agreed.

Proposal 2
- Samsung supports.
- LGE wonders what happens in case of SPS. Ericsson sees no problem

⇒ agreed

Proposal 3
- Nokia thinks the if statements could be changed to make the text cleaner. Ericsson agrees.

⇒ agreed as baseline and make sure that RRC and MAC use the same parameters for *extendedPHR* and *simultaneousPUSCH- PUCCH*

- Huawei would also like to add "If the UE is configured with simultaneous PUSCH and PUCCH transmission, the Power Headroom reporting procedure is also used to provide the serving eNB with information about the difference between the nominal UE maximum power and the estimated power for UL-SCH and PUCCH transmission on PCell"
- Docomo would prefer not to repeat too much of the procedural text and limit the addition to "and also with information about the difference between the nominal UE maximum power and the estimated power for UL-SCH and PUCCH transmission on PCell".

IPR2025-00720, OnePlus Ex. 1004

- Ericsson asks if the "PCell" part is required. NSN thinks so as this refers to type 2. Huawei confirms.

⇒ "and also with information about the difference between the nominal UE maximum power and the estimated power for UL-SCH and PUCCH transmission on PCell" to be added to the first paragraph of subclause 5.4.6

Withdrawn

R2-106493 PHR Format Selection LG Electronics Inc. Disc

7.1.4.3 Other CA

R2-106491 SCell deactivation procedure ETRI Disc

- Ericsson would like to know what the benefits are. For proposal 1, ETRI thinks the eNB does not know the buffer status as it is left to UE implementation. For proposal 2, active time is shortened.

Proposal 1

- CATT comments that in UL, the flush of the HARQ buffers was required to avoid non-adaptive retransmissions. In DL, CATT does not see the need for flushing the buffers. NSN thinks this was discussed before and it was agreed to leave it up to UE implementation. Huawei agrees with CATT and NSN.

⇒ not agreed

Proposal 2

- Huawei supports.
- NSN thinks it can be implemented without any specification impact. Ericsson agrees.
- Samsung would prefer to have a clarification somewhere to avoid keeping UE in active time for retransmissions that did not go through on an SCell which has been deactivated.
- Panasonic does not see the complexity in having it.
- NSN points out that earlier we discussed that deactivation should typically take place when no retransmissions are pending.
- Alcatel-Lucent supports the proposal.
- Huawei sees no impact on deactivated SCell.
- CATT does not support.
- Nokia asks what the problem is without having it. Samsung thinks one impact is to stay awake a bit longer than required.
- Ericsson wonders what we do with other timers.

⇒ leave it up to UE implementation for the time being (can come back at the next meeting).

R2-106496 CR for SCell deactivation procedure ETRI CR ? - - ? REL-10 LTE_CA-Core

⇒ not agreed.

R2-106497 SR and CALG Electronics Inc. Disc

- understanding is that if simultaneous PUSCH/PUCCH transmission in not supported, then PUCCH on PCell + PUSCH on SCell is also not possible.
- LGE comments that when allowing PUSCH on SCell and PUCCH on PCell, the benefits of the proposal disappear.

⇒ noted, proposal not agreed.

R2-106513 SR handling in CA Samsung Disc

- Ericsson sees the benefit when retransmissions are ongoing but not for new transmissions.
- NSN would prefer keeping the specification as it is. Huawei agrees because do not see the collisions as a likely case.

⇒ no changes for now but can come back at the next meeting.

Withdrawn

R2-106396 CR for introduction of per-UE deactivation timer Fujitsu CR ? - - ? REL-10 LTE_CA-Core

withdrawn

7.1.4.4 UL MIMO

=> Including email discussion outcome for [71b#24]: LTE: UL MIMO - MAC CR [Ericsson]

IPR2025-00720, OnePlus Ex. 1004

R2-106256 Summary of e-mail discussion [71b#24] LTE: UL MIMO MAC CR Ericsson Report REL-10 LTE_UL_MIMO-Core
related to email discussion [71b#24]
Suggestion 1
⇒ agreed.
Suggestion 2
- Ericsson clarifies that the intention is that no changes are needed to the note in 5.4.3.1 to cover UL MIMO.

R2-106659 HARQ operation for UL multiple antenna transmission Huawei, HiSilicon, Nokia Siemens Networks CR 36.321 (0446) - B REL-10 LTE_UL_MIMO-Core
⇒ not agreed.

R2-106687 Text proposal for capturing UL-SM in 36.321 Ericsson, ST Ericsson, Samsung, Panasonic
⇒ agreed in principle but polish wording offline and update in R2-106863.

Come Backs for Friday

TDocs

R2-106860 Introduction of Carrier Aggregation Ericsson CR 36.321 0436 1 B
R2-106861 LS for Power Headroom Reporting Nokia Corporation LS
R2-106863 HARQ operation for UL multiple antenna transmission Ericsson CR 36.321 0447 B

PCMAX Reporting issue

Two alternatives:
1) report PCMAX always for PCell (the two) and SCells
2) report PCMAX depending on whether real or reference format is used for PCell and SCell (virtual indication can then be used to indicate the presence of PCMAX)

IPR2025-00720, OnePlus Ex. 1004

Annex B:
Reports of joint sessions with other WGs

5 joint ad hocs with other WGs were held under SA2 leadership during RAN2 #72:
- **SA2-RAN2-RAN3-CT1-CT4 ad hoc on MTC (Mon 17:30-20:30)**
  Tdocs: S2-105074, S2-105494, S2-105495, S2-105758, S2-105776, S2-105779, S2-105802 (agenda), S2-105803 (overview), S2-105804, S2-105805, S2-105806, S2-105816 (summary)
- **SA2-RAN2-RAN3-CT1 ad hoc on LIPA HO (Tue 7:30-9:00)**
  Tdocs: S2-105357 (RAN3 issues), S2-105583, S2-105609, S2-105639, S2-105661, S2-105716, S2-105818 (agenda)
- **SA2-RAN2 ad hoc on MBR/GBR (Wed 7:00-8:00)**
  Tdocs: S2-105511, S2-105521, S2-105522, S2-105732, S2-105891 (agenda), S2-105892
- **SA2-RAN2-RAN3 ad hoc on MTU (Wed 8:00-9:00)**
  Tdocs: S2-104470, S2-105333, S2-105512, S2-105781, S2-105782, S2-105893 (agenda)
- **SA2-RAN2-CT1-CT4 ad hoc on MTC (Fri 7:00-8:00)**
  Tdocs: S2-105958 (Access barring), S2-105966 (Wait Timer Handling)

chairman of these sessions: SA2 chairman Balazs Bertenyi (Nokia Siemens Networks)
MCC support of these sessions: SA2 secretary Maurice Pope (ETSI MCC)

The following notes of these sessions are copied from the SA2 report.

B.1 SA2-RAN2-RAN3-CT1-CT4 ad hoc on MTC (Mon 17:30-20:30)

TD S2-105802 Agenda for the Joint Session on NIMTC. This was provided by the WG Chairmen.
An overall slide et has been produced to summarize the issues raised in RAN2 regarding NIMTC. This slide et can be found in TD S2-105803 (R2-106677).
The structure of this slide et will be used as the agenda for the joint session:
1. Indicators (slide-1): TD S2-105776 (SA1 LS), TD S2-105495, TD S2-105804 (R2-106267)
2. Wait timer handling (slide-2).
3. Access Class Baring (slide-3): TD S2-105779 (SA1 LS), TD S2-105805 (R2-106429), TD S2-105806 (R2-106274), TD S2-105758.
4. NAS issues: TD S2-105074 (SA2 LS), TD S2-105494.

The joint session will start at 17.30 in the RAN WG2 meeting room and will close 19.30 the latest.
Discussion and conclusion:
The agenda was provided for information and was noted.

IPR2025-00720, OnePlus Ex. 1004
Page 631 of 700

TD S2-105803 RAN WG2 input for Joint WG meeting on MTC (15-11-2011). This was introduced by RAN WG2 (R2-106677). RAN WG2 input for Joint WG meeting on MTC (15-11-2011).

Discussion and conclusion:

The slides were reviewed and used for the handling of each contribution.

Indicator at connection establishment (Slide 1):

TD S2-105776 LS from SA WG1: LS on MTC indicators and configuration options. At SA WG1#52, SA WG1 discussed the use of MTC Device configuration options (i.e. UE configured for MTC and UE configured for low priority) and their related indicators (i.e. MTC indicator, low priority indicator). Conclusions Terminology like MTC Indicator shall be avoided as it causes confusion. Indicator names that more precisely reflect the functionality covered shall be used. Due to the diverse requirements of different MTC services and verticals, it is preferred to allow for independent usage of the new functions SA WG2 is introducing within the NIMTC/SIMTC work items. Whenever feasible, different configuration options / indicator names shall be used for different functionality, rather than combining multiple functions under a single configuration option / indicator. Whenever combinations of functionality are made under a single configuration option / indicator, then SA WG1 shall be involved to determine whether those combinations make sense from a service point of view. Action: SA WG1 asks SA WG2 group to keep the above guidance in the conclusions section into account.

Discussion and conclusion:

It was commented that for overload control, the high or low priority indicator is not very useful. Nokia commented that the view of SA WG1 that there may be a number of different MTC devices but if an indicator is used to describe different configurations then it does not fulfil the original idea to have a simple indicator for an MTC device. The CT WG4 Chairman stated that the original definition of the MTC indicator is low priority and high latency. Samsung commented that the UE should perform functions based on it's configuration, rather than a number of indicators needed to the network to perform specific functions. Nokia Siemens Networks commented that the original idea for an indicator was to allow the network to treat MTC devices in a different was to other devices, but SA WG1 now seem to allow this for all UEs. The main issue may be only to align signalling priority with existing data priorities. China Mobile suggested adding another indicator (e.g. a 'human user indicator') but the number of indicators specified should be kept to a minimum.

TD S2-105495 Low priority indicator. This was introduced by Nokia Siemens Networks on behalf of Nokia Siemens Networks and Alcatel-Lucent. Analysis on Low Priority indicator and a way forward proposal on its storage.

Discussion and conclusion:

RIM commented that the contribution appears to ask to prevent confusion over ARP and signalling priority indicators.

IPR2025-00720, OnePlus Ex. 1004
Page 632 of 700

TD S2-105804 Interpreting SA WG2 MTC requirements for the UTRAN. This was introduced by IPWireless (R2-106267). This paper identifies the impacts for the UMTS RAN of the SA WG2 MTC Rel-10 requirements with emphasis placed on identifying the differences in the handling of the 'Low priority' and 'MTC' indicators. It is also proposed to ask SA WG2 some additional questions for clarification.

Discussion and conclusion:

Some clarification on the use cases behind the work being done was provided by Vodafone, indicating that a large number of devices are expected to be deployed and a large proportion of these will be roaming and protection in case of network failure may be needed to avoid signalling overload due to all roaming devices moving to another network. Huawei commented that there are priority levels set by RAN and it needs to be decided whether these are sufficient for use. Alcatel-Lucent commented that the use of 'Delay Tolerant' indicator is the same as 'low priority' and may be used for steering which should be avoided. NTT DOCOMO proposed discussing the purposes that the functionality is required for and then which devices the functionality is applicable to, and differentiate between low priority devices and low priority applications. Qualcomm agreed with NTT DOCOMO and added that the need to propagate the requests to the Core Network should be determined from the RAN perspective. Vodafone clarified that the routing is related to the CS-domain, whereas overload is in the PS domain. NTT DOCOMO suggested keeping the mechanism simple for Rel-10. Qualcomm agreed with this. Sierra Wireless commented that MTC devices which may need to make emergency call need to be taken into account. Vodafone replied that this could be handled on the NAS-level. Huawei commented that the radio priority handling for signalling is the issue as it is already available for data. Vodafone commented that a NAS level MTC indicator may be needed for Charging aspects.

It was suggested that there is no 'MTC indicator' for Rel-10, but the need for something to distinguish between devices which can be rejected for longer time period under congestion should be considered (i.e. a 'delay tolerant' type of indication).
RAN WG2 should work on a simple overload control for devices which can tolerate longer delays and a 'time tolerant' mechanism for connection establishment. RAN WG2 should decide if the indication is given as a new connection establishment request cause or with the connection setup complete information.

Wait/Reject timer handling (Slide 2).

Main proposed options:
Wait timer handling at AS or at NAS
Questions also related to other WGs:

1. Reject wait timer to be handled at AS (RRC will block new attempts) or NAS (i.e. just passed up to higher layers) ?
2. Timer continues/stops at intra-RAT cell reselection (or not strong requirement) ?
3. Granularity of 1min, with range up to 1 hour is sufficient ?

Mainly RAN WG2 internal questions:

- Rejection at RRC only, or also lower layer (e.g. UMTS AICH)
- What RRC messages to include extended value range ?

NTT DOCOMO commented that a UE moving outside of a pool area may wish to retry. RIM commented that this should not be passed up to the NAS when existing timers can be used. NTT DOCOMO commented that using timers may not work in some circumstances. Vodafone commented that the multi-RAT aspects need to be considered and this should not be done when moving to another RAT. It was commented that many MTC devices will be low-mobility or stationary devices. **An open issue is AS or NAS level timers ?**

Common ACB for low priority/roaming UEs (Slide 3):

IPR2025-00720, OnePlus Ex. 1004
Page 633 of 700

TD S2-105779 LS from SA WG1: Reply LS on Release 10 NIMTC Conclusions. SA WG1 thanks RAN WG2 and SA WG2 for their LSs and took note of the information provided. SA WG1 would like to inform about the progress made concerning the service requirements for Extended Access Barring. An agreed Rel-10 CR to TS 22.011 is attached to this LS. Please take the requirements in the CR into account in your further specification work. Action: SA WG1 kindly asks RAN WG2, GERAN and SA WG2 to consider the requirements in the TS 22.011 CR on Extended Access Barring in your further specification work for Rel-10.

Discussion and conclusion:

NTT DOCOMO asked whether the new Access Class is implemented on the UE or the USIM. NTT DOCOMO would prefer to avoid USIM impacts. This was out of scope for this discussion. It was commented that the Access Class Barring mechanism needs to be provided clear requirements in order to produce an effective solution. There was some discussion on whether a PLMN indicator was needed. It was commented that the granularity is insufficient in Rel-10 to make this worthwhile and should be moved to Rel-11.

TD S2-105805 Discussion in MTC requirements and ACB. This was introduced by Alcatel-Lucent (R2-106429). This document discussed the use of Access barring of MTC devices for CN overload. The following observation and proposal were made: Observation: Access barring cannot be used for overload handling of a specific CN node. Proposal: It is proposed to evaluate all Access barring mechanisms in conjunction with the other solutions for RAN overload mechanisms. If it is really felt that a solution for roaming devices is really needed, then a simple one (or two depending on the types of roaming that needs to be barred and is considered possible by CT WG1) bit barring indication for roaming can be considered for Rel-10.

Discussion and conclusion:

This was not handled in the joint session due to lack of time.

TD S2-105806 Extended ACB for EUTRAN. This was introduced by Vodafone (R2-106274). In S1-103147 [1], Vodafone highlights some requirements for Access Class Barring for CN overload control. In this contribution, those requirements are highlighted and a possible solution to fulfil the requirements is outlined for EUTRA. A draft CR is provided in the Appendix for the proposed solution.

Discussion and conclusion:

This was not handled in the joint session due to lack of time.

TD S2-105758 ACB for M2M roamers. This was introduced by Vodafone. Informal reports about the RAN WG2 discussions on access class barring for M2M roaming indicate that there is some unease on this topic. Also, a quick review of the submitted RAN 2 TDs shows that a couple of alternative ideas are presented (e.g. adding roaming/operator group indicators to the 3rd RRC Connection establishment message). In light of the ongoing discussions on this topic, Vodafone have identified one potential set of alternatives to ACB for M2M roamers. This alternative is enabled by M2M related changes that CT WG1 do appear to be adopting. At the time of submitting this TD, Vodafone has NOT concluded on their final preferred solution. However, ACB fulfils the M2M roaming need of limiting load 'at source'. The primary purpose of submitting this document is to ensure that, IF alternative solutions are being debated, then a fuller set of alternatives are considered.

Discussion and conclusion:

This was not handled in the joint session due to lack of time.

IPR2025-00720, OnePlus Ex. 1004
Page 634 of 700

TD S2-105074 Reply LS on Comments on Rel-10 issues for NIMTC. To: CT WG1 CC: CT WG4, RAN WG2, GERAN WG2. (This document is from SA WG2 meeting #81).

Discussion and conclusion:

This was not handled in the joint session due to lack of time.

TD S2-105494 APN Congestion Control. This was introduced by Nokia Siemens Networks on behalf of Nokia Siemens Networks, Nokia, ETRI, Ericsson, ST-Ericsson and Alcatel-Lucent. Analysis on APN congestion control and a way forward proposal.

Discussion and conclusion:

This was not handled in the joint session due to lack of time.

A summary of results of the joint session was provided in TD S2-105816.

IPR2025-00720, OnePlus Ex. 1004
Page 635 of 700

B.2 SA2-RAN2-RAN3-CT1 ad hoc on LIPA HO (Tue 7:30-9:00)

TD S2-105818 Agenda for the Joint Session on LIPA. This was introduced by WG Chairmen. The joint session will focus on resolving the issues raised in TD S2-105357. The following TDs are planned to be handled: TD S2-105609, TD S2-105716, TD S2-105639, TD S2-105661, TD S2-105583. The joint session will end at 9am the latest.

Discussion and conclusion:

This was noted.

TD S2-105357 LS from RAN WG3: LS on LIPA deactivation issue. (RAN WG3)
Abstract: RAN WG3 would like to inform SA WG2 that RAN WG3 has taken into account the Stage 2 CRs pack produced by SA WG2 on LIPA and is completing its work. During this work, RAN WG3 has detected a potential problem for the support of LIPA on 3g HNB: LIPA operation requires that the LIPA connection be deactivated at any outgoing handover of a 3g HNB operating a LIPA RAB and that the (source) SGSN will trigger this deactivation. However one key RAN WG3 feature in release 10 is to improve the mobility between two 3G HNBs via an optimized UTRAN internal handover that does not involve the CN (SGSN). Since the CN is not aware of the relocation, the SGSN will not be able to trigger the deactivation as envisioned by SA WG2 at RANAP Relocation time. RAN WG3 would like SA WG2 to take into account the above limitation and provide a solution of de-activating LIPA that does not rely on RANAP Relocation messaging. Action: RAN WG3 kindly ask SA WG2 to take into account the issue found by RAN WG3. RAN WG3 kindly ask SA WG2 to also provide a solution of de-activating LIPA that does not rely on RANAP Relocation messaging.

Discussion:

Vodafone asked what enhanced RAN mobility was, It was explained that this does not involve the Core Network (i.e. without messages to the SGSN) and is intended to limit the signalling for enterprise scenarios. It was clarified that the optimised handover in LTE using X2 handover will still notify the core network that this has happened, whereas in 3G the core network will not be aware of the relocation. Ericsson commented that the inter-3G scenarios also need to be handled and this should be resolved first. Qualcomm commented that the handover issues should be handled in RAN WG3 taking into account that there should be no Core Network impacts. Huawei commented that mobility within a CSG should always be supported in LIPA. The related contributions were briefly reviewed.

TD S2-105609 LIPA PDN connection deactivation way forward. This was introduced by Huawei on behalf of Huawei and Hisilicon.
Abstract: At SA WG2#80 for the LIPA PDN deactivation it has been agreed to deactivate it on the source side and the source MME does not include it in the BEARER CONTEXT to be transferred to the target side(refer to S2-104399/4400). Before SA WG2#81 two problems have been raised:

A) GTP issue, whether the source MME/SGSN can deactivate the LIPA PDN connection after the HO procedure?
B) RAB issue, whether the bearer information in the CONTEXT information can be different than the information in the RAN container?

A new problem has been raised from the incoming LS (R3-103114):

C) RAN based HO issue, whether the core network can deactivate the LIPA PDN connection for the RAN based HO, e.g. X2 HO?

Discussion:

Nokia Siemens Networks commented that this would require all legacy RAN Nodes to support mobility. Qualcomm agreed that this has large impact on RAN WG2 as the UE will need to know the correct bearer state, which will require new mechanisms.

IPR2025-00720, OnePlus Ex. 1004
Page 636 of 700

TD S2-105716 Discussion on LIPA PDN connection release. This was introduced by Nokia Siemens Networks on behalf of Nokia Siemens Networks and Nokia.
Abstract: At SA WG2#80 it was agreed that at S1 based handover the source MME cleans up the LIPA resources as the target MME/SGW may not be able to reach the LGW co-located with the HeNB. During the discussion at SA WG2#81 and offline discussions the following issues were discovered with the solution agreed at SA WG2#80:

- At S1-based handover with MME change without SGW relocation the source MME will contact the SGW after the handover procedure when the contexts of the non-LIPA PDN connections of the UE in the SGW are already assigned to the S11 GTP-C tunnel to the target MME. Therefore it is SGW implementation dependent if the PDN connection release initiated by the source MME will be successful or not. (You can find more details about this problem in S2-104904.)
- Current UTRAN specification does not allow the case that the SGSN/MME requests bearers that are not present in the RNC transparent container. Therefore it is implementation dependent how a legacy RNC reacts for such a request, e.g., a legacy RNC may reject the handover. (You can find more details about this problem in S2-105023 and S2-105024.)
- RAN WG3 is working on optimized handovers between the HNBs. As SGSN/MME are not involved in such a handover, it is obvious that in this case they cannot trigger the release of the LIPA PDN connection.

This paper analyses the problem of LIPA PDN connection (PDP context) release at handovers and proposes a way forward. Note in the rest of this paper the term LIPA PDN connection is used, but the analysis also covers the 3G case with PDP context.

Discussion:

It was commented that the source eNodeB only needs to know whether the target is in the same CSG. Motorola expressed concerns over security (hacking) of the LGW in the HNB. Qualcomm agreed that the HNB security concerns need to be taken into account. Nokia Siemens Networks commented that the security of the HNB is a general issue to be tackled and not specific to this. NEC disagreed as SA WG3 have developed security for the HNB.

TD S2-105639 LIPA PDN connection Deactivation. This was introduced by Alcatel-Lucent.
Abstract: At SA WG2#80 for the LIPA PDN deactivation it has been agreed to deactivate it on the source side and the source MME does not include it in the CONTEXT to be transferred to the target side (refer to S2-104399/4400). During the off-line discussion, two possible problems have been raised in SA WG2:

A) Whether the source MME/SGSN can deactivate the LIPA PDN connection after the HO procedure?

B) Whether the bearer information in the CONTEXT information can be different than the information in the RAN container?

At the same time, RAN WG3 sent an LS to inform about the expected support of intra-RAN optimized HNB-HNB mobility in release 10 which creates another potential issue.

This paper analyses all the issues associated to this LIPA PDN connection deactivation and how to resolve it.

Discussion:

Huawei commented that once the handover has started and the cell is deactivated, there is no way to return to the old cell. Alcatel-Lucent replied that this is common to all handovers.

IPR2025-00720, OnePlus Ex. 1004
Page 637 of 700

TD S2-105661 LIPA PDP Context/PDN Connection Deactivation. This was introduced by NEC.
Abstract: In 3GPP Rel-10 LIPA is enabled through a dedicated LIPA PDP context/PDN connection between the UE and a Local GW (L-GW). In this release, the L-GW is co-located with the H(e)NB. Also, mobility of LIPA bearers is not supported. As a consequence, the LIPA PDP Context/PDN connections needs to be deactivated when the UE leaves the coverage of the H(e)NB where the LIPA connection was established.

Discussion:

No comments made.

TD S2-105583 LIPA bearer deactivation during mobility process. This was introduced by Panasonic.
Abstract: It has been agreed during SA WG2#80 that the LIPA bearers should be deactivated by the source MME/SGSN during the mobility procedures. However, several issues has been identified and further discussed during SA WG2#81 and following offline teleconference. Several general principles seem to be agreeable based on the discussions:

- IDEL Mode mobility requires CN control for LIPA bearer deactivation, as RAN is unaware of the bearers;
- Rel-10 handover procedure has no problem in keeping consistent bearer lists in RAN Transparent Container and the EPS Bearer List from CN, as both the source H(e)NB and MME/SGSN can omit the LIPA bearers in the list. The consideration is more on forward compatibility with Rel-11 when LIPA mobility is supported;
- RAN WG3's optimized handover work only applies to handover within the same CSG and when no access control is required.

This paper proposed the possible way forward for the issue with Rel-11 LIPA mobility support taking into consideration.

Discussion:

Alcatel-Lucent commented that the solution in 2.2.1 would not work from the RAN perspective as the HANDOVER command is integrity protected by the target RAN node. Qualcomm commented that there is no integrity protection between the target and the UE and this should be used for the mechanism. Ericsson suggested that the LGW can initiate the removal of the PDN connection on handover, to simplify the procedures.

The SA WG2 Chairman proposed that the LGW should trigger deactivation, which can be checked by the MME after handover. Companies were asked to develop CRs based on LGW-initiated release.

IPR2025-00720, OnePlus Ex. 1004
Page 638 of 700

B.3 SA2-RAN2 ad hoc on MBR/GBR (Wed 7:00-8:00)

TD S2-105891 Agenda for the GBR>MBR Joint session. This was provided by the WG Chairmen.
The joint session will focus on resolving the issues raised in RAN WG2 on how to handle MBR>GBR. The following TDs are planned to be handled: S2-105522 (S2-105521), S2-105511, S2-105732, S2-105892 (R2-106643). The joint session will start at 7am and will end at 8am the latest.

Discussion:

The agenda was noted.

TD S2-105521 On the need of multiple child SAs. This was introduced by Qualcomm Incorporated on behalf of Qualcomm Incorporated and Deutsche Telecom.
Abstract: Discussion paper to be presented during the joint meeting with RAN WG2. In Release 8/9, SA WG2 decided to mandate MBR=GBR and there was no need for the UE to know MBR since eNB already assigns PBR based on GBR. However, SA decided to allow the network to set MBR>GBR to support applications that's capable to perform rate adaptation. For instance, an application can generate nominal rate of x, which will be close to GBR but if there's extra bandwidth given by the network, the application can increase its rate up to MBR. However, the application should not increase its rate beyond MBR. In this contribution, we discuss whether there is a need for new procedures to handle MBR>GBR in RAN WG2 specifications.
An updated version of this was available in TD R2-106669.

Discussion:

Nokia commented that the higher priority will steal bandwidth from the lower priority and asked what happens if one of them misbehaves. It was clarified that this will result in bandwidth waste. Ericsson commented that if an application tries to use more than the MBR then the traffic will be discarded, so why is such a mechanism required. It was clarified that this cannot be forced in the application layer so it is for audio/video applications under operator control. Huawei asked whether in this scheme the UE would not utilise some resource which is available when buffers are nearly full. Deutsche Telecom explained that some applications which operators wish to support are not well-controlled applications and this is intended to give enough operator control of the resources. This was then noted.

TD S2-105522 MBR>GBR Issues in RAN2. This was provided by Qualcomm Incorporated.
Abstract: Discussion paper to be presented during the joint meeting with RAN WG2.

Discussion:

This was provided for information and was noted.

TD S2-105511 Where to enforce Uplink MBR. This was introduced by Ericsson on behalf of Ericsson and ST-Ericsson.
Abstract: Why it is neither required nor beneficial to enforce the MBR in the UE and why it is preferable to perform rate enforcement in the network. For the joint RAN WG2 and SA WG2 meeting on MBR>GBR.

Discussion:

Deutsche Telecom commented that the reality is that even if an application is in the network is not well-behaved, market forces (popularity) of such an application may mean that it still needs to be supported, so operator mechanisms to control such applications is required. This was then noted.

IPR2025-00720, OnePlus Ex. 1004
Page 639 of 700

TD S2-105732 Evaluation of Use Case for MBR Enforcement within the UE AS. This was introduced by Nokia on behalf of Nokia and Nokia Siemens Networks.
Abstract: The use case for MBR enforcement on the UE Access Stratum is evaluated and it is argued that typical end-to-end use cases for MBR>GBR services do not reap benefits from MBR enforcement on the UE AS.

Discussion:

Vodafone asked what happens in UMTS for MBR > GBR in the mobile scheduling. It was clarified that this is handled by logical channel. Deutsche Telecom commented that the issues with packet services are now emerging as this is a fairly new phenomenon in the mobile industry. Also, the MBR and GBR characteristics will need to be different for different types of services. Nokia replied that if the application is well-defined and known then the connection can be configured for it and the problem will not occur. Samsung agreed that the application characteristics cannot always be known in advance of the service set-up. This was then noted.

TD S2-105892 (Draft) CR to 36.300: Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at UE side. This was provided by Orange SA on behalf of Orange SA, Deutsche Telekom, Telecom Italia and Qualcomm (R2-106643). Summary of change: Due to the above reasons for change, it is proposed that UEs shall limit the resource served to a logical channel with MBR>GBR to MBR and not beyond that.

Discussion:

This was not handled as no conclusion on the topic had been reached (noted).

It was concluded that this requires more discussion and possibly another joint session at the next co-located meeting. Off-line discussion of these issues was encouraged.

IPR2025-00720, OnePlus Ex. 1004
Page 640 of 700

B.4 SA2-RAN2-RAN3 ad hoc on MTU (Wed 8:00-9:00)

TD S2-105893 Agenda for the MTU Joint session. This was introduced by WG Chairmen. The joint session will focus on resolving the issues raised on MTU handling in the 3GPP system. The discussion was triggered by the following LSs: S2-104470 (CT WG4), S2-105333 (CT WG1). The following TDs are planned to be handled:S2-105781, S2-105512, S2-105782 (CR). The joint session will start at 8am and will end at 9am the latest.

Discussion:

The agenda was noted.

TD S2-104470 LS from CT WG4: LS on MTU in 3GPP system. To avoid unnecessary IP fragmentation of outer IP packets in the backbone (due to protocol overhead e.g. IP, GTP, UDP, ESP optionally, UDP encapsulation if V4 is used in private networks), which is CPU intensive, bandwidth inefficient and less resilient to packet losses, CT WG4 agreed to set the default MTU size for inner IP packets in 3GPP system to 1280 octets for both IPv4 and IPv6 (while also agreeing that it seems that it could be possible to increase the MTU size from 1280 to a value up to 1394 octets - see Annex of the attachment). Since this numerical recommendation should apply to UE and PGW/GGSN, CT WG4 consider that it should be specified preferably within a unique system-wide specification (e.g. 3GPP TS 23.060) to which other specifications could refer, or alternatively within CT WG1 and CT WG4/CT WG3 specifications. CT WG4 ask CT WG1 and SA WG2 to comment if any other value should be chosen and to consider inserting in their specifications the recommendation to set the default inner MTU size in 3GPP system to 1280 octets (or any other value that should be chosen) for both IPv4 and IPv6 in order to minimize potential of fragmentation. Recommending this default inner MTU size does not prevent the use of a greater MTU value when path MTU discovery is supported. Action: CT WG4 ask CT WG1 and SA WG2 to comment if any other value should be chosen and to consider inserting in their specifications the recommendation to set the default inner MTU size in 3GPP system to 1280 octets (or any other value that should be chosen) for both IPv4 and IPv6 in order to minimize potential of fragmentation.

Discussion:

This LS was from SA WG2 meeting #81 and was noted.

IPR2025-00720, OnePlus Ex. 1004
Page 641 of 700

TD S2-105333 LS from CT WG1: Reply LS on MTU in 3GPP system. (CT WG1)
Abstract: CT WG1 thanks CT WG4 for the LS on MTU in 3GPP system. A number of issues and questions were raised, listed below: - Are there any backward compatibility issues with earlier releases, where UEs can use bigger MTU sizes? As indicated in the discussion paper attached to the LS, 3GPP TS 23.060 specifies a maximum value of 1502 bytes. Based on this text, a Release 4 UE could send packets up to 1502 bytes. Section 9.3 of 23.060 says: 'The PDP PDUs shall be routed and transferred between the MS and the GGSN as N PDUs. In case of PDP type PPP, the maximum size of each N PDU shall be 1 502 octets. In other cases, the maximum size of each N PDU shall be 1 500 octets. When the MS or the GGSN receives a PDP PDU that results in an N PDU that is not larger than the maximum N PDU size, the PDP PDU shall be routed and transferred as one N PDU. When the MS or the GGSN receives a PDP PDU that results in an N PDU that is larger than the maximum N PDU size, the PDP PDU shall be segmented, discarded or rejected, depending on the PDP type and the implementation. The packet data protocol in the MS may limit the maximum size of the PDP PDUs that are routed and transferred, e.g., due to MS memory limitations.' This is particularly possible in case of laptops connect to IP network using a mobile equipment, where the length of IP packets is decided by the IP stack implementation in the laptop. There are some IP stack implementations in laptops which use 1500 bytes MTU. - Vendors might use general SIP stack implementations, which use the value recommended in IETF RFC 3261. If 3GPP specifies lower values, it may result in fragmentation of UDP packets carrying SIP signalling. Section 18.1.1 of RFC 3261 says: 'The 200 byte 'buffer' between the message size and the MTU accommodates the fact that the response in SIP can be larger than the request. This happens due to the addition of Record-Route header field values to the responses to INVITE, for example. With the extra buffer, the response can be about 170 bytes larger than the request, and still not be fragmented on IPv4 (about 30 bytes is consumed by IP/UDP, assuming no IPSec). 1300 is chosen when path MTU is not known, based on the assumption of a 1500 byte Ethernet MTU.' - Has SA WG4 been informed about this? User plane specifications might define or assume certain maximum transmission units. - Is there a risk that the size of the maximum Service Data Unit (SDU), as specified in clause 10.5.6.5 of 3GPP TS 24.008, will have negative impact on performance (due to subsequent fragmentation of fragments), if not aligned with the size of the MTU? - Given that the specified maximum MTU size is smaller than the maximum size normally used by SIP implementations, will the caused fragmentation have impact on network performance, and/or will it cause packet loss?

Discussion:

This LS was not opened at the joint session and was noted.

TD S2-105781 Discussion on MTU size. This was introduced by Nokia Siemens Networks on behalf of Nokia Siemens Networks and Nokia. (Revision of TD S2-105720).
Abstract: This paper analyses the MTU size problem and proposes to use dynamic link MTU discovery as a primary tool to set the link MTU in UEs.

Discussion:

Ericsson commented that the MTU size limit is not only set to prevent fragmentation in the network as there are also minimum MTU size proposals. Nokia Siemens Networks replied that this is the Nokia Siemens Networks interpretation of the SA WG4 specifications and other interpretations also need to be reviewed. It was also commented that IPv6 Router Advertisement may not be available. Nokia Siemens Networks acknowledged that DHCPv4 may be in use in the network. Samsung commented that split UE implementations (e.g. dongles) may have different MTU configuration in the upper layers and this may add further complexity. This was then noted.

TD S2-105512 Summary of MTU usage and assumptions in 3GPP specifications. This was introduced by Ericsson on behalf of Ericsson and ST-Ericsson.
Abstract: For joint (RAN WG2/3,CT WG1/3/4) session on MTU. This contribution provides the background analysis of the usage of MTU size in 3GPP system and impacts if it is changed compared to pre-Rel-8 system. Way Forward: Ericsson/ST-Ericsson proposes to have the same value to be used in EPS as for GERAN/UMTS in case of GPRS based architecture, i.e. - Max MTU is 1500 octet. Depending on implementation, configuration and network support, nodes may discard, fragment or forward packets larger than 1500 octet. Packet size should be between 1280 and 1394 octet in order to ensure the most efficient use of tunnels and reduce fragmentation.

Discussion:

It was clarified that this leads to a protocol configuration solution, not included in this contribution. This was used as part of discussions and was noted.

IPR2025-00720, OnePlus Ex. 1004
Page 642 of 700

TD S2-105782 23.060 CR1310R1: Clarification on MTU size. This was introduced by Nokia Siemens Networks on behalf of Nokia Siemens Networks and Nokia. (Revision of TD S2-105721).
Abstract: Summary of change: The meaning of N-PDU is clarified. It is recommended to use dynamic link MTU discovery. If the UE does not receive any dynamic information about the MTU then it should use a default value of 1344 octets, which is small enough to avoid IP layer fragmentation in most of the cases.

Discussion:

This was not handled in the joint session.

General discussion:

It was clarified that tunnels set up by the UE should allow a large MTU size, but the problem is for setting up default tunnels. Vodafone commented that a special mechanism may be needed for roaming as the home network will not have information on the links in the VPLMN. NTT DOCOMO asked what the advantage of avoiding fragmentation is. Nokia Siemens Networks explained that this helps reduce overheads due to fragmentation and increases efficiency.

3 options for dynamic MTU discovery mechanism was agreed to be included in the specifications:
- PCO solution for IPv4
- IPv6 Router Advertisement.
- DHCPv4

Should default value for MTU size be specified?
It was concluded to try to encourage the existing dynamic mechanisms available (IPv4 and IPv6 mechanisms). The specification of default values should be studied in the WGs. Off-line discussion between delegates was encouraged. CRs to 23.060 and 23.401 should be developed by SA WG2.

IPR2025-00720, OnePlus Ex. 1004
Page 643 of 700

B.5 SA2-RAN2-CT1-CT4 ad hoc on MTC (Fri 7:00-8:00)

TD S2-105966 Summary of offline Discussions on Wait Timer Handling at AS or NAS Level. This was introduced by Vodafone. The main objective of this discussion is to decide whether it is preferable to handle the wait timer (sent in RRC) at the AS level or at the NAS level. This discussion is a follow up of the outcome of the joint session outlined in S2-105816 related to this issue.

Discussion and conclusion:

Nokia Siemens Networks asked where the timer would go in the NAS and whether it was for CS or PS or both. Vodafone replied that it is domain-specific and the timer runs per-domain. There was some discussion over this. It was suggested that for Core Network Congestion, the timers will be handled on the NAS level and will not be reset at Cell reselection. Nokia Siemens Networks had concerns over adding such complexity where it is not necessarily needed. Ericsson pointed out that there was no message integrity protection and there is a danger of rejecting the UE for long periods. Vodafone replied that in such cases the reject timer is given an upper bound to prevent such issues and this also applies to unprotected NAS reject messages. It was clarified that the network boundary functions will ensure timer resets.

It was agreed as a working assumption that the Wait Timer will be handled in the NAS and companies were asked to draft CRs based upon this for the WGs.

TD S2-105958 Summary of offline discussion: Access barring feature for MTC. This was introduced by Ericsson on behalf of Ericsson and ST-Ericsson. Source for discussion, from 'MTC joint session SA WG2/RAN WG2/RAN WG3/CT WG1/CT WG4
Outcome - 15 Nov 2010' (S2-105816):
FFS1: Do we need AC based solution in Rel-10 ?
FFS2: If yes, does it look as follows:

- Will have new access barring info for 'delay tolerant' devices
- FFS whether e.g. 10 bits for UMTS, probability for LTE
- Two additional bits to indicate whether the new AB is applicable for 2 roamer groups HPLMN/eHPLMN and preferred PLMN (see SA WG1 CR), or these groups are totally blocked
- FFS: PLMN specific?

Summary: The offline activity (mail, physical meeting) was not able to give a unified conclusion.

1. Do we need additional access barring feature in Rel-10 in EUTRAN/UTRAN?
   What are the expected consequences if not introducing this in Rel-10?
   a. Access barring for 'delay-tolerant' UEs?
   b. Access barring for 'roaming, delay-tolerant' UEs?

Arguments pro:
Available in UEs as early as possible Efficient mechanism to protect one network in case of failure of other network In particular to protect network from roaming UE at failures in other network. Agreed in SA WG1.
Arguments against:
Existing access class barring can be used. Many details unclear: specific to device, application or subscription? Hard to see future-proof solution, with applications of different 'priority' in same device Late in Rel-10 RRC Connection reject/release method is preferred.

2. Technical solution
   a. Name of concept: 'Delay-tolerant', 'low-priority', …

IPR2025-00720, OnePlus Ex. 1004
Page 644 of 700

No consensus, however preference expressed for concept/name not linked to application characteristic.

b. 'bit-field' barring indication (UTRAN), probability factor (EUTRAN)
   Several ideas presented by companies, but not further discussed.
c. Other concerns
   '…the release should not be essential but a future proof solution should be the issue'
   'We prefer the NAS provides AS with a 'low priority' call type. NAS spec should specify when this 'call type' is provided to NAS, in line with the existing LTE approach.'.

Discussion and conclusion:

Nokia Siemens Networks commented that there are still a number of open issues which need to be studied. It was commented that the work is not mature enough to have ACB for Rel-10. Vodafone commented that the NAS asks the RRC for a connection (e.g. emergency or normal) and the priority indications can be overridden taking the call type into account. The interesting use is for roaming scenarios when a network failure could propagate back to the home network if no action is taken. It was commented that in this WI the CN Overload should be studied, rather than the RAN Overload. It was clarified that the RAN also uses ACB for overload control. Vodafone commented that ACB is used only in abnormal events and catastrophes and should not be used a part of normal overload control. Nokia Siemens Networks commented that some operators may use ACB also for normal overload control. NTT DOCOMO commented that ACB effectively prevents signalling to the RAN and protects the RAN. NTT DOCOMO suggested to start from a simple RRC reject release basis for Rel-10.

It was agreed that the Stage 1 and Stage 2 level descriptions of ACB will stand for Rel-10. It is expected that ACB will be used for GERAN, but this decision is subject to GERAN discussions. For LTE and UTRAN, there will be no ACB solution for Rel-10, but a simple RRC Reject solution will be considered instead. Further study on using ACB for LTE and UTRAN may be considered for Rel-11.

IPR2025-00720, OnePlus Ex. 1004
Page 645 of 700

Annex C:
List of participants

The list of participants of this RAN WG2 meeting #72 is attached to this report.

Total number of participants: 184 (registered just before the meeting: 245).

Annex D:
List of Tdocs

The list of Tdocs of this RAN WG2 meeting #72 is attached to this report.

Total number of Tdocs: 945 (R2-106040 - R2-106984) of which 862 Tdocs are available, i.e. 83 are not provided.

Annex E:
Incoming liaison statements for TSG RAN WG2 #72

RAN2 Tdoc	title (contact)	source	input	status	LS answer	additional comments
R2-106042	LS on Enhancements of Iur-g interface (contact: ZTE)	GERAN2	G2-100386	noted	-	
R2-106043	Reply LS to S2-104424 = R2-105296 on PS handover failure during the SRVCC (contact: Nokia)	GERAN2	G2-100387	noted	-	
R2-106044	LS on RAN sharing for Home(e)NB cells (contact: Nokia)	GERAN2	G2-100392	noted	R2-106942	
R2-106045	LS Concerning LTE Positioning Protocol	OMA LOC	OMA-LS_888	noted	-	
R2-106046	LS response to R2-104205 on per-UE PHR (contact: Alcatel-Lucent)	RAN1	R1-105796	noted	-	
R2-106047	LS on physical layer parameters for relay-specific advancements to be configured by higher layers (contact: Ericsson)	RAN1	R1-105819	noted	-	
R2-106048	LS on the reference format on virtual PHR (contact: Ericsson)	RAN1	R1-105820	noted	-	
R2-106049	LS on UTRAN ANR TS (contact: ZTE)	RAN3	R3-103071	noted	-	
R2-106050	LS on RN E-CGI configuration by O&M (contact: Alcatel-Lucent)	RAN3	R3-103091	noted	-	
R2-106051	LS on GBR and MBR definition (contact: Alcatel-Lucent)	RAN3	R3-103110	noted	-	
R2-106052	Reply LS to R2-105226 on Consideration on counting for MBMS activation (contact: Huawei)	RAN3	R3-103113	noted	-	

IPR2025-00720, OnePlus Ex. 1004
Page 646 of 700

RAN2 Tdoc	title (contact)	source	input	status	LS answer	additional comments
R2-106053	LS on Applicability of Handover restriction list for CSFB (contact: NSN)	RAN3	R3-103115	noted	-	
R2-106054	LS on Paging Priority indication over S1 for eMPS (contact: Alcatel-Lucent)	RAN3	R3-103117	noted	-	
R2-106055	Reply LS to C4-102304 on MTU in 3GPP system (contact: NSN)	SA2	S2-105263	noted	-	
R2-106056	LS on delivering registered PLMN ID for CS domain to eNB for multi-PLMN CSFB (contact: Qualcomm)	SA2	S2-105274	noted	-	
R2-106057	LS on Home (e)NodeB support in LCS (contact: NTT DOCOMO)	SA2	S2-105279	noted	-	
R2-106058	Reply LS to R2-105226 on Considerations on counting for MBMS activation (contact: Huawei)	SA2	S2-105281	noted	-	
R2-106059	LS on S1 handover / Iu relocation with LIPA connection removal (contact: Alcatel-Lucent)	SA2	S2-105317	noted	-	
R2-106060	Reply LS to R2-105994 on Release 10 NIMTC Conclusions (contact: Vodafone)	SA2	S2-105318	noted	-	
R2-106061	LS on parameters for Rel-10 (contact: Ericsson)	RAN1	R1-105821	noted	-	
R2-106062	LS on RAN4 decisions on Band 12 (contact: Huawei)	RAN4	R4-103901	noted	-	
R2-106063	Reply LS to R2-102663 on Radio Link Monitoring for Carrier Aggregation (contact: NTT DOCOMO)	RAN4	R4-103962	noted	R2-106902	
R2-106064	Response LS to R2-104205 on Per UE PHR related questions (contact: Ericsson)	RAN4	R4-103978	noted	-	
R2-106157	Reply LS to R2-106026 on service requirement for Rel-10 UE CSFB call (contact: NTT DOCOMO)	SA1	S1-103244	noted	-	
R2-106158	LS on MTC indicators and configuration options (contact: TNO)	SA1	S1-103320	noted	-	
R2-106159	Reply LS to R2-105994 on Release 10 NIMTC Conclusions (contact: Ericsson)	SA1	S1-103343	noted	-	
R2-106674	LS reply to R2-106030 on Counting for Activation of an MBMS Bearer Service (contact: Orange)	SA4	S4-100871	noted	-	
R2-106675	Reply LS to S2-105305 on MBR>GBR bearers in MTSI (contact: Samsung)	SA4	S4-100880	noted	-	
R2-106676	LS on impact of LTE air interface transmission delay on LTE system capacity for voice services (contact: Huawei)	SA4	S4-100966	noted	postponed	
R2-106864	LS on UE categories (contact: Ericsson)	RAN1	R1-106523	noted	-	LS received on Fri during RAN2 #72
R2-106865	LS on "in-device coexistence between LTE and ISM" update of TR 36.816 (contact: CMCC)	RAN4	R4-104809	noted	-	LS received on Fri during RAN2 #72
R2-106866	Reply LS to S2-104444 on new Study Item on Core Network Overload issues (contact: Vodafone)	SA3	S3-101400	not treated	?	LS received on Fri during RAN2 #72
R2-106867	Reply LS to S3-101105 on Progress on relay node security (contact: Sagem)	CT6	C6-100586	not treated	?	LS received on Fri during RAN2 #72
R2-106868	LS on introduction of radio bearer combination for DC-HSDPA and MIMO (contact: Ericsson)	RAN5	R5-106703	not treated	?	LS received on Fri during RAN2 #72

IPR2025-00720, OnePlus Ex. 1004
Page 647 of 700

RAN2 Tdoc	title (contact)	source	input	status	LS answer	additional comments
R2-106870	LS on inclusion of RF measurements into MDT report (contact: Motorola)	SA5	S5-103274	noted	postponed	LS received on Wed during RAN2 #72
R2-106872	Request to enable UE-originated RLF reporting after fresh RRC connection setup (contact: NSN)	RAN3	R3-103654	noted	-	LS received on Wed during RAN2 #72
R2-106874	Reply LS to S3-101105 = R2-105306 on Progress on relay node security (contact: Qualcomm)	CT1	C1-104897	noted	-	LS received on Wed during RAN2 #72
R2-106875	Reply LS to R2-106000 on Progress on relay node security (contact: NTT DOCOMO)	SA3	S3-101417	noted	R2-106913	LS received on Wed during RAN2 #72
R2-106876	Review of MDT design and reply LS on Security Issues with Logged MDT (contact: NTT DOCOMO)	SA3	S3-101422	noted	-	LS received on Wed during RAN2 #72
R2-106879	LS on MDT Stage 2 functionality (contact: NSN)	SA5	S5-103319	not treated	?	LS received on Wed during RAN2 #72
R2-106885	LS on Pcmax,c (contact: Qualcomm)	RAN1	R1-106497	not treated	?	LS received on Wed during RAN2 #72

postponed: LS answer was postponed to next RAN2 meeting (note: incoming LS will not be presented again at the next meeting and involved parties are requested to submit proposal for draft outgoing LS answer to next meeting).

Summary:

- In total: 41 LSs received for RAN2 #72: 23 related to LTE/E-UTRA, 3 related to UTRA, 15 related to joint aspects
- 0 resubmissions from RAN2 #71bis
- 12 of the 41 LSs received during RAN2 #72 meeting:
  - R2-106864 = R1-106523
  - R2-106865 = R4-104809
  - R2-106866 = S3-101400
  - R2-106867 = C6-100586
  - R2-106868 = R5-106703
  - R2-106870 = S5-103274
  - R2-106872 = R3-103654
  - R2-106874 = C1-104897
  - R2-106875 = S3-101417
  - R2-106876 = S3-101422
  - R2-106879 = S5-103319
  - R2-106885 = R1-106497
- 36 LSs noted; 5 LSs not treated and they will be resubmitted to RAN2 #72bis:
  - R2-106866 = S3-101400

IPR2025-00720, OnePlus Ex. 1004
Page 648 of 700

- R2-106867 = C6-100586
- R2-106868 = R5-106703
- R2-106879 = S5-103319
- R2-106885 = R1-106497

IPR2025-00720, OnePlus Ex. 1004
Page 649 of 700

Annex F:
Outgoing liaison statements of TSG RAN WG2 #72

Only final outgoing LSs are listed here.

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
R2-106803	ANR way forward	RAN3	-	ZTE	-	REL-10	ANR_UTRAN-Core	
R2-106902	Radio Link Monitoring for Carrier Aggregation	RAN4	RAN1	NTT DOCOMO	R4-103962 = R2-106063	REL-10	LTE_CA-Core	
R2-106913	Relay node security	SA3	RAN3	Ericsson	S3-101417 = R2-106875	REL-10	LTE_Relay-Core	
R2-106916	HARQ feedback for RNs configured with R-PDCCH	RAN1	-	Ericsson	-	REL-10	LTE_Relay-Core	
R2-106918	Power Headroom Reporting	RAN4	RAN1	Nokia	-	REL-10	LTE_CA-Core	
R2-106939	Handling of UTRAN Mobility Information	SA2	CT1	Ericsson	S2-104449 = R2-105299	REL-9	SAES-CSFB	
R2-106942	RAN sharing for Home(e)NB cells	GERAN	RAN3, CT1, CT4, SA1, SA2	Qualcomm	G2-100392 = R2-106044	REL-9	EHNB-GERAN	
R2-106944	Report Strongest Cells for SON	RAN4	-	Alcatel-Lucent	-	REL-10	TEI10, LTE-L23	

Summary:

In total 8 outgoing LSs of RAN2 #72 (including 0 LSs agreed by email):
5 related to LTE/E-UTRA, 1 related to UTRA, 2 related to joint aspects.

IPR2025-00720, OnePlus Ex. 1004
Page 650 of 700

Annex G:
List of agreed CRs for RAN #50

Overview of 179 agreed and 1 technically endorsed (25.331 REL-10) RAN2 CRs submitted to RAN #50 (Istanbul): see also RP-101364 (revision of RP-101057)

spec	REL-4	REL-5	REL-6	REL-7	REL-8	REL-9	REL-10	CRs	specs
25.302	0	0	0	0	0	0	2	**2**	**1**
25.306	0	0	0	0	0	2	6	**8**	**2**
25.307	1	1	1	1	1	1	1	**7**	**7**
25.308	0	0	0	0	0	0	1	**1**	**1**
25.319	0	0	0	0	0	0	2	**2**	**1**
25.321	0	0	0	3	5	5	6	**19**	**4**
25.322	0	0	0	0	0	0	1	**1**	**1**
25.331	0	0	0	0	14	18	30	**62**	**3**
25.367	0	0	0	0	0	1	0	**1**	**1**
25.993	0	0	0	0	0	0	1	**1**	**1**
36.300	0	0	0	0	0	2	32	**34**	**2**
36.302	0	0	0	0	0	0	1	**1**	**1**
36.304	0	0	0	0	0	1	1	**2**	**2**
36.305	0	0	0	0	0	1	0	**1**	**1**
36.306	0	0	0	0	0	0	2*	**2***	**1**
36.321	0	0	0	0	0	0	3	**3**	**1**
36.323	0	0	0	0	0	0	1	**1**	**1**
36.331	0	0	0	0	5	10	11	**26**	**3**
36.355	0	0	0	0	0	7	1	**8**	**2**
UTRA	1	1	1	4	20	27	50	**104**	**22**
LTE	0	0	0	0	5	21	50	**76**	**14**
total	1	1	1	4	25	48	100	**180**	**36**

In addition there were some company contributions.

IPR2025-00720, OnePlus Ex. 1004
Page 651 of 700

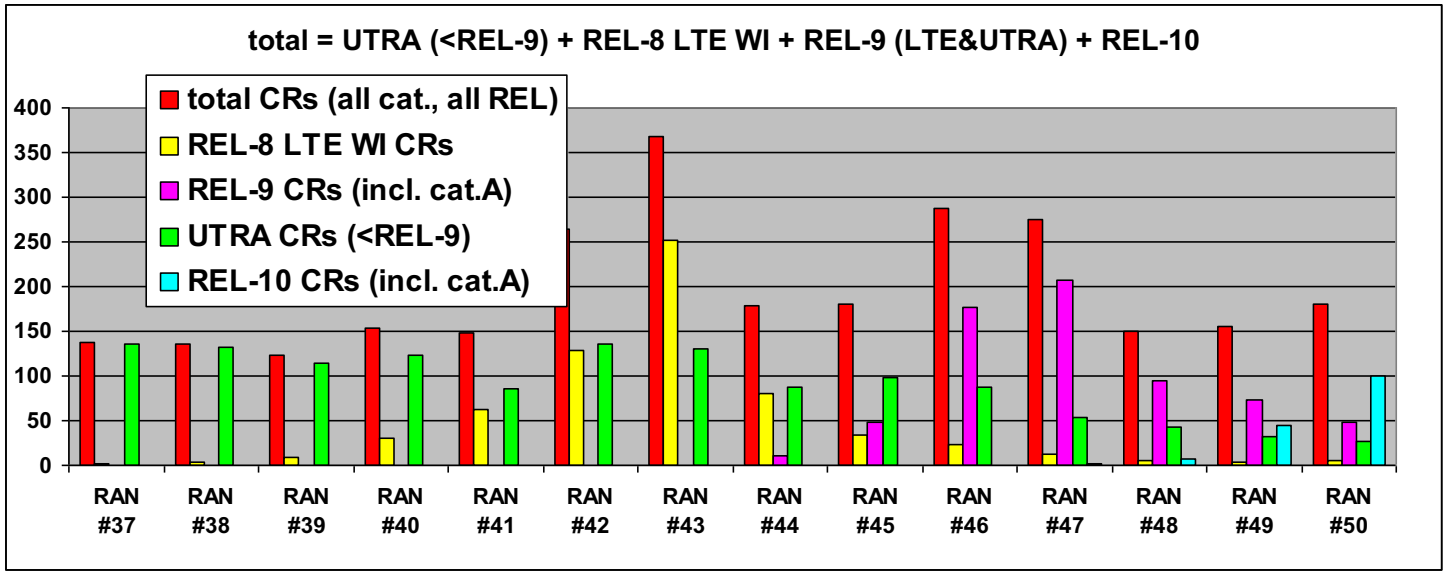


Figure G-1: RAN2 CRs submitted to the previous and the coming RAN plenary #50

The following table includes the RAN2 CRs submitted to RAN #50 in Istanbul:

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.302	0082	1	B	REL-10	R2-106742	Introduction of MC-HSUPA for 1.28Mcps TDD	TDD_MC_HSUPA	ZTE	RP-101217	revised	wrong CR number 0082 allocated, therefore see revision in RP-101365
25.302	0083	1	F	REL-10	R2-106770	Introduction of 4C-HSDPA definitions	4C_HSDPA-Core	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	RP-101218	revised	wrong CR number 0083 allocated, therefore see revision in RP-101366
25.302	0203	2	B	REL-10	R2-106983	Introduction of MC-HSUPA for 1.28Mcps TDD	TDD_MC_HSUPA	ZTE	RP-101365	approved	revision of R2-106742 in RP-101217 just to correct CR number
25.302	0204	2	F	REL-10	R2-106984	Introduction of 4C-HSDPA definitions	4C_HSDPA-Core	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	RP-101366	approved	revision of R2-106770 in RP-101218 just to correct CR number
25.306	0277	-	F	REL-9	R2-106068	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	RANimp-DC_MIMO	Nokia Corporation, Nokia Siemens Networks	RP-101211	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 652 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.306	0278	1	F	REL-10	R2-106981	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	4C_HSDPA-Core	Nokia Corporation, Nokia Siemens Networks	RP-101218	reissued	reissued in RP-101366
25.306	0278	1	F	REL-10	R2-106981	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	4C_HSDPA-Core	Nokia Corporation, Nokia Siemens Networks	RP-101366	approved	identical with CR in RP-101218
25.306	0279	-	A	REL-10	R2-106070	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	RANimp-DC_MIMO	Nokia Corporation, Nokia Siemens Networks	RP-101211	approved	
25.306	0280	1	F	REL-10	R2-106755	Introduction of REL-10 access stratum release indicator	TEI10	ZTE	RP-101213	approved	
25.306	0281	-	F	REL-9	R2-106072	Introduction of REL-9 access stratum release indicator	TEI9	ZTE	RP-101212	approved	
25.306	0282	1	A	REL-10	R2-106734	Introduction of REL-9 access stratum release indicator	TEI9	ZTE	RP-101212	approved	
25.306	0283	-	F	REL-10	R2-106750	Corrections on 25.306 for 4C-HSDPA	4C_HSDPA-Core	Huawei, HiSilicon	RP-101218	reissued	reissued in RP-101366
25.306	0283	-	F	REL-10	R2-106750	Corrections on 25.306 for 4C-HSDPA	4C_HSDPA-Core	Huawei, HiSilicon	RP-101366	approved	identical with CR in RP-101218
25.306	0284	-	B	REL-10	R2-106744	introduction of MC-HSUPA for 1.28Mcps TDD	TDD_MC_HSUPA	TD Tech	RP-101217	reissued	reissued in RP-101365
25.306	0284	-	B	REL-10	R2-106744	introduction of MC-HSUPA for 1.28Mcps TDD	TDD_MC_HSUPA	TD Tech	RP-101365	approved	identical with CR in RP-101217
25.307	0107	-	A	REL-9	R2-106784	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	E1900-Core	Alcatel-Lucent	RP-101223	postponed	
25.307	0108	-	A	REL-10	R2-106785	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	E1900-Core	Alcatel-Lucent	RP-101223	postponed	
25.307	0109	1	A	REL-8	R2-106777	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	E1900-Core	Alcatel-Lucent	RP-101223	postponed	
25.307	0110	-	B	REL-4	R2-106786	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	E1900-Core	Alcatel-Lucent	RP-101223	postponed	
25.307	0111	-	A	REL-5	R2-106787	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	E1900-Core	Alcatel-Lucent	RP-101223	postponed	
25.307	0112	-	A	REL-6	R2-106788	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	E1900-Core	Alcatel-Lucent	RP-101223	postponed	
25.307	0113	-	A	REL-7	R2-106789	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	E1900-Core	Alcatel-Lucent	RP-101223	postponed	
25.308	0104	-	B	REL-10	R2-106074	Introduction of MU-MIMO for LCR TDD in 25.308	MUMIMO_LCR_TDD-Core	TD Tech	RP-101219	approved	
25.319	0073	1	B	REL-10	R2-106982	Introduction of MU-MIMO for LCR TDD in 25.319	MUMIMO_LCR_TDD-Core	TD Tech	RP-101219	approved	
25.319	0074	-	F	REL-10	R2-106743	Modification for MC-HSUPA for 1.28Mcp TDD	TDD_MC_HSUPA	TD Tech	RP-101217	reissued	reissued in RP-101365
25.319	0074	-	F	REL-10	R2-106743	Modification for MC-HSUPA for 1.28Mcp TDD	TDD_MC_HSUPA	TD Tech	RP-101365	approved	identical with CR in RP-101217

IPR2025-00720, OnePlus Ex. 1004
Page 653 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.321	0704	-	F	REL-7	R2-106076	Clarification to the default SG in DTX Cycle 2	RANimp-CPC	Qualcomm Incorporated	RP-101194	approved	
25.321	0705	-	A	REL-8	R2-106077	Clarification to the default SG in DTX Cycle 2	RANimp-CPC	Qualcomm Incorporated	RP-101194	approved	
25.321	0706	-	A	REL-9	R2-106078	Clarification to the default SG in DTX Cycle 2	RANimp-CPC	Qualcomm Incorporated	RP-101194	approved	
25.321	0707	-	A	REL-10	R2-106079	Clarification to the default SG in DTX Cycle 2	RANimp-CPC	Qualcomm Incorporated	RP-101194	approved	
25.321	0708	-	F	REL-8	R2-106080	Correction in release of common E-DCH resources	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.321	0709	-	A	REL-9	R2-106081	Correction in release of common E-DCH resources	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.321	0710	-	A	REL-10	R2-106082	Correction in release of common E-DCH resources	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.321	0711	1	F	REL-7	R2-106702	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	RANimp-EnhState	ZTE	RP-101195	approved	
25.321	0712	2	A	REL-8	R2-106766	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	RANimp-EnhState	ZTE	RP-101195	approved	
25.321	0713	2	A	REL-9	R2-106767	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	RANimp-EnhState	ZTE	RP-101195	approved	
25.321	0714	2	A	REL-10	R2-106768	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	RANimp-EnhState	ZTE	RP-101195	approved	
25.321	0715	-	F	REL-7	R2-106087	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	RANimp-EnhState	Qualcomm Incorporated	RP-101195	approved	
25.321	0716	-	A	REL-8	R2-106088	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	RANimp-EnhState	Qualcomm Incorporated	RP-101195	approved	
25.321	0717	-	A	REL-9	R2-106089	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	RANimp-EnhState	Qualcomm Incorporated	RP-101195	approved	
25.321	0718	-	A	REL-10	R2-106090	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	RANimp-EnhState	Qualcomm Incorporated	RP-101195	approved	
25.321	0719	-	B	REL-10	R2-106746	introduction of MC-HSUPA for 1.28Mcps TDD	TDD_MC_HSUPA	TD Tech	RP-101217	reissued	reissued in RP-101365
25.321	0719	-	B	REL-10	R2-106746	introduction of MC-HSUPA for 1.28Mcps TDD	TDD_MC_HSUPA	TD Tech	RP-101365	approved	identical with CR in RP-101217
25.321	0721	-	F	REL-8	R2-106739	correction on equal priority in E-TFC selection for 1.28Mcps TDD	LCRTDD-EDCH-L23	TD Tech	RP-101196	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 654 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.321	0722	-	A	REL-9	R2-106740	correction on equal priority in E-TFC selection for 1.28Mcps TDD	LCRTDD-EDCH-L23	TD Tech	RP-101196	approved	
25.321	0723	-	A	REL-10	R2-106741	correction on equal priority in E-TFC selection for 1.28Mcps TDD	LCRTDD-EDCH-L23	TD Tech	RP-101196	approved	
25.322	0388	-	B	REL-10	R2-106091	Introduction of LCR TDD MC-HSUPA in 25.322	TDD_MC_HSUPA	CATT	RP-101217	reissued	reissued in RP-101365
25.322	0388	-	B	REL-10	R2-106091	Introduction of LCR TDD MC-HSUPA in 25.322	TDD_MC_HSUPA	CATT	RP-101365	approved	identical with CR in RP-101217
25.331	4329	-	F	REL-8	R2-106093	Addition of ROHC target mode in SRNS relocation message	TEI8	Alcatel-Lucent	RP-101205	approved	
25.331	4330	-	A	REL-9	R2-106094	Addition of ROHC target mode in SRNS relocation message	TEI8	Alcatel-Lucent	RP-101205	approved	
25.331	4331	-	A	REL-10	R2-106095	Addition of ROHC target mode in SRNS relocation message	TEI8	Alcatel-Lucent	RP-101205	approved	
25.331	4332	-	F	REL-8	R2-106096	Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN	MBSFN-DOB	IPWireless Inc.	RP-101201	approved	
25.331	4333	-	A	REL-9	R2-106097	Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN	MBSFN-DOB	IPWireless Inc.	RP-101201	approved	
25.331	4334	-	A	REL-10	R2-106098	Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN	MBSFN-DOB	IPWireless Inc.	RP-101201	approved	
25.331	4335	-	F	REL-8	R2-106099	Correction on actions related to HSPA_RNTI_STORED_CELL_PCH	RANimp-UplinkEnhState	Panasonic, Broadcom	RP-101200	approved	
25.331	4336	-	A	REL-9	R2-106100	Correction on actions related to HSPA_RNTI_STORED_CELL_PCH	RANimp-UplinkEnhState	Panasonic, Broadcom	RP-101200	approved	
25.331	4337	-	A	REL-10	R2-106101	Correction on actions related to HSPA_RNTI_STORED_CELL_PCH	RANimp-UplinkEnhState	Panasonic, Broadcom	RP-101200	approved	
25.331	4338	1	F	REL-9	R2-106706	Correction on CS voice over HSPA SDU discard timer configuration	RInImp8-CsHspa	Huawei, HiSilicon	RP-101202	approved	
25.331	4339	-	A	REL-10	R2-106103	Correction on CS voice over HSPA SDU discard timer configuration	RInImp8-CsHspa	Huawei, HiSilicon	RP-101202	approved	
25.331	4340	-	F	REL-8	R2-106104	Correction on READY_FOR_COMMON_EDCH definition	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4341	-	A	REL-9	R2-106105	Correction on READY_FOR_COMMON_EDCH definition	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4342	-	A	REL-10	R2-106106	Correction on READY_FOR_COMMON_EDCH definition	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4343	-	F	REL-10	R2-106107	Correction to the absence of IE additional Cells in 4C-HSDPA	4C_HSDPA-Core	Samsung	RP-101218	reissued	reissued in RP-101366
25.331	4343	-	F	REL-10	R2-106107	Correction to the absence of IE additional Cells in 4C-HSDPA	4C_HSDPA-Core	Samsung	RP-101366	approved	identical with CR in RP-101218
25.331	4344	1	F	REL-9	R2-106666	Correction to the limitation of SI acquisition	EHNB-RAN2	Huawei, HiSilicon	RP-101206	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 655 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.331	4345	1	A	REL-10	R2-106667	Correction to the limitation of SI acquisition	EHNB-RAN2	Huawei, HiSilicon	RP-101206	approved	
25.331	4346	-	F	REL-8	R2-106110	CR on T324 timer usage	RANimp-HSDSCH	Huawei, HiSilicon	RP-101198	approved	
25.331	4347	-	A	REL-9	R2-106111	CR on T324 timer usage	RANimp-HSDSCH	Huawei, HiSilicon	RP-101198	approved	
25.331	4348	-	A	REL-10	R2-106112	CR on T324 timer usage	RANimp-HSDSCH	Huawei, HiSilicon	RP-101198	approved	
25.331	4349	-	F	REL-8	R2-106113	Power offset for Scheduling Info in MAC-i	RANimp-UplinkL2dataRates	Ericsson, ST-Ericsson	RP-101199	approved	
25.331	4350	-	A	REL-9	R2-106114	Power offset for Scheduling Info in MAC-i	RANimp-UplinkL2dataRates	Ericsson, ST-Ericsson	RP-101199	approved	
25.331	4351	-	A	REL-10	R2-106115	Power offset for Scheduling Info in MAC-i	RANimp-UplinkL2dataRates	Ericsson, ST-Ericsson	RP-101199	approved	
25.331	4352	2	F	REL-10	R2-106769	Some clarifications of 4C-HSDPA behavior	4C_HSDPA-Core	ZTE	RP-101218	reissued	reissued in RP-101366
25.331	4352	2	F	REL-10	R2-106769	Some clarifications of 4C-HSDPA behavior	4C_HSDPA-Core	ZTE	RP-101366	approved	identical with CR in RP-101218
25.331	4353	1	F	REL-10	R2-106756	Some legacy editorial corrections for TEI10	TEI10	ZTE	RP-101213	approved	
25.331	4354	-	F	REL-10	R2-106118	Speed dependent scaling rules in HCS environment	TEI10	Ericsson, ST-Ericsson	RP-101213	approved	
25.331	4355	-	F	REL-8	R2-106119	UE behaviour when PPAC and DSAC parameters not present in SIB3	PPACR	NEC	RP-101203	approved	
25.331	4356	-	A	REL-9	R2-106120	UE behaviour when PPAC and DSAC parameters not present in SIB3	PPACR	NEC	RP-101203	approved	
25.331	4357	-	A	REL-10	R2-106121	UE behaviour when PPAC and DSAC parameters not present in SIB3	PPACR	NEC	RP-101203	approved	
25.331	4358	-	F	REL-8	R2-106718	Corrections to ETWS primary notification with security procedure	ETWS	Infineon Technologies	RP-101204	approved	
25.331	4359	-	A	REL-9	R2-106719	Corrections to ETWS primary notification with security procedure	ETWS	Infineon Technologies	RP-101204	approved	
25.331	4360	-	A	REL-10	R2-106720	Corrections to ETWS primary notification with security procedure	ETWS	Infineon Technologies	RP-101204	approved	
25.331	4367	1	F	REL-8	R2-106771	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	TEI8	Qualcomm Incorporated	RP-101205	approved	
25.331	4368	1	A	REL-9	R2-106772	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	TEI8	Qualcomm Incorporated	RP-101205	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 656 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.331	4369	1	A	REL-10	R2-106773	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	TEI8	Qualcomm Incorporated	RP-101205	approved	
25.331	4375	-	F	REL-10	R2-106758	RLC reset on a Signalling Radio Bearer	TEI10	Ericsson, ST-Ericsson	RP-101213	approved	
25.331	4382	-	F	REL-10	R2-106749	Corrections on 25.331 for 4C-HSDPA	4C_HSDPA-Core	Huawei, HiSilicon	RP-101218	reissued	reissued in RP-101366
25.331	4382	-	F	REL-10	R2-106749	Corrections on 25.331 for 4C-HSDPA	4C_HSDPA-Core	Huawei, HiSilicon	RP-101366	approved	identical with CR in RP-101218
25.331	4383	-	B	REL-10	R2-106790	Introduction of MU-MIMO for LCR TDD in 25.331	MUMIMO_LCR_TDD-Core	CATT	RP-101219	approved	
25.331	4384	3	F	REL-8	R2-106978	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4385	3	A	REL-9	R2-106979	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4386	3	A	REL-10	R2-106980	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4387	3	F	REL-9	R2-106974	Precoding weight set restriction setting for secondary cell	RANimp-DC_MIMO	Ericsson, ST-Ericsson	RP-101211	approved	
25.331	4392	1	F	REL-9	-	Procedural text to support measurements in the Secondary UL Frequency	RANimp-DC_HSUPA	-	RP-101263	approved	company contribution to RAN #50; is a revision of R2-106732 which was not agreed in RAN2 email discussion [72#11]
25.331	4393	1	A	REL-10	-	Procedural text to support measurements in the Secondary UL Frequency	RANimp-DC_HSUPA	-	RP-101264	approved	company contribution to RAN #50; is a revision of R2-106733 which was not agreed in RAN2 email discussion [72#11]
25.331	4394	3	F	REL-10	R2-106973	Precoding weight set restriction setting for secondary cells	4C_HSDPA-Core, RANimp-DC_MIMO	Ericsson, ST-Ericsson, ZTE, Qualcomm Incorporated	RP-101211	approved	
25.331	4395	-	F	REL-8	R2-106778	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4396	-	A	REL-9	R2-106779	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	
25.331	4397	-	A	REL-10	R2-106780	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	RANimp-UplinkEnhState	Ericsson, ST-Ericsson	RP-101200	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 657 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.331	4398	-	F	REL-10	R2-106775	Addition of Rel-10 critical extension in SRNS relocation message adding ROHC target mode	TEI10, RANimp-RABSE	Alcatel-Lucent	RP-101213	approved	
25.331	4399	-	F	REL-9	R2-106735	Addition of UE ROHC capability in IRAT handover	RANimp-RABSE, TEI9	Alcatel-Lucent	RP-101212	approved	
25.331	4400	-	A	REL-10	R2-106736	Addition of UE ROHC capability in IRAT handover	RANimp-RABSE, TEI9	Alcatel-Lucent	RP-101212	approved	
25.331	4403	2	B	REL-10	R2-106765	Introduction of MCHSUPA for 1.28Mcsp TDD	TDD_MC_HSUPA	ZTE	RP-101217	reissued	reissued in RP-101365
25.331	4403	2	B	REL-10	R2-106765	Introduction of MCHSUPA for 1.28Mcsp TDD	TDD_MC_HSUPA	ZTE	RP-101365	approved	identical with CR in RP-101217
25.331	4404	-	F	REL-8	R2-106708	Correction of HSPA_RNTI_STORED_CELL_PCH handling	RANimp-UplinkEnhState	Nokia Corporation, Nokia Siemens Networks	RP-101200	approved	
25.331	4405	-	A	REL-9	R2-106709	Correction of HSPA_RNTI_STORED_CELL_PCH handling	RANimp-UplinkEnhState	Nokia Corporation, Nokia Siemens Networks	RP-101200	approved	
25.331	4406	-	A	REL-10	R2-106710	Correction of HSPA_RNTI_STORED_CELL_PCH handling	RANimp-UplinkEnhState	Nokia Corporation, Nokia Siemens Networks	RP-101200	approved	
25.331	4407	1	B	REL-10	R2-106806	Introduction of detected set measurements and reporting for Inter-frequency	Interf_dset_meas_UMTS	Nokia Corporation, Nokia Siemens Networks	RP-101220	approved	
25.331	4409	1	F	REL-8	R2-106762	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	RANimp-HSDSCH	Panasonic	RP-101198	approved	
25.331	4410	1	A	REL-9	R2-106763	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	RANimp-HSDSCH	Panasonic	RP-101198	approved	
25.331	4411	1	A	REL-10	R2-106764	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	RANimp-HSDSCH	Panasonic	RP-101198	approved	
25.331	4419	1	F	REL-10	R2-106802	Corrections to 4C-HSDPA	4C_HSDPA-Core	InterDigital	RP-101218	reissued	reissued in RP-101366
25.331	4419	1	F	REL-10	R2-106802	Corrections to 4C-HSDPA	4C_HSDPA-Core	InterDigital	RP-101366	approved	identical with CR in RP-101218
25.331	4427	-	C	REL-10	R2-106774	Enhanced Security Mode procedure handling in case of delayed L2 ACK	TEI10	Research In Motion UK Limited, Qualcomm Incorporated	RP-101213	approved	
25.331	4432	2	F	REL-8	R2-106794	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	RANimp-UplinkEnhState	Panasonic	RP-101200	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 658 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
25.331	4433	2	A	REL-9	R2-106795	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	RANimp-UplinkEnhState	Panasonic	RP-101200	approved	
25.331	4434	2	A	REL-10	R2-106796	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	RANimp-UplinkEnhState	Panasonic	RP-101200	approved	
25.367	0019	-	F	REL-9	R2-106122	Correction to the limitation of SI acquisition	EHNB-RAN2	Huawei, HiSilicon	RP-101206	approved	
25.993	0118	-	B	REL-10	R2-106757	Adding the 12.2/7.4/5.9/4.75 kbps speech without SRB#5	TEI10	Nokia Siemens Networks, Nokia Corporation	RP-101213	approved	
36.300	0269	2	B	REL-10	R2-106854	Corrections and new agreements on Carrier Aggregation	LTE_CA-Core	Nokia Siemens Networks (Rapporteur)	RP-101226	approved	
36.300	0270	-	F	REL-9	R2-106124	36300_CRxxx_Handover for Hybrid Cells	EHNB-RAN2	Vodafone, Nokia, Nokia Siemens Networks	RP-101206	approved	
36.300	0271	-	A	REL-10	R2-106125	36300_CRxxx_Handover for Hybrid Cells	EHNB-RAN2	Vodafone, Nokia, Nokia Siemens Networks	RP-101206	approved	
36.300	0272	-	F	REL-9	R2-106126	Correction on MAC padding on MCH	MBMS_LTE	CATT	RP-101208	approved	
36.300	0273	-	A	REL-10	R2-106127	Correction on MAC padding on MCH	MBMS_LTE	CATT	RP-101208	approved	
36.300	0274	3	B	REL-10	R2-106930	Additions and corrections to relaying description	LTE_Relay-Core	Ericsson	RP-101228	approved	
36.300	0275	1	B	REL-10	R2-106880	LTE - Stage 2 agreements on MBMS enhancement	MBMS_LTE_enh-Core	Huawei (Rapporteur)	RP-101231	approved	
36.300	0276	1	B	REL-10	R2-106887	CR to 36.300 adding e1xCSFB support for dual Rx/Tx UE	TEI10, LTE-L23	Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated	RP-101214	approved	linked to CT CP-100761
36.300	0277	-	F	REL-10	R2-106907	Editorial Clean-Up	TEI10, LTE-L23	Nokia Siemens Networks (Rapporteur)	RP-101214	approved	
36.300	0278	1	B	REL-10	R2-106943	Introduction of enhanced ICIC	eICIC_LTE-Core	Qualcomm Incorporated	RP-101229	approved	
36.300	0285	2	C	REL-10	R2-106924	Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side.	TEI10, LTE-L23	Orange SA, Deutsche Telekom, Telecom Italia	RP-101214	approved	
36.300	0286	-	F	REL-10	R2-106947	CR for Description of Energy Saving	TEI10, LTE-interfaces	RAN3	RP-101214	approved	
36.300	0287	-	B	REL-10	R2-106948	S1 non UE associated message handling	LTE_Relay-Core	RAN3	RP-101228	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 659 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
36.300	0288	-	F	REL-10	R2-106949	Clarification to ANR Operation	LTE-interfaces, TEI10	RAN3	RP-101214	approved	
36.300	0289	-	F	REL-10	R2-106950	P-GW function embedded in DeNB and addressing requirements	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0290	-	B	REL-10	R2-106951	eNB Configuration Update procedure in RN startup and detach procedure	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0291	-	B	REL-10	R2-106952	Introduction of MCE initiated MBMS Session Start Request	MBMS_LTE_enh-Core	RAN3	RP-101231	approved	
36.300	0292	-	F	REL-10	R2-106953	No NNSF function in RN	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0293	-	B	REL-10	R2-106954	S1 handover routing toward RN	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0294	-	F	REL-10	R2-106955	TNL address Handling	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0295	-	F	REL-10	R2-106956	Correction on SPID Transfer	LTE-Interfaces, TEI10	RAN3	RP-101214	approved	
36.300	0296	-	B	REL-10	R2-106957	Support of ARP Pre-emption	MBMS_LTE_enh-Core	RAN3	RP-101231	approved	
36.300	0297	-	B	REL-10	R2-106958	Support of MBMS Service Counting Report procedure	MBMS_LTE_enh-Core	RAN3	RP-101231	approved	
36.300	0298	-	B	REL-10	R2-106959	Stage 2 for the X2 based mobility enhancement between HeNBs	HNB_HENB_mob_enh-Core	RAN3	RP-101222	approved	
36.300	0299	-	B	REL-10	R2-106960	Introduction of event-triggered inter-RAT cell load reporting	SONenh_LTE-Core	RAN3	RP-101230	approved	
36.300	0300	-	B	REL-10	R2-106961	Introduction of LIPA function	LIPA_SIPTO	RAN3	RP-101216	approved	LIPA_SIPTO has no RAN WI, it is an SA2 feature and it will be treated at RAN #50 under TEI10
36.300	0301	-	B	REL-10	R2-106962	OAM requirements for QCI to DSCP mapping config for relays	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0302	-	B	REL-10	R2-106963	Non UE associated message handling	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0303	-	B	REL-10	R2-106964	Introduction of MTC Overload Support	NIMTC-RAN_overload	RAN3	RP-101224	approved	
36.300	0304	-	B	REL-10	R2-106965	Relay Node Un Signalling Transport Support	LTE_Relay-Core	RAN3	RP-101228	approved	
36.300	0305	-	F	REL-10	R2-106966	Complete S1 Interface Signalling Procedures	LTE-Interfaces, TEI10	RAN3	RP-101214	approved	
36.300	0306	1	B	REL-10	R2-106972	X2 procedure and OAM requirements to support eICIC	eICIC_LTE-Core	RAN3	RP-101229	approved	
36.300	0307	-	B	REL-10	R2-106968	Stage-2 updates to RN initial attachment	LTE_Relay-Core	RAN3	RP-101228	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 660 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
36.300	0308	-	B	REL-10	R2-106969	Functionality of SON MRO defined for Rel.10	SONenh_LTE-Core	RAN3	RP-101230	approved	
36.302	0021	3	B	REL-10	R2-106898	Introduction of CA to TS36.302	LTE_CA-Core	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	RP-101226	approved	
36.304	0140	2	B	REL-10	R2-106900	36.304 CR on MDT	MDT_UMTS LTE-Core	NSN	RP-101221	approved	
36.304	0142	-	F	REL-9	R2-106919	Cell selection in case of redirection based CSFB procedure	TEI9, LTE-L23	Qualcomm Incorporated	RP-101210	approved	
36.305	0022	-	F	REL-9	R2-106946	Alignment of LPPa descriptions to stage 3	LCS_LTE	RAN3	RP-101207	approved	
36.306	0036	1	B	REL-10	-	Introduction of Carrier aggregation and UL/DL MIMO	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core	-	RP-101290	rejected	company contribution to RAN #50; is a resubmission of R2-106933 which was not agreed in RAN2 email discussion [72#01]
36.306	0037	-	B	REL-10	-	Inclusion of new UE categories in Rel-10	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core	-	RP-101268	approved	company contribution to RAN #50; is a counter proposal to RP-101290 which was not agreed in RAN2 as R2-106933 in email discussion [72#01]
36.321	0436	2	B	REL-10	R2-106917	Introduction of Carrier Aggregation	LTE_CA-Core	Ericsson	RP-101226	approved	
36.321	0437	1	B	REL-10	R2-106890	Introduction of relays in MAC	LTE_Relay-Core	Ericsson	RP-101228	approved	
36.321	0447	-	B	REL-10	R2-106863	HARQ operation for UL multiple antenna transmission	LTE_UL_MIMO-Core	Ericsson	RP-101225	approved	
36.323	0084	-	B	REL-10	R2-106970	Addition of integrity protection of DRBs in PDCP for RNs	LTE_Relay-Core	Ericsson	RP-101228	postponed	
36.331	0476	3	B	REL-10	R2-106937	Introduction of Minimization of Drive Tests	MDT_UMTS LTE-Core	Nokia Siemens Networks, Nokia Corporation	RP-101221	revised	company contribution in RP-101183 for RAN #50 to revise this CR
36.331	0476	4	B	REL-10	-	36.331 CR on Introduction of Minimization of Drive Tests	MDT_UMTS LTE-Core	-	RP-101183	approved	company contribution to RAN #50 replacing R2-106937 in RP-101221
36.331	0477	4	B	REL-10	-	AC-Barring for Mobile Originating CSFB call	LTE-L23, TEI10	-	RP-101293	approved	company contribution to RAN #50; is a revision of R2-106940 for which RAN2 email discussion [72#05] achieved no consensus; see also counter proposal in RP-101289
36.331	0478	-	F	REL-10	R2-106137	Addition of UE-EUTRA-Capability descriptions	TEI10, LTE-L23	Research In Motion UK Limited	RP-101214	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 661 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
36.331	0481	-	F	REL-10	R2-106140	Clarification on Default Configuration for CQI-ReportConfig	TEI10, LTE-L23	CATT	RP-101214	approved	
36.331	0482	-	F	REL-8	R2-106141	Clarification on Meaning of FGI Bits	LTE-L23	Vodafone	RP-101197	approved	
36.331	0483	-	A	REL-9	R2-106142	Clarification on Meaning of FGI Bits	LTE-L23	Vodafone	RP-101197	approved	
36.331	0484	-	F	REL-8	R2-106143	Clarification regarding reconfiguration of the quantityConfig	LTE-L23	Ericsson, ST-Ericsson, Nokia Siemens Networks, Nokia Corporation, Samsung	RP-101197	approved	
36.331	0485	-	A	REL-9	R2-106144	Clarification regarding reconfiguration of the quantityConfig	LTE-L23	Ericsson, ST-Ericsson, Nokia Siemens Networks, Nokia Corporation, Samsung	RP-101197	approved	
36.331	0486	1	F	REL-9	R2-106851	Corrections to the presence of IE regarding DRX and CQI	TEI9, LTE-L23	ASUSTeK	RP-101210	approved	
36.331	0487	-	B	REL-10	R2-106146	CR to 36.331 adding e1xCSFB support for dual Rx/Tx UE	TEI10, LTE-L23	Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated	RP-101215	approved	linked to CT CP-100761
36.331	0488	1	B	REL-10	R2-106856	Introduction of Carrier Aggregation and UL/ DL MIMO	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core	Rapporteur (Samsung)	RP-101227	approved	
36.331	0489	1	B	REL-10	R2-106886	Introduction of relays in RRC	LTE_Relay-Core	Ericsson	RP-101228	approved	
36.331	0490	1	B	REL-10	R2-106906	Priority indication for CSFB with re-direction	TEI10, LTE-L23, eMPS	ZTE	RP-101214	approved	
36.331	0491	-	F	REL-10	R2-106150	SIB Size Limitations	TEI10, LTE-L23	Nokia Siemens Networks	RP-101214	approved	
36.331	0492	1	B	REL-10	R2-106882	Stage-3 CR for MBMS enhancement	MBMS_LTE_enh-Core	Huawei (Rapporteur)	RP-101231	postponed	
36.331	0493	-	F	REL-9	R2-106152	The field descriptions of MeasObjectEUTRA	TEI9, LTE-L23	Huawei, HiSilicon	RP-101210	approved	
36.331	0497	2	F	REL-8	R2-106945	Clarification of FGI settings non ANR periodical measurement reporting (contact: NSN)	LTE-L23	Nokia Siemens Networks, NTT DoCoMo, Motorola	RP-101197	approved	
36.331	0498	1	A	REL-9	R2-106690	Clarification of FGI settings non ANR periodical measurement reporting	LTE-L23	Nokia Siemens Networks, NTT DOCOMO, INC., Motorola	RP-101197	approved	
36.331	0500	-	F	REL-9	R2-106853	Corrections to RLF Report	SON	NEC	RP-101209	approved	
36.331	0506	-	F	REL-8	R2-106691	Clarification regarding default configuration value N/A	LTE-L23	Samsung	RP-101197	approved	

IPR2025-00720, OnePlus Ex. 1004
Page 662 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
36.331	0513	-	C	REL-10	R2-106912	Combined Quantity Report for IRAT measurement of UTRAN	TEI10, LTE-L23	Huawei, HiSilicon, Deutsche Telekom, Ericsson, ST-Ericsson, TeliaSonera, Nokia Siemens Networks, ZTE	RP-101214	approved	
36.331	0519	1	F	REL-9	R2-106923	T321 timer fix	EHNB-RAN2	Samsung	RP-101206	approved	
36.331	0523	-	F	REL-8	R2-106693	Restriction of AC barring parameter setting	LTE-L23	NTT DOCOMO, INC.	RP-101197	approved	
36.331	0524	-	A	REL-9	R2-106694	Restriction of AC barring parameter setting	LTE-L23, SSAC	NTT DOCOMO, INC.	RP-101197	approved	
36.331	0525	-	F	REL-9	R2-106852	Removal of SEQUENCE OF SEQUENCE in UEInformationResponse	TEI9, LTE-L23	Alcatel-Lucent, Samsung	RP-101210	approved	
36.331	0526	1	A	REL-9	R2-106901	Clarification regarding default configuration value N/A	LTE-L23	Samsung	RP-101197	approved	
36.331	0527	1	F	REL-10	R2-106941	UE power saving and Local release	TEI10, LTE-L23	Nokia Siemens Networks, Deutsche Telekom, NTT DOCOMO INC., Telecom Italia	RP-101214	approved	
36.331	0528	-	B	REL-10	-	UE capability signaling for CA and MIMO in REL10	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core	-	RP-101291	rejected	company contribution to RAN #50; is a resubmission of R2-106934 which was not agreed in RAN2 email discussion [72#01]
36.331	0529	-	F	REL-9	-	FGI bits related to CDMA2000 in Rel-9	TEI9, LTE-L23	-	RP-101259	postponed	company contribution to RAN #50
36.331	0530	1	B	REL-10	-	Inclusion of new UE categories in Rel-10	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core	-	RP-101429	approved	revision of RP-101267
36.331	0530	-	B	REL-10	-	Inclusion of new UE categories in Rel-10	LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core	-	RP-101267	revised	is a counter proposal to RP-101291 which was not agreed in RAN2 as R2-106934 in email discussion [72#01]
36.331	0531	-	B	REL-10	-	AC-Barring for Mobile Originating CSFB call	LTE-L23, TEI10	-	RP-101289	rejected	company contribution to RAN #50; is a counter proposal to RP-101293

IPR2025-00720, OnePlus Ex. 1004
Page 663 of 700

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN Tdoc	RAN status	Remarks
36.331	0532	-	F	REL-9	-	Splitting FGI bit 3	TEI9, LTE-L23	-	RP-101431	approved	company contribution to RAN #50
36.355	0037	-	F	REL-9	R2-106153	Correction of reliable transport terminology in description of LPP-Message	LCS_LTE	Qualcomm Incorporated	RP-101207	approved	
36.355	0038	-	F	REL-9	R2-106154	One cell with known SFN in OTDOA assistance data	LCS_LTE	Ericsson, ST-Ericsson	RP-101207	approved	
36.355	0039	1	F	REL-9	R2-106695	UE frequency capability for LPP	LCS_LTE	Ericsson, ST-Ericsson	RP-101207	approved	
36.355	0040	-	F	REL-10	R2-106156	Update of 'serving cell' terminology in 36.355	LTE_CA-Core	Qualcomm Incorporated	RP-101226	approved	
36.355	0041	-	F	REL-9	R2-106696	Correction to LPP reliable transport	LCS_LTE	Qualcomm Incorporated	RP-101207	approved	
36.355	0042	-	F	REL-9	R2-106697	Correction to LPP Error procedure	LCS_LTE	Qualcomm Incorporated	RP-101207	approved	
36.355	0043	-	F	REL-9	R2-106698	Addition of missing reference to LPPe	LCS_LTE	Qualcomm Incorporated	RP-101207	approved	
36.355	0044	2	F	REL-9	R2-106920	Correction to the ODTOA assistance data	LCS_LTE	Nokia Siemens Networks, Nokia Corporation, Qualcomm Incorporated, Ericsson, ST-Ericsson	RP-101207	approved	

Rows highlighted in yellow indicate company contributions treated at RAN #50 for which no Tdoc was submitted to RAN2.

This table has 205 rows:

- 192 CRs agreed by RAN2 (corresponding to 179 agreed CRs submitted originally): 169 of them approved, 9 postponed, 11 reissued, 3 revised by RAN #50
- 1 CR which was technically endorsed by RAN2 (R2-106806) and then approved by RAN #50
- 12 company contributions (highlighted in yellow) of which 7 were approved by RAN #50:

So finally: Approved RAN2 CRs after RAN #50:

IPR2025-00720, OnePlus Ex. 1004
Page 664 of 700

spec	REL-4	REL-5	REL-6	REL-7	REL-8	REL-9	REL-10	CRs	specs	rapporteur	email
25.302	0	0	0	0	0	0	2	**2**	**1**	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com
25.306	0	0	0	0	0	2	6	**8**	**2**	Anders Berggren (ST Ericsson)	anders.y.berggren@stericsson.com
25.308	0	0	0	0	0	0	1	**1**	**1**	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	0	0	2	**2**	**1**	Kundan Kumar Lucky (Samsung)	kklucky@samsung.com
25.321	0	0	0	3	5	5	6	**19**	**4**	He Jing (Nokia Siemens Networks)	he.jing@nsn.com
25.322	0	0	0	0	0	0	1	**1**	**1**	Kundan Kumar Lucky (Samsung)	kklucky@samsung.com
25.331	0	0	0	0	14	19	31	**64**	**3**	Simone Provvedi (Ericsson) ASN.1: Brian Martin (Renesas)***	simone.provvedi@ericsson.com brian.2.martin@renesasmobile.com
25.367	0	0	0	0	0	1	0	**1**	**1**	Damanjit Singh (Qualcomm)	dsingh@qualcomm.com
25.993	0	0	0	0	0	0	1	**1**	**1**	Shin Horng Wong (Alcatel-Lucent)	shin_horng.wong@alcatel-lucent.com
36.300	0	0	0	0	0	2	32	**34**	**2**	Benoist Sebire (Nokia Siemens Networks)	benoist.sebire@nsn.com
36.302	0	0	0	0	0	0	1	**1**	**1**	Sudeep Palat (Alcatel-Lucent)***	spalat@alcatel-lucent.com
36.304	0	0	0	0	0	1	1	**2**	**2**	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	1	0	**1**	**1**	Nathan Tenny (Qualcomm)	ntenny@qualcomm.com
36.306	0	0	0	0	0	0	1	**1**	**1**	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.321	0	0	0	0	0	0	3	**3**	**1**	Magnus Lindström (Ericsson)	magnus.q.lindstrom@ericsson.com
36.331	0	0	0	0	5	11	12	**28**	**3**	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	7	1	**8**	**2**	Nathan Tenny (Qualcomm)	ntenny@qualcomm.com
UTRA	0	0	0	3	19	27	50	**99**	**15**		
LTE	0	0	0	0	5	22	51	**78**	**13**		
total	0	0	0	3	24	49	101	**177**	**28**		

***: temporary support for the period after RAN #50, situation will be clarified at RAN2 #72bis in Dublin in Feb. 2011.

Additional REL-10 specs that will be introduced without CRs: 36.305, 36.314, 36.322, 36.323 and 37.320.

Missing REL-10 specs to be introduced after RAN #51: 25.301, 25.303, 25.304, 25.307, 25.323, 25.324, 25.346, 25.367, 34.109.

TRs for which it needs to be decided at RAN2 #72bis whether to upgrade to REL-10 after RAN #51: 36.805, 36.806, 36.938

IPR2025-00720, OnePlus Ex. 1004
Page 665 of 700

Annex H:
RAN WG2 meeting #72 post processing

Email discussions/approvals

Rapporteur companies are requested to kick-off email discussions as soon as possible via the RAN2 email reflector. Important: In the beginning of the subject of each email the corresponding identifier [...] of the email discussion has to be used in order to allow sorting of the different email discussions.

RAN2 chairman: Note that in order to meet the deadline for an email discussion, documents should be provided with sufficient time to review the final version.
I.e. an “almost final version” should be available 24 hours before the deadline.

Email discussions up to Thursday November 25, 2010 midnight Pacific time:

[72#01] - LTE: LTE-A UE capability [Nokia]

- Concerns 36.306 CR (draft CR in R2-106893) and 36.331 CR (text proposal in R2-106892)
- Can try to see up to what extend the material is acceptable, but at least the category related updates should be included in the final versions

=> Final versions in R2-106933 (36.305 CR0036R1) and R2-106934 (36.331 CR0528)

conclusion: Email discussion was kicked off by Jari Isokangas (Nokia) on 23.11.2010.
R2-106933 Introduction of Carrier aggregation and UL/DL MIMO Nokia Corporation, Nokia Siemens Networks CR 36.306 0036 1 B REL-10 LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core
R2-106934 UE capability signalling for CA and MIMO in REL10 Nokia, Nokia Siemens Networks CR 36.331 0528 - B REL-10 LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core
were not agreed on 30.11.2010 as concerns were raised by Ericsson.

[72#02] - LTE: LTE-A 36.331 CR [Samsung]

- Concerns update of R2-106147, including all stage-3 36.331 agreements except UE capability

=> Final version in R2-106856 36.331 CR0488 R1

conclusion: Email discussion was kicked off by Himke van der Velde (Samsung) on 22.11.2010.
R2-106856 Introduction of Carrier Aggregation and UL/ DL MIMO Rapporteur (Samsung) CR 36.331 0488 1 B REL-10 LTE_CA-Core, LTE_UL_MIMO-Core, LTE_eDL_MIMO-Core
was agreed on 26.11.2010.

[72#03] - LTE: 36.323 CR on DRB Integrity for RNs [Ericsson]

- Concerns 36.323 stage-3 CR on DRB integrity protection for relays (draft CRs in e.g. R2-106471, R2-106498)
- Should come to 36.323 CR's based on the modelling approach from R2-106471 (but including RLC-UM). Only when this approach is leading to ambiguity, a more extensive description approach as in R2-106498 should be considered

=> Final version in R2-10???? 36.323 CR0???

conclusion: Email discussion was kicked off by Jessica Östergaard (Ericsson) on 24.11.2010.
R2-106970 Addition of integrity protection of DRBs in PDCP for RNs Ericsson CR 36.323 0084 - B REL-10 LTE_Relay-Core
was agreed on 27.11.2010.

[72#04] - LTE: 36.331 MDT CR [NSN]

- Concerns 36.331 CR for MDT, draft in R2-106931

=> Final version to be provided in R2-106937 CR0476 R3

IPR2025-00720, OnePlus Ex. 1004

conclusion: Email discussion was kicked off by Malgorzata Tomala (NSN) on 22.11.2010.
R2-106937 Introduction of Minimization of Drive Tests Nokia Siemens Networks, Nokia Corporation CR 36.331 0476 3 B REL-10 MDT_UMTSLTE-Core
was agreed on 26.11.2010.

[72#05] - LTE: 36.331 CR for barring of MO CSFB [NTT DCM]

- Concerns 36.331 draft CRs in R2-106904 CR0477 R1 for alternative 1/R2016928 CR0477 R2 for alternative 2

=> Final version to be provided in R2-106940 CR0477 R3

conclusion: Email discussion was kicked off by Wuri Hapsari (NTT DOCOMO) on 22.11.2010.
R2-106940 AC-Barring for Mobile Originating CSFB call NTT DOCOMO, INC., NEC, Qualcomm Incorporated, Panasonic, ZTECR 36.331 0477 3 B REL-10 TEI10, LTE-L23
was withdrawn on 27.11.2010 as no consensus was achieved by the email discussion deadline.

[72#06] - LTE: 36.331 CR on UE power saving and Local release [NSN]

- Concerns 36.331 draft CR in R2-106911

=> Final version to be provided in R2-106941 CR0527 R1

conclusion: Email discussion was kicked off by Woonhee Hwang (NSN) on 22.11.2010.
R2-106941 UE power saving and Local release Nokia Siemens Networks, Deutsche Telekom, NTT DOCOMO INC., Telecom Italia CR 36.331 0527 1 F REL-10 TEI10, LTE-L23
was agreed on 26.11.2010.

[72#07] - LTE: Update of TR36.816 [CMCC]

- Concerns update of TR36.816 reflecting decisions from RAN2#72

=> Final agreeable v0.3.1 to be provided in R2-106925; Joern will allocate Tdoc number of v0.4.0 (just accepting change marks from v0.3.1) later

conclusion: Email discussion was kicked off by Zhenping Hu (CMCC) on 23.11.2010.
Finally, it was decided to skip v0.4.0 and go directly to v1.0.0.
R2-106971 TR 36.816 v1.0.0 on "Study on signalling and procedure for interference avoidance for in-device coexistence" CMCC TR36.816 REL-10 FS_SPIA_IDC
was agreed on 01.12.2010 and will be provided to RAN #50 for information.

[72#08] - UMTS: Expanded 1900MHz Band [ALU]

- Verify ASN.1 implementation and 25.307 CRs for expanded 1900MHz Band for UTRA and LTE (related to R2-106670 / R2-106777 / R2-106784/ R2-106785/ R2-106786/ R2-106787/ R2-106788 / R2-106789)

=> Expected output: 25.331 CR in R2-106776 R1

conclusion: Email discussion was kicked off by Nicola Puddle (Alcatel-Lucent) on 22.11.2010.
R2-106776 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331 Alcatel-Lucent CR 25.331 4402 1 B REL-10 E1900-Core
was withdrawn as no consensus could be achieved during the email discussion.

R2-106786 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0110 - B REL-4 E1900-Core

R2-106787 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0111 - A REL-5 E1900-Core

R2-106788 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0112 - A REL-6 E1900-Core

R2-106789 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0113 - A REL-7E1900-Core

R2-106777 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0109 1 A REL-8 E1900-Core

R2-106784 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0107 - A REL-9 E1900-Core

R2-106785 Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307 Alcatel-Lucent CR 25.307 0108 - A REL-10 E1900-Core

were agreed on 26.11.2010.

[72#09] - UMTS: SIB5 changes for E-DCH in CELL-FACH and Idle Mode [Ericsson]

- Related to R2-106807 / R2-106808 / R2-106809

=> Expected output: final versions of CRs (if updates are needed, contact Joern for Tdoc numbers)

conclusion: Email discussion was kicked off by Jose Luis Pradas (Ericsson) on 23.11.2010.
R2-106978 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4384 3 F REL-8RANimp-UplinkEnhState

R2-106979 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4385 3 A REL-9RANimp-UplinkEnhState

R2-106980 SIB5 changes for E-DCH in CELL_FACH and Idle Mode Ericsson, ST-Ericsson CR 25.331 4386 3 A REL-10 RANimp-UplinkEnhState

were agreed on 28.11.2010.

[72#10] - UMTS: Precoding weight set restriction [Ericsson]

- Email agreement for Precoding weight set restriction setting for secondary cell (related to R2-106804 / R2-106805)

=> Expected output: final versions of CRs

conclusion: Email discussion was kicked off by Simone Provvedi (Ericsson) on 22.11.2010.
R2-106973 Precoding weight set restriction setting for secondary cells Ericsson, ST-Ericsson, ZTE, Qualcomm Incorporated CR 25.331 4394 3 F REL-10 4C_HSDPA-Core, RANimp-DC_MIMO

R2-106974 Precoding weight set restriction setting for secondary cell Ericsson, ST-Ericsson CR 25.331 4387 3 F REL-9 RANimp-DC_MIMO

were agreed on 27.11.2010.

[72#11] - UMTS: Meas on Secondary UL Frequency [Ericsson]

- Email agreement for Procedural text to support measurements in the Secondary UL Frequency (related to R2-106732 / R2-106733)

=> Expected output: final versions of CRs (if updates are needed, contact Joern for Tdoc numbers)

conclusion: Email discussion was kicked off by Jose Luis Pradas (Ericsson) on 23.11.2010.
R2-106732 Procedural text to support measurements in the Secondary UL Frequency Ericsson, ST-Ericsson CR 25.331 4392 - F REL-9 RANimp-DC_HSUPA

R2-106733 Procedural text to support measurements in the Secondary UL Frequency Ericsson, ST-Ericsson CR 25.331 4393 - A REL-10 RANimp-DC_HSUPA
were not agreed on 27.11.2010 due to concerns raised by Huawei.

[72#12] - UMTS: Detected set measurement and reporting [Nokia]

- Email agreement for technical endorsment of “Introduction of detected set measurements and reporting for Inter-frequency” (related to R2-106754)

=> Expected output: Technically endorsable version of CR in R2-106806

IPR2025-00720, OnePlus Ex. 1004

conclusion: Email discussion was kicked off by Brian Martin (Nokia) on 22.11.2010.
R2-106806 Introduction of detected set measurements and reporting for Inter-frequency Nokia Corporation, Nokia Siemens Networks CR 25.331 4407 1 B REL-10 Interf_dset_meas_UMTS
was technically endorsed on 26.11.2010.

Email discussions up to Monday November 29, 2010 midnight Pacific time:

[72#21] - LTE: eICIC stage-2 CR on 36.300 [Qualcomm]

- Concerns 36.300 CR for eICIC, draft in R2-106897

=> Final version to be provided in R2-106943 CR0278 R1

conclusion: Email discussion was kicked off by Masato Kitazoe (Qualcomm) on 20.11.2010.
R2-106943 Introduction of enhanced ICIC Qualcomm Incorporated CR 36.300 0278 1 B REL-10 eICIC_LTE-Core
was agreed on 30.11.2010.

Email discussions up to Monday January 10, 2011 midnight Pacific time:

[72#31] - LTE: 36.331 CR on Integrity for Relays [NSN]

- Draft CR in R2-106230
- Try to come to acceptable CR reflecting all changes required for 36.331 w.r.t. supporting DRB Integrity for Relays including key handling description

conclusion: Email discussion was kicked off by Woonhee Hwang (NSN) on 29.11.2010.
Email discussion summary R2-110164 and 36.331 CR R2-110165 are provided to RAN2 #72bis.

[72#32] - LTE: RLF reporting [NTT DCM]

- Try to settle all stage-2 issues on RLF reporting, e.g:
  - Contents of the report based on RAN3 input
  - When to release the information ?
  - PLMN checking for reporting ?
  - Survive selection/active on other RAT ?
- Also try to come to Stage-3 CR

conclusion: Email discussion was kicked off by Wuri Hapsari (NTT DOCOMO) on 09.12.2010.
Email discussion summary R2-110283 is provided to RAN2 #72bis .
Note: An NTT DOCOMO proposal for a 36.331 CR is provided in R2-110395 (there was no time to review it in this email discussion).

[72#33] - LTE: "Pattern2" (pattern for neighbour cell RRM) details [Qualcomm]

- Try to agree on pattern2 details like:
  a) 1 or more patterns ?
  b) linked to (group of) PCI's ?

conclusion: Email discussion was kicked off by Masato Kitazoe (Qualcomm) on 06.12.2010.
Email discussion summary R2-110053 is provided to RAN2 #72bis.
Note: There is also a Qualcomm proposal for a draft LS to RAN4 in R2-110093.

[72#34] - UMTS: ANR open issues [ZTE]

- Settle stage-2 open issues:
  - What information should be logged?
  - Details of logging criteria
  - How NW restricts logging behavior (to avoid too many log entries)
  - How to perform IRAT logging
  - When should UE report the log (source/target/other)

conclusion: Email discussion was kicked off by Li Yang (ZTE) on 02.12.2010.
Email discussion summary R2-110084 is provided to RAN2 #72bis.

[72#35] - UMTS: MDT open issues [NSN]

- Email discussion on open issues of MDT as listed in R2-106792 (related to R2-106792)

conclusion: Email discussion was kicked off by Guillaume Decarreau (Nokia Siemens Networks) on 13.12.2010.
Email discussion summary R2-110337 is provided to RAN2 #72bis.

CRs from other WGs to be agreed/reviewed by RAN2 before RAN #50:

The following 23 RAN3 CRs to RAN2 specs were provided by MCC (on 24.11.2010) for review until Fri 26.11.2010 9am CET:

- R2-106946 Alignment of LPPa descriptions to stage 3 (contact: Ericsson) RAN3 CR 36.305 0022 - F REL-9LCS_LTE R3-103615
  CR was agreed on 28.11.2010 but section renumbering is not allowed and will not be carried out in the CR implementation.
- R2-106947 CR for Description of Energy Saving (contact: CMCC) RAN3 CR 36.300 0286 - F REL-10 TEI10 R3-103152
  Rapporteur: "cat.F CR?"
  CMCC: "CR is the description about energy saving procedure in X2-CP Procedures. Because the description here is not aligned with section 22.4.4 in 36.300, therefore, we try to correct the description here to achieve the alignment between these two sections".
  CR was agreed on 26.11.2010.
- R2-106948 S1 non UE associated message handling (contact: Huawei) RAN3 CR 36.300 0287 - B REL-10 LTE_Relay-Core R3-103157
  agreed on 26.11.2010.
- R2-106949 Clarification to ANR Operation (contact: Samsung) RAN3 CR 36.300 0288 - F REL-10 LTE-interfaces, TEI10 R3-103163
  agreed on 26.11.2010.
- R2-106950 P-GW function embedded in DeNB and addressing requirements (contact: ALU) RAN3 CR 36.300 0289 - F REL-10 LTE_Relay-Core R3-103164
  agreed on 26.11.2010.
- R2-106951 eNB Configuration Update procedure in RN startup and detach procedure (contact: Huawei) RAN3 CR 36.300 0290 - B REL-10 LTE_Relay-Core R3-103165
  agreed on 26.11.2010.
- R2-106952 Introduction of MCE initiated MBMS Session Start Request (contact: ALU) RAN3 CR 36.300 0291 - B REL-10 MBMS_LTE_enh-Core R3-103211
  MCC will correct bullet formatting during CR implementation and check whether new subclause number is appropriate.
  CR was agreed on 26.11.2010.
- R2-106953 No NNSF function in RN (contact: Motorola) RAN3 CR 36.300 0292 - F REL-10 LTE_Relay-Core R3-103224
  agreed on 26.11.2010.
- R2-106954 S1 handover routing toward RN (contact: Huawei) RAN3 CR 36.300 0293 - B REL-10 LTE_Relay-Core R3-103290
  MCC will add bullet point "-" during CR implementation.
  CR was agreed on 26.11.2010.
- R2-106955 TNL address Handling (contact: Huawei) RAN3 CR 36.300 0294 - F REL-10 LTE_Relay-Core R3-103292
  agreed on 26.11.2010.
- R2-106956 Correction on SPID Transfer (contact: Samsung) RAN3 CR 36.300 0295 - F REL-10 LTE-Interfaces, TEI10 R3-103610
  agreed on 26.11.2010.
- R2-106957 Support of ARP Pre-emption (contact: Huawei) RAN3 CR 36.300 0296 - B REL-10 MBMS_LTE_enh-Core R3-103631
  agreed on 26.11.2010.

- R2-106958 Support of MBMS Service Counting Report procedure (contact: Huawei) RAN3 CR 36.300 0297 - B REL-10 MBMS_LTE_enh-Core R3-103633
  agreed on 26.11.2010.
- R2-106959 Stage 2 for the X2 based mobility enhancement between HeNBs (contact: NSN) RAN3 CR 36.300 0298 - B REL-10 HNB_HENB_mob_enh-Core R3-103649
  agreed on 26.11.2010.
- R2-106960 Introduction of event-triggered inter-RAT cell load reporting (contact: ALU) RAN3 CR 36.300 0299 - B REL-10 SONenh_LTE-Core R3-103656
  Rapporteur: is the addition a new bullet?
  Alcatel-Lucent: The indentation is intentional as this falls under the inter-RAT part, while not being part of cell load definition strictly speaking. We recognize that there was no real clean solution given the current structure of the section. We propose to agree the CR as it is; Next meeting ALU will bring a global CR to fix the section.
  MCC will add "-" and correct style to B1 for the added sentence.
  CR was agreed on 26.11.2010.
- R2-106961 Introduction of LIPA function (contact: ALU) RAN3 CR 36.300 0300 - B REL-10 LIPA_SIPTO R3-103675
  MCC will correct style of the NOTE in 4.6.1 and style of the bullets in 4.6.x during CR implementation.
  CR was agreed on 26.11.2010.
- R2-106962 OAM requirements for QCI to DSCP mapping config for relays (contact: Qualcomm) RAN3 CR 36.300 0301 - B REL-10 LTE_Relay-Core R3-103681
  agreed on 26.11.2010.
- R2-106963 Non UE associated message handling (contact: Huawei) RAN3 CR 36.300 0302 - B REL-10 LTE_Relay-Core R3-103686
  agreed on 26.11.2010.
- R2-106964 Introduction of MTC Overload Support (contact: ALU) RAN3 CR 36.300 0303 - B REL-10 NIMTC-RAN_overload R3-103704
  agreed on 26.11.2010.
- R2-106965 Relay Node Un Signalling Transport Support (contact: Huawei) RAN3 CR 36.300 0304 - B REL-10 LTE_Relay-Core R3-103713
  agreed on 26.11.2010.
- R2-106966 Complete S1 Interface Signalling Procedures (contact: Huawei) RAN3 CR 36.300 0305 - F REL-10 LTE-Interfaces, TEI10 R3-103745
  agreed on 26.11.2010.
- R2-106967 X2 procedure and OAM requirements to support eICIC (contact: Qualcomm) RAN3 CR 36.300 0306 - B REL-10 eICIC_LTE-Core R3-103775
  revised in R2-106972 to indicated 36.423 as other affected specification (confirmed by Qualcomm)
  R2-106972 X2 procedure and OAM requirements to support eICIC (contact: Qualcomm) RAN3 CR 36.300 0306 1 B REL-10 eICIC_LTE-Core
  R2-106972 was agreed on 26.11.2010.
- R2-106968 Stage-2 updates to RN initial attachment (contact: Huawei) RAN3 CR 36.300 0307 - B REL-10 LTE_Relay-Core R3-103791
  agreed on 26.11.2010.

The following 1 RAN3 CR to a RAN2 spec was provided by MCC (on 25.11.2010) for review until Fri 26.11.2010 noon CET:

- R2-106969 Functionality of SON MRO defined for Rel.10 (contact: NSN) RAN3 CR 36.300 0308 - B REL-10 SONenh_LTE-Core R3-103765
  CR was agreed on 28.11.2010 but some style corrections will be needed during the CR implementation.

Preparation of SI and WI status reports for RAN #49:

Rapporteurs were asked to make draft status reports available for review on the RAN2 reflector (without Tdoc number) asap after RAN2 #72, below the results of RAN #50 are summarized:
Note: Below percentage complete/target completion date/status report are listed.

- REL-10 WI Network-Based Positioning Support for LTE, rapporteur: Terri Brooks (TruePosition)
  acronym: LCS_LTE-NBPS, WID: RP-090354 revised in RP-100135 at RAN #47
  history: RAN #43: New: 0%/Dec. 09 (RAN #46)/-
  RAN #44: 5%/Dec. 09/RP-090402
  RAN #45: 25%/Dec. 09/RP-090700
  RAN #46: 30%/March 10/RP-091043 exception request sheet: RP-091391
  RAN #47: 30%/Dec. 10/RP-100032 WI moved to REL-10
  RAN #48: 30%/Dec. 10/RP-100459
  RAN #49: 30%/March 11/RP-100769
  now: RAN #50: 50%/March 11/RP-101102

- REL-10 WI Inclusion of "RF Pattern Matching Technologies" as positioning method in the UTRAN, rapporteur: Norman Shaw (Polaris Wireless)
  acronym: LCS_UMTS_RFPMT-CoreWI, WID: RP-091427
  history: RAN #46: New: 0%/June 10 (RAN #48)/-
  RAN #47: 0%/June 10/RP-100134
  RAN #48: 0%/Dec.10/RP-100450
  RAN #49: 70%/Dec.10/RP-100753
  now: RAN #50: 90%/March 11/RP-101084

- REL-10 WI Core part: Minimization of drive tests for E-UTRAN and UTRAN, rapporteur: Malgorzata Tomala (NSN)
  acronym: MDT_UMTSLTE-Core, WID: RP-091423 revised in RP-100360 at RAN #47
  history: RAN #46: New: 0%/Dec. 10 (RAN #50)/-
  RAN #47: 20%/Dec. 10/RP-100051
  RAN #48: 35%/Dec. 10/RP-100457
  RAN #49: 60%/Dec.10/RP-100763
  now: RAN #50: 85%/March 11/RP-101095

- REL-10 WI Core part: Latency reductions for LTE, rapporteur: Henrik Enbuske (Ericsson)
  acronym: LTE_LATRED-Core, WID: RP-091449
  history: RAN #46: New: 0%/Dec. 10 (RAN #50)/-
  RAN #47: 20%/Dec. 10/RP-100060
  RAN #48: 20%/Dec. 10/RP-100469 (WI will be on hold until Dec.10)
  RAN #49: 20%/Dec. 10/RP-100779 (WI will be on hold until Dec.10)
  now: RAN #50: 20%/Dec. 10/RP-101112 WI was stopped before completion

- REL-10 SI Study on RAN improvements for Machine-Type Communications, rapporteur: Jeff Gao (Huawei)acronym: FS_NIMTC-RAN, SID: RP-090991 revised in RP-100330 at RAN #47
  history: RAN #45: New: 0%/June 10 (RAN #48)/-
  RAN #46: 0%/June 10/RP-091087
  RAN #47: 10%/Dec.10/RP-100084
  RAN #48: 30%/Dec.10/RP-100500
  RAN #49: 40%/Dec.10/RP-100795 (SI on hold until new MTC WI is completed)
  now: RAN #50: 40%/March 11/RP-101126 (SI on hold until MTC WI is completed)

- REL-10 WI Core part: Further enhancements to MBMS for LTE, rapporteur: Zhao Junhui (Huawei)
  acronym: MBMS_LTE_enh-Core, WID: RP-100691
  history: RAN #48: New: 0%/Dec.10 (RAN #50)/-
  RAN #49: 30%/Dec.10/RP-100791
  now: RAN #50: 80%/March 11/RP-101122

- REL-10 WI Core part: Service continuity in connected mode and location information for MBMS for LTE, rapporteur: Zhao Junhui (Huawei)
  acronym: MBMS_LTE_SC-Core, WID: RP-100690
  history: RAN #48: New: 0%/June 11 (RAN #52)/- (WI on hold until Dec.10)
  RAN #49: 0%/June 11/RP-100792 (WI on hold until Dec.10)
  now: RAN #50: 0%/June 11/RP-101123 (WI on hold until March 11)

- REL-10 SI Study on signaling and procedure for interference avoidance for in-device coexistence, rapporteur: Zhenping Hu (CMCC)

IPR2025-00720, OnePlus Ex. 1004
Page 672 of 700

acronym: FS_SPIA_IDC, WID: RP-100671
history: RAN #48: New: 0%/Dec.10 (RAN #50)/-
RAN #49: 25%/Dec.10/RP-100800
now: RAN #50: 60%/March 11/RP-101130

- REL-10 WI RAN mechanisms to avoid CN overload due to Machine-Type Communications, rapporteur: Jeff Gao (Huawei)
acronym: NIMTC-RAN_overload, WID: RP-101026
RAN #49: New: 0%/March 11 (RAN #51)/-
now: RAN #50: 50%/March 11/RP-101101

- REL-10 WI Interfrequency detected set measurements for UMTS, rapporteur: Chris Callender (Nokia)
acronym: Interf_dset_meas_UMTS, WID: RP-101015
RAN #49: New: 0%/Dec.10 (RAN #50)/-
now: RAN #50: 100%/Dec.10/RP-101093 WI is completed and closed

Annex I: History

Document history		
Date	**TSG RAN WG2 Tdoc**	**Subject**
09.11.2010	-	Skeleton report for RAN WG2 #72 provided before the meeting.
10.11.2010	-	Updated skeleton report for RAN WG2 #72 provided before the meeting.
15.11.2010	-	2nd update of the skeleton report for RAN WG2 #72 just provided before the start of the meeting.
26.11.2010	-	Draft report of RAN2 #72 (v0.1)
06.12.2010	-	Draft report v1.0 of RAN2 #72 with revision marks relative to v0.1
14.01.2011	R2-110002	Draft report v2.0 of RAN2 #72 submitted to RAN2 #72bis (revision marks relative to v1.0)
21.01.2011	R2-110039	Draft report v3.0 of RAN2 #72 revised during RAN2 #72bis (revision marks relative to v2.0)
21.01.2011	R2-110679	Final report of RAN2 #72 as agreed by RAN2 #72bis

Author: **Dr. Joern Krause (3GPP TSG RAN WG2 MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33-492-94 4261
email: Joern.Krause@etsi.org

IPR2025-00720, OnePlus Ex. 1004
Page 673 of 700

Appendix H

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes, No	withdrawn, not treated, noted, revised, endorsed, agreed, postponed	Late: submitted after 09.11.10 10:00am CET	R2-10xxxx	-	-	
Yes	agreed		R2-106040	Proposed agenda for RAN2 #72, Jacksonville, USA, 15.11.-19.11.2010	Samsung (RAN2 chairman)	
Yes	revised	Late	R2-106041	Draft report of 2 #71bis, Xian, China, 11.10.-15.10.2010	ETSI MCC	to be agreed on Friday of the meeting
Yes	noted		R2-106042	LS on Enhancements of Iur-g interface (contact: ZTE)	GERAN2	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106043	Reply LS to S2-104424 = R2-105296 on PS handover failure during the SRVCC (contact: Nokia)	GERAN2	cc: RAN2; related Tdoc in R2-106537 will be treated in UTRA session; no LS answer from RAN2
Yes	noted		R2-106044	LS on RAN sharing for Home(e)NB cells (contact: Nokia)	GERAN2	to: RAN2; LS answer decision postponed to Fri; finally Qualcomm draft a reply LS in R2-106910 (final LS in R2-106942)
Yes	noted		R2-106045	LS Concerning LTE Positioning Protocol	OMA LOC	to: RAN2; no LS answer from RAN2 (one Tdoc will introduce reference)
Yes	noted		R2-106046	LS response to R2-104205 on per-UE PHR (contact: Alcatel-Lucent)	RAN1	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106047	LS on physical layer parameters for relay-specific advancements to be configured by higher layers (contact: Ericsson)	RAN1	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106048	LS on the reference format on virtual PHR (contact: Ericsson)	RAN1	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106049	LS on UTRAN ANR TS (contact: ZTE)	RAN3	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106050	LS on RN E-CGI configuration by O&M (contact: Alcatel-Lucent)	RAN3	cc: RAN2; no LS answer from RAN2
Yes	noted		R2-106051	LS on GBR and MBR definition (contact: Alcatel-Lucent)	RAN3	cc: RAN2; no LS answer from RAN2
Yes	noted		R2-106052	Reply LS to R2-105226 on Consideration on counting for MBMS activation (contact: Huawei)	RAN3	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106053	LS on Applicability of Handover restriction list for CSFB (contact: NSN)	RAN3	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106054	LS on Paging Priority indication over S1 for eMPS (contact: Alcatel-Lucent)	RAN3	cc: RAN2; no LS answer from RAN2
Yes	noted		R2-106055	Reply LS to C4-102304 on MTU in 3GPP system (contact: NSN)	SA2	cc: RAN2; no LS answer from RAN2 (will be discussed in joint WG session)
Yes	noted		R2-106056	LS on delivering registered PLMN ID for CS domain to eNB for multi-PLMN CSFB (contact: Qualcomm)	SA2	cc: RAN2; no LS answer from RAN2
Yes	noted		R2-106057	LS on Home (e)NodeB support in LCS (contact: NTT DOCOMO)	SA2	cc: RAN2; no LS answer from RAN2
Yes	noted		R2-106058	Reply LS to R2-105226 on Considerations on counting for MBMS activation (contact: Huawei)	SA2	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106059	LS on S1 handover / Iu relocation with LIPA connection removal (contact: Alcatel-Lucent)	SA2	to: RAN2; ALU drafted LS answer in R2-106430 (finally LS answer was withdrawn)
Yes	noted		R2-106060	Reply LS to R2-105994 on Release 10 NIMTC Conclusions (contact: Vodafone)	SA2	to: RAN2; no LS answer from RAN2 (will be discussed in joint WG session)
Yes	noted		R2-106061	LS on parameters for Rel-10 (contact: Ericsson)	RAN1	to: RAN2; no LS answer from RAN2 (will be handled in LTE CP session)
Yes	noted		R2-106062	LS on RAN4 decisions on Band 12 (contact: Huawei)	RAN4	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106063	Reply LS to R2-102663 on Radio Link Monitoring for Carrier Aggregation (contact: NTT DOCOMO)	RAN4	to: RAN2; R2-102663 was sent from RAN2 #69bis in Beijing in April 2010; LS answer drafted by NTT DOCOMO in R2-106855 (final LS answer in R2-106902)
Yes	noted		R2-106064	Response LS to R2-104205 on Per UE PHR related questions (contact: Ericsson)	RAN4	to: RAN2; no LS answer from RAN2
No	withdrawn	Late	R2-106065	Void	-	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106066	Introduction of MC-HSUPA for 1.28Mcps TDD	ZTE	
Yes	revised		R2-106067	25.304 CR on MDT	NSN	related to email discussion [71b#04]
Yes	agreed		R2-106068	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106069	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	Nokia Corporation, Nokia Siemens Networks	since CR has no CR number it was revised in R2-106981
Yes	agreed		R2-106070	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106071	Introduction of REL-10 access stratum release indicator	ZTE	
Yes	agreed		R2-106072	Introduction of REL-9 access stratum release indicator	ZTE	
Yes	revised		R2-106073	Introduction of REL-9 access stratum release indicator	ZTE	implicitly in principle agreed at RAN2 #71bis
Yes	agreed	Late	R2-106074	Introduction of MU-MIMO for LCR TDD in 25.308	TD Tech	
Yes	revised	Late	R2-106075	Introduction of MU-MIMO for LCR TDD in 25.319	TD Tech	
Yes	agreed		R2-106076	Clarification to the default SG in DTX Cycle 2	Qualcomm Incorporated	
Yes	agreed		R2-106077	Clarification to the default SG in DTX Cycle 2	Qualcomm Incorporated	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106078	Clarification to the default SG in DTX Cycle 2	Qualcomm Incorporated	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106079	Clarification to the default SG in DTX Cycle 2	Qualcomm Incorporated	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106080	Correction in release of common E-DCH resources	Ericsson, ST-Ericsson	
Yes	agreed		R2-106081	Correction in release of common E-DCH resources	Ericsson, ST-Ericsson	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106082	Correction in release of common E-DCH resources	Ericsson, ST-Ericsson	implicitly in principle agreed at RAN2 #71bis
Yes	revised		R2-106083	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	revised		R2-106084	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	implicitly in principle agreed at RAN2 #71bis
Yes	revised		R2-106085	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	implicitly in principle agreed at RAN2 #71bis
Yes	revised		R2-106086	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106087	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	Qualcomm Incorporated	
Yes	agreed		R2-106088	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	Qualcomm Incorporated	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106089	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	Qualcomm Incorporated	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106090	HARQ buffer upon H-RNTI switch in Enhanced CELL_FACH	Qualcomm Incorporated	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106091	Introduction of LCR TDD MC-HSUPA in 25.322	CATT	
Yes	revised		R2-106092	25.331 CR on MDT	NSN	related to email discussion [71b#04]
Yes	agreed		R2-106093	Addition of ROHC target mode in SRNS relocation message	Alcatel-Lucent	
Yes	agreed		R2-106094	Addition of ROHC target mode in SRNS relocation message	Alcatel-Lucent	
Yes	agreed		R2-106095	Addition of ROHC target mode in SRNS relocation message	Alcatel-Lucent	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106096	Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN	IPWireless Inc.	
Yes	agreed		R2-106097	Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN	IPWireless Inc.	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106098	Clarification of the operation of RRC for 3.84 Mcps TDD IMB MBSFN	IPWireless Inc.	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106099	Correction on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic, Broadcom	
Yes	agreed		R2-106100	Correction on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic, Broadcom	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106101	Correction on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic, Broadcom	implicitly in principle agreed at RAN2 #71bis
Yes	revised		R2-106102	Correction on CS voice over HSPA SDU discard timer configuration	Huawei, HiSilicon	REL-9 CR for REL-8 WI
Yes	agreed		R2-106103	Correction on CS voice over HSPA SDU discard timer configuration	Huawei, HiSilicon	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106104	Correction on READY_FOR_COMMON_EDCH definition	Ericsson, ST-Ericsson	
Yes	agreed		R2-106105	Correction on READY_FOR_COMMON_EDCH definition	Ericsson, ST-Ericsson	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106106	Correction on READY_FOR_COMMON_EDCH definition	Ericsson, ST-Ericsson	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106107	Correction to the absence of IE additional Cells in 4C-HSDPA	Samsung	
Yes	revised		R2-106108	Correction to the limitation of SI acquisition	Huawei, HiSilicon	not based on latest spec version or mistake on CR cover sheet

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106109	Correction to the limitation of SI acquisition	Huawei, HiSilicon	implicitly in principle agreed at RAN2 #71bis; not based on latest spec version or mistake on CR cover sheet
Yes	agreed		R2-106110	CR on T324 timer usage	Huawei, HiSilicon	
Yes	agreed		R2-106111	CR on T324 timer usage	Huawei, HiSilicon	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106112	CR on T324 timer usage	Huawei, HiSilicon	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106113	Power offset for Scheduling Info in MAC-i	Ericsson, ST-Ericsson	
Yes	agreed		R2-106114	Power offset for Scheduling Info in MAC-i	Ericsson, ST-Ericsson	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106115	Power offset for Scheduling Info in MAC-i	Ericsson, ST-Ericsson	implicitly in principle agreed at RAN2 #71bis
Yes	revised		R2-106116	Some clarifications of 4C-HSDPA behavior	ZTE	
Yes	revised		R2-106117	Some legacy editorial corrections for TEI10	ZTE	
Yes	agreed		R2-106118	Speed dependent scaling rules in HCS environment	Ericsson, ST-Ericsson	
Yes	agreed		R2-106119	UE behaviour when PPAC and DSAC parameters not present in SIB3	NEC	
Yes	agreed		R2-106120	UE behaviour when PPAC and DSAC parameters not present in SIB3	NEC	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106121	UE behaviour when PPAC and DSAC parameters not present in SIB3	NEC	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106122	Correction to the limitation of SI acquisition	Huawei, HiSilicon	
Yes	revised		R2-106123	36.300 CR for RAN2 #71bis agreements on Carrier Aggregation	NSN	covers agreed changes of R2-105398, R2-105480, R2-105703
Yes	agreed		R2-106124	36300_CRxxx_Handover for Hybrid Cells	Vodafone, Nokia, Nokia Siemens Networks	
Yes	agreed		R2-106125	36300_CRxxx_Handover for Hybrid Cells	Vodafone, Nokia, Nokia Siemens Networks	
Yes	agreed		R2-106126	Correction on MAC padding on MCH	CATT	
Yes	agreed		R2-106127	Correction on MAC padding on MCH	CATT	
Yes	revised		R2-106128	Additions and corrections to relaying description	Ericsson	highlighted changes of 4.7.5 will be removed
Yes	revised		R2-106129	LTE - Stage 2 agreements on MBMS enhancement	Huawei (Rapporteur)	related to email discussion [71#21]; CR accepted as a base for further work, revised in R2-106880 to include additional agreements of RAN2 #72
Yes	revised		R2-106130	CR to 36.300 adding e1xCSFB support for dual Rx/Tx UE	Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated	
Yes	revised		R2-106131	36.302 CR to introduce carrier aggregation	Alcatel-Lucent	
Yes	revised		R2-106132	36.304 CR on MDT	NSN	related to email discussion [71b#03]; accepted as base for further work; RAN2 #72 agreements will be added in revision R2-106883
Yes	revised		R2-106133	Introduction of Carrier Aggregation	Ericsson	related to email discussion [71b#08]
Yes	revised		R2-106134	Introduction of relays in MAC	Ericsson	CR cover updated?; accepted as base for further work (with 1 text removal), revised in R2-106890 to add RAN2 #72 agreements
Yes	revised		R2-106135	36.331 CR on MDT	NSN	related to email discussion [71b#03]; accepted as base for further work; RAN2 #72 agreements will be added in revision R2-106884
Yes	revised		R2-106136	AC-Barring for Mobile Originating CSFB call	NTT DOCOMO, INC., NEC, Qualcomm Incorporated, Panasonic, ZTE	counter proposal in R2-106586; R2-106136 is revised in 2 CRs indicating different alternatives: R2-106904 and R2-106928
Yes	agreed		R2-106137	Addition of UE-EUTRA-Capability descriptions	Research In Motion UK Limited	
Yes	rejected		R2-106138	Clarification of feature group indicator settings for inter-RAT periodical measurement reporting	Motorola, NTT DOCOMO	there is a proposal to replace this CR by R2-106226
Yes	rejected		R2-106139	Clarification of feature group indicator settings for inter-RAT periodical measurement reporting	Motorola, NTT DOCOMO	there is a proposal to replace this CR by R2-106227
Yes	agreed		R2-106140	Clarification on Default Configuration for CQI-ReportConfig	CATT	
Yes	agreed		R2-106141	Clarification on Meaning of FGI Bits	Vodafone	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	agreed		R2-106142	Clarification on Meaning of FGI Bits	Vodafone	
Yes	agreed		R2-106143	Clarification regarding reconfiguration of the quantityConfig	Ericsson, ST-Ericsson, Nokia Siemens Networks, Nokia Corporation, Samsung	
Yes	agreed		R2-106144	Clarification regarding reconfiguration of the quantityConfig	Ericsson, ST-Ericsson, Nokia Siemens Networks, Nokia Corporation, Samsung	
Yes	revised		R2-106145	Corrections to the presence of IE regarding DRX and CQI	ASUSTeK	
Yes	agreed		R2-106146	CR to 36.331 adding e1xCSFB support for dual Rx/Tx UE	Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated	
Yes	revised		R2-106147	Introduction of Carrier Aggregation	Rapporteur (Samsung)	related to email discussion [71b#07]
Yes	revised		R2-106148	Introduction of relays in RRC	Ericsson	accepted as base for further work (with 1 text removal), revised in R2-106886 to add RAN2 #72 agreements
Yes	revised		R2-106149	Priority indication for CSFB with re-direction	ZTE	
Yes	agreed		R2-106150	SIB Size Limitations	Nokia Siemens Networks	extra parenthesis at the end has to be removed before resubmission to RAN2 #72
Yes	revised		R2-106151	Stage-3 CR for MBMS enhancement	Huawei (Rapporteur)	contents accepted, will be revised further to include agreements of RAN2 #72
Yes	agreed		R2-106152	The field descriptions of MeasObjectEUTRA	Huawei, HiSilicon	
Yes	agreed		R2-106153	Correction of reliable transport terminology in description of LPP-Message	Qualcomm Incorporated	
Yes	agreed		R2-106154	One cell with known SFN in OTDOA assistance data	Ericsson, ST-Ericsson	
Yes	revised		R2-106155	UE frequency capability for LPP	Ericsson, ST-Ericsson	
Yes	agreed		R2-106156	Update of 'serving cell' terminology in 36.355	Qualcomm Incorporated	
Yes	noted	Late	R2-106157	Reply LS to R2-106026 on service requirement for Rel-10 UE CSFB call (contact: NTT DOCOMO)	SA1	to: RAN2; no LS answer from RAN2
Yes	noted	Late	R2-106158	LS on MTC indicators and configuration options (contact: TNO)	SA1	cc: RAN2; no LS answer from RAN2 (will be discussed in joint WG session)
Yes	noted	Late	R2-106159	Reply LS to R2-105994 on Release 10 NIMTC Conclusions (contact: Ericsson)	SA1	to: RAN2; no LS answer from RAN2 (will be discussed in joint WG session)
Yes	revised		R2-106160	Corrections to ETWS primary notification with security procedure	Infineon Technologies	
Yes	revised		R2-106161	Corrections to ETWS primary notification with security procedure	Infineon Technologies	
Yes	revised		R2-106162	Corrections to ETWS primary notification with security procedure	Infineon Technologies	
Yes	withdrawn		R2-106163	Clarification of the applicability of IE Number of PCCH transmissions	Infineon Technologies, Qualcomm Incorporated	
Yes	withdrawn		R2-106164	Clarification of the applicability of IE Number of PCCH transmissions	Infineon Technologies, Qualcomm Incorporated	
Yes	withdrawn		R2-106165	Clarification of the applicability of IE Number of PCCH transmissions	Infineon Technologies, Qualcomm Incorporated	
Yes	withdrawn		R2-106166	Clarification of the applicability of IE Number of PCCH transmissions	Infineon Technologies, Qualcomm Incorporated	
Yes	noted		R2-106167	Clarification of four open issues regarding Cell_DCH based ANRF approach	ZTE	
Yes	not treated		R2-106168	Methods for alleviating adverse effects of Cell_DCH based ANRF approach	ZTE	
Yes	not treated		R2-106169	Discussions on RRC establishment cause for RN	New Postcom	
Yes	not treated		R2-106170	Resource-specific measurement in Connected Mode for eICIC	New Postcom	
Yes	not treated		R2-106171	Resource-specific measurement in Idle Mode for eICIC	New Postcom	
Yes	noted		R2-106172	RNC ID issue	ZTE	
Yes	not treated		R2-106173	Stage 2 description of Cell_DCH based ANRF approach	ZTE	
Yes	withdrawn		R2-106174	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	withdrawn		R2-106175	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	withdrawn		R2-106176	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	withdrawn		R2-106177	Introduction of REL-9 access stratum release indicator	ZTE	
Yes	rejected		R2-106178	Correction of IE handling relevant to DC-HSUPA	ZTE	
Yes	rejected		R2-106179	Correction of IE handling relevant to DC-HSUPA	ZTE	
Yes	revised		R2-106180	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	revised		R2-106181	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	revised		R2-106182	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	noted		R2-106183	Radio Link Monitoring of SCells	Nokia Siemens Networks, Nokia Corporation	
No	withdrawn		R2-106184	TAT Expiry	Nokia Siemens Networks, Nokia Corporation	
Yes	revised		R2-106185	Editorial Clean-Up	Nokia Siemens Networks (Rapporteur)	
Yes	revised		R2-106186	Corrections and new agreements on Carrier Aggregation	Nokia Siemens Networks (Rapporteur)	contents accepted, will be revised further to include agreements of RAN2 #72
Yes	not treated		R2-106187	R-PDCCH Configuration for Type 1 RN	LG-Ericsson	
Yes	not treated		R2-106188	MTC device/low priority/roaming indications at RRC connection setup	ETRI	discusses how to use MTC device / Low priority / Roaming indication" in RRC signaling to enable RAN mechanism for protecting CN from signaling overload. "
Yes	not treated		R2-106189	Indications for MTC in RRC Signaling	ETRI	introduces the necessary MTC indications in RRC signaling for overload protection
Yes	not treated		R2-106190	Indications for MTC in RRC Signaling	ETRI	introduces the necessary MTC indications in RRC signaling for overload protection
Yes	noted		R2-106191	The Order for Segmented Logged MDT Reporting	CHTTL	option 1 will be captured in R2-106682
Yes	rejected		R2-106192	Missing fresh KASME during the security key-change-on-the-fly	Nokia Corporation	
No	withdrawn		R2-106193	Missing fresh KASME during the security key-change-on-the-fly	Nokia	
Yes	not treated		R2-106194	MDT capability	Huawei, HiSilicon, China Unicom	
Yes	not treated		R2-106195	Fast response eICIC approaches	Telefonica	Contribution on the advantages due to inclussion of a fast response on ABS to actual traffic demand, for the eICIC design
Yes	noted		R2-106196	validity of location information for immediate MDT	Huawei, HiSilicon, China Unicom	
Yes	revised		R2-106197	MDT related Stage3 issue	Huawei, HiSilicon	
Yes	noted		R2-106198	some update proposal for 37.320	Huawei, HiSilicon	4.1 changes will be included in R2-106682
Yes	noted		R2-106199	Power Headroom MAC CE format for CA	Nokia Siemens Networks, Nokia Corporation	
Yes	not treated		R2-106200	Problem Scenarios and Proposed Solutions for Home BS Coexistence	Telefonica	This contribution proposes to expand the scope of the Study Item to include Home Base Stations as a particular case of in-device coexistence, and taking into account the 5 GHz ISM band
Yes	not treated		R2-106201	Deactivation timer value range	Nokia Siemens Networks, Nokia Corporation	
Yes	revised		R2-106202	Clarification on MDT section in 36.304	Huawei, HiSilicon	will be merged in rapporteur's CR R2-106883 (with 2 changes)
Yes	not treated		R2-106203	Discussion on Open issues for Pcmax reporting	MediaTek	
Yes	not treated		R2-106204	Indication of virtual PHR	MediaTek, NTT DoCoMo, Panasonic, Qualcomm	
Yes	not treated		R2-106205	Further consideration on cross-scheduling configuration	Huawei, HiSilicon	already covered
Yes	noted		R2-106206	Clarification on activation/deactivation procedure	MediaTek	
Yes	revised		R2-106207	Clarifications on CA configuration	Huawei, HiSilicon	all proposals will be merged into rapporteur's CR R2-106856

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
No	withdrawn		R2-106208	Introduction of 4C-HSDPA definitions	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	
Yes	revised		R2-106209	Introduction of 4C-HSDPA definitions	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	at first intended to be revised in R2-106748; later revised in R2-106752
Yes	not treated		R2-106210	Discussion on Release indepenednt in-device Coexistence and compatibility issues	MediaTek	
Yes	revised		R2-106211	Correction to Inter-node RRC information element	MediaTek	will be merged into R2-106856 (with some modifications)
Yes	not treated		R2-106212	ANR Reselection Point in Cell_PCH	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	not treated		R2-106213	Radio Link Monitoring on Scell	Huawei, HiSilicon	
Yes	noted		R2-106214	PHR Related Issues	Huawei, HiSilicon	
Yes	revised		R2-106215	Clarification on measurement reporting in CA	HTC	
Yes	noted		R2-106216	Text Proposals for clarification of PHR	Huawei, HiSilicon	
Yes	rejected		R2-106217	Clarification on timer T326	HTC	
Yes	not treated		R2-106218	Summary of email discussion [71b#04]: UMTS: MDT - Running CR for 25.331 & 25.304	Nokia Siemens Networks, Nokia Corporation	related to email discussion [71b#04]
Yes	revised		R2-106219	Clarification on transmission of CoutingResponse	HTC	will be merged into R2-106882 (with some modifications)
Yes	rejected		R2-106220	Clear MDT configuration and logs in detached state	HTC	can be discussed further offline and see next meeting
Yes	noted	Late	R2-106221	Summary of email discussion [71b#21]: UMTS: MDT - log availability indication	Nokia Siemens Networks, Nokia Corporation	related to email discussion [71b#21]
Yes	noted		R2-106222	Measurements of deactivated SCells	Nokia Corporation, Nokia Siemens Networks	
Yes	not treated		R2-106223	Network-to-UE signalling for TDM eICIC	Nokia Corporation, Nokia Siement Networks	
Yes	not treated		R2-106224	Discussion on eICIC scenarios	Nokia Corporation, Nokia Siemens Networks	
Yes	not treated		R2-106225	Further results on HetNet mobility	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106226	Clarification of FGI settings non ANR periodical measurement reporting	Nokia Siemens Networks, NTT DOCOMO, INC., Motorola	CR includes the contents in R2-106138
Yes	revised		R2-106227	Clarification of FGI settings non ANR periodical measurement reporting	Nokia Siemens Networks, NTT DOCOMO, INC., Motorola	CR includes the contents in R2-106139
Yes	noted		R2-106228	Relay security solution and impact to eNB	Nokia Siemens Networks, Nokia Corporation	
Yes	not treated		R2-106229	PDCP Impact due to S1/X2 IP	Nokia Siemens Networks, Nokia Corporation	
Yes	noted		R2-106230	RRC Impact due to S1/X2 IP	Nokia Siemens Networks, Nokia Corporation	
Yes	noted		R2-106231	Optionality of SIB1 and SIB2 in RNReconfiguration message	Nokia Siemens Networks, Nokia Corporation	will be included in R2-106886 (with need codes)
Yes	noted		R2-106232	RN Mandatory Functions	Nokia Siemens Networks, Nokia Corporation	
Yes	noted		R2-106233	Separation of Relay descriptions	Nokia Siemens Networks, Nokia Corporation	Ericsson will draft 36.331 CR in R2-106891 for lightweight approach
Yes	noted		R2-106234	UE power saving in LTE network	Nokia Siemens Networks	
Yes	withdrawn		R2-106235	Stage-3 CR describing the interactions between RRC and the upper layers for MBMS	IPWireless Inc.	
Yes	noted		R2-106236	Outstanding Counting Issues	IPWireless Inc.	
Yes	not treated		R2-106237	Discussion on the PHR related issues	HTC	
Yes	noted		R2-106238	Logged MDT reporting when roaming	Nokia Siemens Networks, Nokia Corporation	
Yes	noted		R2-106239	MDT stage 3 open issues	Nokia Siemens Networks, Nokia Corporation	agreements will be captured in stage 3 CR
Yes	noted		R2-106240	Redirection based CSFB failure	Qualcomm Incorporated	more offline discussion needed
Yes	revised		R2-106241	Cell selection in case of redirection based CSFB procedure	Qualcomm Incorporated	

IPR2025-00720, OnePlus Ex. 1004
Page 680 of 700

Uploaded	status	Late	Tdoc	Title	Source	further information
No	withdrawn		R2-106242	Intermodulation problem with LTE Band 7 and ISM Band	Nokia Corporation	
Yes	not treated		R2-106243	RL monitoring for pathloss reference SCell	Qualcomm Incorporated	
Yes	noted	Late	R2-106244	Email discussion [71b#26]: LTE: Enhanced ICIC - Mobility scenarios	Qualcomm Incorporated	related to email discussion [71b#26]
Yes	noted		R2-106245	Way forward for connected mode eICIC	Qualcomm Incorporated	
Yes	revised		R2-106246	Introduction of enhanced ICIC	Qualcomm Incorporated	
Yes	not treated		R2-106247	Stage-3 text proposal on RRM/RLM restriction for eICIC	Qualcomm Incorporated	
Yes	not treated		R2-106248	Paging and DRX in Relay Node	NEC	
No	withdrawn		R2-106249	Text proposal for TR 37.868 on Access Barring Scaling for MTC	Deutsche Telekom	
Yes	rejected		R2-106250	Removal of redundant Cell Update Procedure for CELL_PCH	Huawei, HiSilicon	
Yes	revised		R2-106251	Corrections to RLF Report	NEC	
Yes	not treated		R2-106252	Removal of redundant Cell Update Procedure for CELL_PCH	Huawei, HiSilicon	
Yes	not treated		R2-106253	Text proposal for TR 37.868 on Access Barring Scaling for MTC	Deutsche Telekom, MediaTek	TP for TR on MTC based on R2-105215 and the discussion in the meeting.
Yes	not treated		R2-106254	Removal of redundant Cell Update Procedure for CELL_PCH	Huawei, HiSilicon	
Yes	not treated		R2-106255	Removal of redundant Cell Update Procedure for CELL_PCH	Huawei, HiSilicon	
Yes	noted		R2-106256	Summary of e-mail discussion [71b#24] LTE: UL MIMO MAC CR	Ericsson	related to email discussion [71b#24]
Yes	noted		R2-106257	Discussion on UMTS ANR non CELL_DCH based approach (log approach)	Huawei, HiSilicon	
Yes	noted		R2-106258	PHR MAC CE format in Rel-10	Ericsson, ST-Ericsson	
Yes	noted		R2-106259	Power Headroom Reporting in Rel-10	Ericsson, ST-Ericsson	
Yes	not treated		R2-106260	Discussion on inter-feq detected set	Huawei, HiSilicon	
Yes	revised		R2-106261	Selection between Rel-8/9 and Rel-10 PHR format	Ericsson, ST-Ericsson	RRC TP will be provided in R2-106857
No	withdrawn		R2-106262	Release of PUCCH resources upon TAT expiry	Ericsson, ST-Ericsson	
Yes	noted		R2-106263	Inter H(e)NB connected mode mobility in enterprise deployment	NEC	
Yes	postponed		R2-106264	Adding the default Configuration for 12.2/7.4/5.9/4.75 kbps speech + 3.4 kbps (without SRB#5)	Ericsson, ST-Ericsson	
Yes	revised		R2-106265	RLC reset on a Signalling Radio Bearer	Ericsson, ST-Ericsson	
Yes	not treated		R2-106266	Interpreting SA2 MTC requirements for the E-UTRAN	IPWIRELESS	
Yes	not treated		R2-106267	Interpreting SA2 MTC requirements for the UTRAN	IPWIRELESS	
Yes	not treated		R2-106268	MTC agnostic RAN	IPWIRELESS	
Yes	noted		R2-106269	Dual Band Dual Cell MIMO only Rel-10 UE not 3C or 4C capable	Ericsson, ST-Ericsson	
Yes	not treated		R2-106270	36331_CRxxx_Indications for Low Priority and MTC	Vodafone	
Yes	not treated		R2-106271	36331_CRxxx_Introduction of Wait Time in RRC Connection Release	Vodafone	
Yes	not treated		R2-106272	25331_CRxxx_Indications for Low Priority and MTC Devices	Vodafone	
Yes	not treated		R2-106273	25331_CRxxx_Extended Wait Times for RRC Connection Reject and Release	Vodafone	
Yes	not treated		R2-106274	Extended ACB for LTE	Vodafone	
Yes	not treated		R2-106275	Extended ACB for UMTS	Vodafone	
Yes	postponed		R2-106276	Re-establish RLC entity when the 'Use special value of HE field' is changed to not configured	Qualcomm Incorporated, Broadcom Corporation	
Yes	postponed		R2-106277	Re-establish RLC entity when the 'Use special value of HE field' is changed to not configured	Qualcomm Incorporated, Broadcom Corporation	
Yes	not treated		R2-106278	36331_CRxxx_FDD Un Subframe Configuration _REL10	Huawei, HiSilicon	
Yes	not treated		R2-106279	Analysis on PDCP and RLC SN lengths on Un link	Huawei, HiSilicon	
Yes	not treated		R2-106280	Idle Mode Use Case and Handling on eICIC	Huawei, HiSilicon	
Yes	revised		R2-106281	Correction to LPP reliable transport	Qualcomm Incorporated	
Yes	revised		R2-106282	Correction to LPP Error procedure	Qualcomm Incorporated	
Yes	revised		R2-106283	Addition of missing reference to LPPe	Qualcomm Incorporated	
Yes	noted		R2-106284	Indication of need for measurement gaps in carrier aggregation	Qualcomm Incorporated	
Yes	noted		R2-106285	LTE Fast Dormancy	Intel Corporation UK	
Yes	not treated		R2-106286	Broadcast of access control data	Sharp	

IPR2025-00720, OnePlus Ex. 1004
Page 681 of 700

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106287	MBR greater than GBR handling in the UE	Qualcomm Incorporated, Orange, Telecom Italia, Deutsche Telekom	
Yes	revised		R2-106288	LTE SAR issues and PHR	Qualcomm Incorporated	
Yes	noted		R2-106289	Fast Dormancy and Long DRX	Qualcomm Incorporated	
Yes	not treated		R2-106290	MTC related indications in RRC signalling	Intel Corporation (UK) Ltd.	
Yes	noted	Late	R2-106291	Email discussion on information from UE for FDM solution	MediaTek	related to email discussion [71b#27]; agreements will be captured in R2-106925
Yes	noted		R2-106292	Clarification on Working Assumptions for ISM Radios	MediaTek	
Yes	not treated		R2-106293	eICIC impact on Connected mode UEs	MediaTek	
Yes	not treated		R2-106294	DRX related timers in carrier aggregation	NEC	
Yes	noted		R2-106295	Clarification for timer T330 in Logged MDT	NEC	
Yes	not treated		R2-106296	MTC indicator at connection setup	Huawei, HiSilicon	
Yes	not treated		R2-106297	ACB for roaming MTC devices	Huawei, HiSilicon	
Yes	not treated		R2-106298	Reject of MTC devices	Huawei, HiSilicon	
Yes	noted		R2-106299	Discussion on DB-DC+MIMO capability	Huawei, HiSilicon	
Yes	not treated		R2-106300	Correction for DB-DC+MIMO capability (R9)	Huawei, HiSilicon	
Yes	not treated		R2-106301	Correction for DB-DC+MIMO capability (R10)	Huawei, HiSilicon	
Yes	revised		R2-106302	Corrections on 25.331 for 4C-HSDPA	Huawei, HiSilicon	
Yes	revised		R2-106303	Corrections on 25.306 for 4C-HSDPA	Huawei, HiSilicon	
Yes	not treated		R2-106304	Further discussion on E-TFC selection in MC-HSUPA	CATT	
Yes	noted		R2-106305	Discussion on LCR TDD MU-MIMO capability reporting	CATT	
Yes	revised		R2-106306	Introduction of MU-MIMO for LCR TDD in 25.331	CATT	
Yes	not treated		R2-106307	Discussion on open issues in UTRAN ANR	CATT	
Yes	noted		R2-106308	Size limitation for logged MDT report	NTT DOCOMO, INC.	
Yes	not treated		R2-106309	Battery Status	Mediatek	
Yes	not treated		R2-106310	MDT UL measurements	Mediatek	
Yes	noted		R2-106311	LTE RLF information survival in UTRAN	NTT DOCOMO, INC.	
Yes	not treated		R2-106312	RLF Report	Mediatek	
Yes	not treated		R2-106313	Validity Timer for Location Information in Immediate MDT	NTT DOCOMO, INC.	
Yes	not treated		R2-106314	eICIC in Idle Mode	Mediatek	
Yes	revised		R2-106315	Location Information definition in TS 37.320	NTT DOCOMO, INC.	
No	withdrawn	Late	R2-106316	UE Capability for Immediate MDT	NTT DOCOMO, INC.	
Yes	noted		R2-106317	RN type change during Un RRC connection re-establishment	CATT	not much support for the proposal
Yes	not treated		R2-106318	L2 measurements of RN	CATT	
Yes	not treated		R2-106319	Handling of MTC and Low Priority Indicators	CATT	
Yes	not treated		R2-106320	Wait timer extension for CN overload control	CATT	
Yes	not treated		R2-106321	Handling of roamers for CN overload control	CATT	
Yes	not treated		R2-106322	UTDOA Support	TruePosition	
Yes	noted		R2-106323	UTDOA Architecture	TruePosition	
Yes	noted	Late	R2-106324	LTE: Network Based Positioning	TruePosition	related to email discussion [71b#25]
Yes	not treated		R2-106325	PHR MAC CE for Carrier Aggregation	Potevio	
No	withdrawn		R2-106326	Reporting of CC-specific PCMAX,c	Potevio	
Yes	noted		R2-106327	SCell Radio Link Monitoring	ZTE	
Yes	revised		R2-106328	Discussion on PHR MAC CE design	ZTE	
Yes	noted		R2-106329	Some clarifications of CA	ZTE	proposals 3 & 4 will be merged into R2-106856
Yes	not treated		R2-106330	Discussion on activation and deactivation MAC CE	ZTE	
Yes	noted		R2-106331	RLF enhancement for immediate MDT	ZTE	
Yes	not treated		R2-106332	Discussion on measurement restriction for eICIC	ZTE	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
No	withdrawn		R2-106333	HARQ RTT for Relay in MAC	ZTE	
Yes	rejected		R2-106334	HARQ feedback for Relay in MAC	ZTE	but LS to RAN1 will be drafted by Ericsson in R2-106894
Yes	noted		R2-106335	Failure handling for RN reconfiguration	ZTE	
Yes	noted		R2-106336	Discussion on MBMS Counting Procedure	ZTE	
Yes	not treated		R2-106337	Way Forward on "MTC indicators"	ZTE	
Yes	revised		R2-106338	Solution for indicators in RRC Connection Request	ZTE	
Yes	not treated		R2-106339	Extension of Wait Time	ZTE	
Yes	not treated		R2-106340	ACB scheme for 'low priority' access requests	ZTE	
Yes	revised		R2-106341	Protection from roaming UEs configured for MTC	ZTE	
Yes	noted		R2-106342	Time variations of gap patterns with bluetooth streaming	Qualcomm Incorporated	
Yes	noted		R2-106343	Solutions for bluetooth conversational voice	Qualcomm Incorporated	
Yes	noted		R2-106344	eICIC Idle Mode discussion	Qualcomm Incorporated	
Yes	not treated		R2-106345	eICIC Idle Mode stage 3	Qualcomm Incorporated	
Yes	noted		R2-106346	Enhancements to Time Stamp Method	Ericsson, ST-Ericsson	
Yes	noted		R2-106347	Considerations on RLF Reporting	Ericsson, ST-Ericsson	
Yes	not treated		R2-106348	Gap Analysis for LTE-WiFi Coexistence by Legacy Solutions	MediaTek	
Yes	noted		R2-106349	Evaluation of SIB5 length and impact for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
Yes	noted		R2-106350	E-DCH transmission continuation back off and Maximum E-DCH resource allocation for CCCH values	Ericsson, ST-Ericsson	
Yes	not treated		R2-106351	Analysis on SCell Radio Link Monitoring	New Postcom	
Yes	revised		R2-106352	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	not treated		R2-106353	Design of PHR MAC CE format for CA	New Postcom	
Yes	revised		R2-106354	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	not treated		R2-106355	Optimization of SCell Deactivation Timer	New Postcom	
Yes	revised		R2-106356	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	revised		R2-106357	Stage 2 corrections for CA	New Postcom	proposals 1 & 5 will be merged into R2-106854
Yes	noted		R2-106358	Clarifications of running MAC CR	New Postcom	
Yes	revised		R2-106359	Precoding weight set restriction setting for secondary cell	Ericsson, ST-Ericsson	
Yes	postponed		R2-106360	DTX-DRX status after a reconfiguration message	Ericsson, ST-Ericsson	
Yes	postponed		R2-106361	DTX-DRX status after a reconfiguration message	Ericsson, ST-Ericsson	
Yes	noted		R2-106362	Enhanced Security Mode procedure handling upon SRNS relocation	Qualcomm Incorporated	
Yes	postponed		R2-106363	DTX-DRX status after a reconfiguration message	Ericsson, ST-Ericsson	
Yes	postponed		R2-106364	DTX-DRX status after a reconfiguration message	Ericsson, ST-Ericsson	
Yes	not treated		R2-106365	MIMO support for DB-DC-HSDPA UEs	Qualcomm Incorporated	
Yes	revised		R2-106366	Procedural text to support measurements in the Secondary UL Frequency	Ericsson, ST-Ericsson	
Yes	revised		R2-106367	Procedural text to support measurements in the Secondary UL Frequency	Ericsson, ST-Ericsson	
Yes	revised		R2-106368	Precoding weight set restriction setting for secondary cells	Ericsson, ST-Ericsson	
Yes	noted		R2-106369	RRC procedure performance for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
Yes	revised		R2-106370	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
Yes	revised		R2-106371	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
Yes	revised		R2-106372	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
No	withdrawn		R2-106373	Addition of uplink positioning to 36.305	Andrew Corporation	
Yes	postponed		R2-106374	When to discard RLC PDUs with special value HE field set	Ericsson, ST-Ericsson, Nokia Corporation, Nokia Siemens Networks, Alcatel-Lucent, InterDigital	
No	withdrawn		R2-106375	When to discard RLC PDUs with special value HE field set	Ericsson, ST-Ericsson, Nokia Corporation, Nokia Siemens Networks, Alcatel-Lucent, InterDigital	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
No	withdrawn		R2-106376	Way forward on reducing the size of RRC Connection Request	Ericsson, ST-Ericsson	
Yes	revised		R2-106377	Overload control by rejecting access attempts	Qualcomm Incorporated	
Yes	revised		R2-106378	DRAFT Reply LS to S2-104449 = R2-105299 on Handling of UTRAN Mobility Information	Ericsson, ST-Ericsson	should be sent preferebly on Monday morning; further offline discussion about SMC
Yes	rejected		R2-106379	Adding Support for Explicit Congestion Notification	Qualcomm Incorporated	
Yes	noted	Late	R2-106380	Summary of [71b#20] email discussion on MDT - Values for max neighbour cell reporting	CMCC	related to email discussion [71b#20]; further offline discussion needed; agreements will be merged in 36.331 CR R2-106931 and 25.331 CR R2-10????
Yes	noted		R2-106381	Considerations on measurement resource restriction for eICIC	CMCC	
Yes	not treated		R2-106382	Framework and procedure of in-device coexistence interference avoidance	CMCC	
Yes	rejected		R2-106383	Correction to 36.300 for Carrier Aggregation	CATT	
Yes	noted		R2-106384	Radio Link Monitoring on Scell	CATT	
Yes	not treated		R2-106385	Handling of SCell Configuration in HO Procedure	CATT	
Yes	not treated		R2-106386	ASN.1 Issues for Measurement Reporting	CATT	
Yes	not treated		R2-106387	Additional Information for PHR	CATT	
Yes	not treated		R2-106388	PHR Format for Rel-10	CATT	
Yes	not treated		R2-106389	The general principles of the TDM solution	CATT	
No	withdrawn		R2-106390	The general principles of the TDM solution	CATT	
Yes	not treated		R2-106391	Discussion about SCell Radio Link Monitoring	ITRI	
Yes	not treated		R2-106392	Simplification of deactivation timer	Fujitsu	
Yes	not treated		R2-106393	Finalisation of RLM on SCells	Fujitsu	
Yes	rejected		R2-106394	CR for PCH and BCH reception	Fujitsu	
Yes	not treated		R2-106395	CR for handling of UE deactivation timer	Fujitsu	
Yes	withdrawn		R2-106396	CR for introduction of per-UE deactivation timer	Fujitsu	
Yes	rejected		R2-106397	CR for PHR trigger	Fujitsu	
Yes	not treated		R2-106398	General consideration on TDM	Huawei, HiSilicon	
Yes	noted		R2-106399	Potential mechanism to realize TDM pattern	Huawei, HiSilicon	
Yes	not treated		R2-106400	Further consideration on FDM solution	Huawei, HiSilicon	
Yes	revised		R2-106401	Addition of Rel-10 critical extension in SRNS relocation message adding ROHC target mode	Alcatel-Lucent	
Yes	revised		R2-106402	Addition of UE ROHC capability in IRAT handover	Alcatel-Lucent	
Yes	revised		R2-106403	Addition of UE ROHC capability in IRAT handover	Alcatel-Lucent	
Yes	withdrawn		R2-106404	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331	Alcatel-Lucent	
Yes	revised		R2-106405	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331	Alcatel-Lucent	
Yes	revised		R2-106406	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	REL-8 CR in R2-106671
Yes	revised		R2-106407	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	REL-8 CR in R2-106671
Yes	not treated		R2-106408	Triggering UE for ANR	Alcatel-Lucent	
Yes	not treated		R2-106409	Fast dormancy interaction with ANR	Alcatel-Lucent	
Yes	revised		R2-106410	Introduction of MCHSUPA for 1.28Mcsp TDD	ZTE	related to email discussion [71b#22]
Yes	noted		R2-106411	UE capability signalling for CA and MIMO in REL10	Nokia, Nokia Siemens Networks	36.331 TP prepared in R2-106892
Yes	noted		R2-106412	Clarification of RAB information for setup	ZTE	
No	withdrawn	Late	R2-106413	Signalling of CA and MIMO capabilties in REL10	Nokia Corporation, Nokia Siemens Networks	
Yes	noted		R2-106414	UE capabilities in REL10	Nokia Corporation, Nokia Siemens Networks	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106415	CA and UL/DL MIMO capabilities in REL10	Nokia Corporation, Nokia Siemens Networks	at first postponed, finally revised in R2-106893
Yes	not treated		R2-106416	SCell RLM Procedures	InterDigital	
Yes	not treated		R2-106417	MAC PHR Contents	InterDigital	
Yes	not treated		R2-106418	MAC PHR Format	InterDigital	
Yes	not treated		R2-106419	eICIC ABS Patterns	InterDigital	
Yes	revised	Late	R2-106420	introduction of MC-HSUPA for 1.28Mcps TDD	TD Tech	
Yes	revised	Late	R2-106421	introduction of MC-HSUPA for 1.28Mcps TDD	TD Tech	
Yes	not treated	Late	R2-106422	Discussion on E-TFC selection for 1.28Mcps TDD	TD Tech	
Yes	revised		R2-106423	Adding the 12.2/7.4/5.9/4.75 kbps speech without SRB#5	Nokia Siemens Networks, Nokia Corporation	
Yes	not treated		R2-106424	Where to enforce Uplink MBR	Ericsson, ST-Ericsson	
Yes	noted		R2-106425	Max number of reported cells for SON ANR for UMTS and CDMA	Alcatel-Lucent	
Yes	rejected		R2-106426	Reporting more than one cell for SON ANR towards UMTS/CDMA	Alcatel-Lucent	postponed to Fri; finally not agreed but LS to RAN4 drafted by ALU in R2-106932
Yes	noted		R2-106427	Specification Impact Analysis of UTDOA	Alcatel-Lucent	
Yes	not treated		R2-106428	Discussion on MTC requirements and solutions	Alcatel-Lucent	
Yes	not treated		R2-106429	Discussion in MTC requirements and ACB	Alcatel-Lucent	
Yes	revised		R2-106430	Draft Reply LS to S2-105317 = R2-106059 on S1 handover/Iu relocation with LIPA connection removal	Alcatel-Lucent	LIPA: Local IP Access; SIPTO: Selected Internet IP Traffic Offload; offline discussion whether LS is needed
Yes	noted		R2-106431	TDM solution with dynamic patterns	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	not treated		R2-106432	The need of Radio Link Monitoring for SCell	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	noted		R2-106433	Delta configuration for the common configuration of SCell	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	R2-106439 was finally considered instead of R2-106433 proposal
Yes	noted		R2-106434	Additional Measurement Reporting issue	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	revised		R2-106435	Introduction of CA to TS36.302	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	at first postponed, finally revised in R2-106895
Yes	revised		R2-106436	Clarification regarding default configuration value N/A	Samsung	cat.A CR missing
Yes	noted		R2-106437	Status of A/N resources after TAT expiry	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	revised		R2-106438	Carrier Aggregation: Layer 2 configuration parameters	Samsung	will be partly captured in rapporteur's CR R2-106856
Yes	revised		R2-106439	Carrier Aggregation: DL/ UL structure common radio configuration	Samsung	will be captured in rapporteur's CR R2-106856 (changing a presence to optional)
Yes	noted		R2-106440	RN subframe configuration signalling	Ericsson, ST-Ericsson	agreements will be merged into R2-106886
Yes	rejected		R2-106441	Simplification of RN startup procedure	Ericsson, ST-Ericsson	
Yes	noted		R2-106442	Method for ANR support in UTRAN	Ericsson, ST Ericsson	
Yes	not treated		R2-106443	remaining open issues on Pcmax signalling	Alcatel-Lucent	
Yes	not treated		R2-106444	MAC PHR CE format design for Rel-10	Alcatel-Lucent	
No	withdrawn	Late	R2-106445	UE power variation resulted due to dual transmission	Alcatel-Lucent	
Yes	not treated		R2-106446	UE power variation resulted due to dual transmission	Alcatel-Lucent	
Yes	revised		R2-106447	Introduction of new PHR trigger to indicate the configured maximum UE power variation resulted due to dual transmission	Alcatel-Lucent	
Yes	revised		R2-106448	correction on RN indicator	Alcatel-Lucent	"shall" change will be merged in rapporteu's CR R2-106886
Yes	noted		R2-106449	Signalling support for Almost Blank Subframe patterns	Alcatel-Lucent	
Yes	not treated		R2-106450	Idle mode and eICIC enhancements in Rel-10	Alcatel-Lucent	
Yes	not treated		R2-106451	RRC signalling design for Almost Blank Subframe patterns	Alcatel-Lucent	
No	withdrawn	Late	R2-106452	Introduction of ABS restriction for RRM, RLM and CSI measurements	Alcatel-Lucent	
Yes	not treated		R2-106453	Need for multiple ABS patterns for CQI measurements	Alcatel-Lucent	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	noted		R2-106454	Removal of HARQ reset upon Treset expiry	Nokia Corporation, Nokia Siemens Networks	
Yes	withdrawn		R2-106455	Removal of HARQ reset upon Treset expiry	Nokia Corporation, Nokia Siemens Networks	cat.A CRs missing?
Yes	revised		R2-106456	Carrier Aggregation: measurement related issues	Samsung	will be partly merged into R2-106856
Yes	revised		R2-106457	Carrier Aggregation: Radio configuration signalling details	Samsung	will be partly merged into R2-106856
Yes	revised		R2-106458	MDT stage 3 details related to 36.331	Samsung	
Yes	revised		R2-106459	Correction of HSPA_RNTI_STORED_CELL_PCH handling	Nokia Corporation, Nokia Siemens Networks	
Yes	not treated		R2-106460	Indicators for MTC Support	Ericsson, ST-Ericsson	
Yes	revised		R2-106461	MDT stage 3 terminology consistency	Samsung	will be merged in rapporteur's CR R2-106884
Yes	revised		R2-106462	Correction of HSPA_RNTI_STORED_CELL_PCH handling	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106463	Correction of HSPA_RNTI_STORED_CELL_PCH handling	Nokia Corporation, Nokia Siemens Networks	
Yes	noted		R2-106464	Measurement gap configuration for inter-freq RSTD measurement	Ericsson, ST-Ericsson	
Yes	noted		R2-106465	Physical layer parameters to be configured by RRC	Ericsson, ST-Ericsson	TP will be prepared in R2-106877
Yes	revised		R2-106466	Adding support for ECN in UTRA	Ericsson, ST-Ericsson	note: 25.401 is a RAN3 TS
Yes	not treated		R2-106467	Indication at connection setup	Nokia Corporation, Nokia Siemens Networks	
Yes	not treated		R2-106468	Extended wait timer	Nokia Corporation, Nokia Siemens Networks	
Yes	noted		R2-106469	Integrity protection on Un	Ericsson, ST-Ericsson	
Yes	not treated		R2-106470	Establishment Cause and Access Barring for Low Priority Access	Ericsson, ST-Ericsson	
Yes	noted		R2-106471	Adding Integrity Protection for Relays to PDCP	Ericsson, ST-Ericsson	related CR see R2-106970
Yes	noted		R2-106472	L2 measurements in DeNB and RN	Ericsson, ST-Ericsson	
Yes	noted		R2-106473	eICIC Idle mode considerations	Motorola	
No	withdrawn	Late	R2-106474	eICIC ABSF subframe configuration	Motorola	
Yes	noted		R2-106475	Discussion on FDM approach for In device coexistence	Motorola	
Yes	noted		R2-106476	Discussion on TDM approach for In device coexistence	Motorola	
No	withdrawn	Late	R2-106477	Scell Radio link monitoring	Motorola	
Yes	not treated		R2-106478	PHR and Pcmax	Motorola	
Yes	not treated		R2-106479	Inter-frequency detected set measurement events	Nokia Corporation, Nokia Siemens Networks	
Yes	noted	Late	R2-106480	Report on [71b#23]: UMTS: Inter-freq detected set measurements	Nokia Corporation	related to email discussion [71b#23]
Yes	revised		R2-106481	Introduction of detected set measurements and reporting for Inter-frequency	Nokia Corporation, Nokia Siemens Networks	
Yes	noted		R2-106482	RACH signalling optimisation	Nokia Corporation, Nokia Siemens Networks	
Yes	postponed		R2-106483	Correction to UE system specific capability for EUTRA	Nokia Corporation, Nokia Siemens Networks	
Yes	noted		R2-106484	Cell reselection ANR Open issues	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106485	Correction to the ODTOA assistance data	Nokia Siemens Networks, Nokia Corporation, Qualcomm Incorporated, Ericsson, ST-Ericsson	
Yes	rejected		R2-106486	Additional Clarifications for CA Running RRC CR	Nokia Siemens Networks, Nokia Corporation	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	not treated		R2-106487	DISC on the UE fast dormancy controlled by the network	NEC	to discuss about the solution to control the UE fast dormancy that does not impact the UE
Yes	noted		R2-106488	DISC on MBMS service activation/deactivation further to counting	NEC	to discuss about the scenarios of MBMS service activation/deactivation in broadcast further to counting and the mechanisms thereof. The RAN3 incoming LS is also a trigger of this
Yes	not treated		R2-106489	Stage-3 details of Additional Reporting for CA	Ericsson, ST Ericsson	
Yes	not treated		R2-106490	Virtual Format Indication	LG Electronics Inc.	
Yes	noted		R2-106491	SCell deactivation procedure	ETRI	
Yes	not treated		R2-106492	Pcmax,c Reporting	LG Electronics Inc.	
No	withdrawn		R2-106493	PHR Format Selection	LG Electronics Inc.	
Yes	not treated		R2-106494	Unavailable DeNB cells at phase II	LG Electronics Inc.	
Yes	not treated		R2-106495	PHR Format	LG Electronics Inc.	
Yes	rejected		R2-106496	CR for SCell deactivation procedure	ETRI	
Yes	noted		R2-106497	SR and CA	LG Electronics Inc.	
Yes	noted		R2-106498	PDCP impacts with Integrity Protection on DRB	LG Electronics Inc.	
Yes	not treated		R2-106499	UE capability indicator for MDT	Samsung	
Yes	not treated		R2-106500	Radio Link Monitoring for SCells	Sharp Corporation	
Yes	noted		R2-106501	Simplification of deactivation timer	Panasonic, Alcatel-Lucent	
Yes	not treated		R2-106502	Additional PHR reporting	Panasonic	
Yes	noted		R2-106503	Issues in Integrity Protection on DRB	LG Electronics Inc.	
No	withdrawn		R2-106504	Clarification on when to log measured result	Panasonic	
No	withdrawn		R2-106505	Clarification on when to log measured result	Panasonic	
Yes	noted		R2-106506	Clarification on when to log measured result	Panasonic	report of offline discussion in R2-106888
Yes	noted		R2-106507	SCell activation and CQI reporting	Samsung	
Yes	noted		R2-106508	Small corrections on agreed running MAC CR for carrier aggregation	Samsung	
Yes	not treated		R2-106509	Discussion on PHR format	Samsung	
Yes	noted		R2-106510	PCMAX and PH determination for type 2 PHR	Samsung	
Yes	revised		R2-106511	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	not treated		R2-106512	Discussion on PCMAX,CC reporting	Samsung	
Yes	noted		R2-106513	SR handling in CA	Samsung	
Yes	revised		R2-106514	HARQ operation for relay and Un subframe configuration	Samsung	
Yes	revised		R2-106515	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	not treated		R2-106516	Discussion on controlling ON/OFF period using CQI and BSR	Samsung	
Yes	revised		R2-106517	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	noted		R2-106518	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	see 25.331 CRs in R2-106711, R2-106724, R2-106725
Yes	not treated		R2-106519	Handling of SCell Radio Link Monitoring	Panasonic	
Yes	not treated		R2-106520	Handling of existing Scell configuration at HO	Panasonic	
Yes	withdrawn		R2-106521	Clarification of the CSFB procedure not to set "Pre-redirection info"	NTT DOCOMO, INC.	
Yes	withdrawn		R2-106522	Clarification of the CSFB procedure not to set "Pre-redirection info"	NTT DOCOMO, INC.	
Yes	not treated		R2-106523	25331_CRxxx_New Indicators in RRC Connection Request	ZTE	
Yes	withdrawn		R2-106524	36331_CRxxx_New Indicators in RRC Connection Request	ZTE	
Yes	not treated		R2-106525	25331_CRxxx_ACB factor for 'low priority access'	ZTE	
Yes	not treated		R2-106526	36331_CRxxx_ACB factor for 'low priority access'	ZTE	
Yes	not treated		R2-106527	Location Information of Immediate MDT	CATT	already covered in R2-106315
Yes	not treated		R2-106528	Discussion on UE Capability of MDT	CATT	
Yes	noted		R2-106529	Consideration on OTDOA Measurement Gap	CATT	will be only considered for REL-10
No	withdrawn		R2-106530	Inclusion of UTRA LCR TDD metrics for MDT	CATT	see R2-106531 instead
Yes	revised		R2-106531	Inclusion of UTRA LCR TDD metrics for MDT	CATT	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	noted		R2-106532	Inclusion of UTRA LCR TDD metrics in 25.331	CATT	
Yes	revised		R2-106533	Inclusion of UTRA LCR TDD metrics for MDT in 25.331	CATT	merged into R2-106792
Yes	not treated		R2-106534	Discussion on measurement restriction requirement of eICIC	CATT	
Yes	not treated		R2-106535	Some Corrections for MDT in 36.331	ZTE	
Yes	rejected		R2-106536	Some Corrections for MDT in 36.331	ZTE	
Yes	rejected		R2-106537	Clarification of the RAB handling not indicated in HO TO UTRAN COMMAND	NTT DOCOMO, INC.	related to LSin R2-106043
Yes	not treated		R2-106538	Clarification of the RAB handling not indicated in HO TO UTRAN COMMAND	NTT DOCOMO, INC.	
Yes	not treated		R2-106539	Handling of UL common configuration of SCell	ASUSTeK	
Yes	not treated		R2-106540	Clarification of the RAB handling not indicated in HO TO UTRAN COMMAND	NTT DOCOMO, INC.	
Yes	not treated		R2-106541	Clarification on Session Start for MBMS Service over Unicast	ASUSTeK	
Yes	not treated		R2-106542	Design of PHR MAC CE format for CA	New Postcom, CATR	
Yes	noted		R2-106543	Log avaialble bit handling during PLMN change	CMCC	will be discussed offline together with R2-106238
Yes	not treated		R2-106544	UL CC configuration on activated SCell	Pantech	
Yes	not treated		R2-106545	consideration on MDT mobility	Pantech	
Yes	noted		R2-106546	Combined Quantity Report for IRAT measurement of UTRAN	Huawei, HiSilicon, Deutsche Telekom, Ericsson, ST-Ericsson, TeliaSonera, Nokia Siemens Networks	
Yes	not treated		R2-106547	Pcmax format in CA	Pantech	
Yes	revised		R2-106548	Combined Quantity Report for IRAT measurement of UTRAN	Huawei, HiSilicon, Deutsche Telekom, Ericsson, ST-Ericsson, TeliaSonera, Nokia Siemens Networks	
Yes	rejected		R2-106549	RRC establishment cause value setting	Huawei, HiSilicon	confirmed that establishment cause is determined by 24.301 but no CR needed
Yes	not treated		R2-106550	Handover Performance and Improvements in Co-channel HetNet	Alcatel-Lucent	
Yes	not treated		R2-106551	Analysis on Common ACB and Other Access Control Methods	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	noted		R2-106552	Clarification on RN reconfiguration failure	HTC	no failure handling will be specified
Yes	revised		R2-106553	Introduction of Minimization of Drive Tests	Nokia Siemens Networks, Nokia Corporation	
Yes	not treated		R2-106554	Clarification on RN reconfiguration failure	HTC	not treated after R2-106552 conclusion
Yes	revised		R2-106555	Corrections to 4C-HSDPA	InterDigital	
Yes	noted		R2-106556	Clarification on Scell configuration failure	HTC	proposal not agreed
Yes	rejected		R2-106557	Correction to TS36.321 on Random Access Procedure	MediaTek	CR was not agreed but a sentence will be added in R2-106860
Yes	not treated		R2-106558	Clarification on Scell configuration failure	HTC	not treated after R2-106556 conclusion
Yes	postponed		R2-106559	CR on CPC issues	Huawei, HiSilicon	
Yes	postponed		R2-106560	CR on CPC issues	Huawei, HiSilicon	CR category to be verified
Yes	postponed		R2-106561	CR on CPC issues	Huawei, HiSilicon	
Yes	postponed		R2-106562	CR on CPC issues	Huawei, HiSilicon	
Yes	noted		R2-106563	Necessity of on off indication for avoiding in-device coexistence interference	LG Electronics Inc.	
Yes	noted		R2-106564	Possible enhancement for idle mode UE to avoid in-device coexistence interference	LG Electronics Inc.	agreements will be captured in R2-106925
Yes	not treated		R2-106565	Alignment of stage2 and 3 on UE behavior at duration timer expiry	LG Electronics Inc.	
Yes	not treated		R2-106566	Fingerprint for idle mode MDT	LG Electronics Inc.	
Yes	not treated		R2-106567	Guideline for log report segmentation	LG Electronics Inc.	
Yes	not treated		R2-106568	Log report request when MDT buffer is empty	LG Electronics Inc.	
Yes	noted		R2-106569	RRC reestablishment procedure for relay	NTT DOCOMO, INC.	
Yes	not treated		R2-106570	Speed scaling of logging interval	LG Electronics Inc.	
Yes	not treated		R2-106571	Stop condition of logging duration timer	LG Electronics Inc.	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	noted		R2-106572	BCH and PCH Reception in Scell	Samsung	
Yes	not treated		R2-106573	Resolving issues related to rradio link monitoring on SCell	LG Electronics Inc.	
Yes	not treated		R2-106574	UE-originated RLF reporting	Samsung	
Yes	noted		R2-106575	Handling of Source SCell configuration at handover	LG Electronics Inc.	
Yes	noted		R2-106576	Trigger of Pattern Use in eICIC	Samsung	
Yes	noted		R2-106577	Femto ABS pattern: Femto cell specific or common?	LG Electronics Inc.	
Yes	not treated		R2-106578	Measurement restriction for idle mode MUE with femto ABS	LG Electronics Inc.	ABS: almost blank subframe
Yes	not treated		R2-106579	Measurement restriction for macro-pico scenario	LG Electronics Inc.	
Yes	noted		R2-106580	RLF PLMN Identity	Samsung	
No	withdrawn		R2-106581	Understanding the nature of LTE and BT in-device coexistence for VOIP service	Samsung	
Yes	noted		R2-106582	Need of separate resource restriction information for CSI	Samsung	
Yes	not treated		R2-106583	General analysis of TDM solutions for coexistence	Intel Corporation (UK) Ltd	
Yes	not treated		R2-106584	Timeline analysis of TDM solutions for coexistence with WiFi	Intel Corporation (UK) Ltd	
Yes	noted	Late	R2-106585	Timeline analysis of TDM solutions for coexistence with Bluetooth	Intel Corporation (UK) Ltd	agreements will be captured in R2-106925; Motorola will draft LS to RAN4 in R2-106927
Yes	revised		R2-106586	AC-Barring for Mobile Originating CSFB call	Samsung	replacing R2-106136 (not from original company); will be merged into R2-
Yes	rejected		R2-106587	PHR and SCell deactivation/removal	HTC	
Yes	not treated		R2-106588	Need of RLM on sCell	Samsung	
Yes	not treated		R2-106589	Integrity protection of DRBs over Un interface	Samsung	
Yes	noted		R2-106590	Reception of unicast data over MBSFN subframes	Samsung	
Yes	not treated		R2-106591	Miscellaneous corrections related to SCells in 36.331	HTC	
Yes	revised		R2-106592	Corrections on Carrier Aggregation in 36.300	HTC	proposal 1 will be merged into R2-106854
Yes	not treated		R2-106593	Supporting integrity protection for DRBs over the Un interface (36.300)	Samsung	
Yes	noted		R2-106594	RAN sharing for H(e)NB	Samsung	report of offline discussion in R2-106914
Yes	not treated		R2-106595	Type confusion between non-CA and CA configurations	HTC	
Yes	revised		R2-106596	T321 timer fix	Samsung	
Yes	revised		R2-106597	Correction to the setting of variable READY_FOR_COMMON_EDCH	Samsung	
Yes	revised		R2-106598	Correction to the setting of variable	Samsung	
Yes	not treated		R2-106599	RRC Connection Establishment with MTC Indication	LG Electronics Inc.	
Yes	not treated		R2-106600	Fingerprint for Immediate MDT	LG Electronics Inc.	related 36.331 CR in R2-106605
Yes	revised		R2-106601	Correction to the setting of variable READY_FOR_COMMON_EDCH	Samsung	
Yes	not treated		R2-106602	Extended Wait Time in RRC Connection Reject for MTC	LG Electronics Inc.	
Yes	not treated		R2-106603	Considerations on PCMAX,c report	ITRI	
Yes	not treated		R2-106604	Supporting integrity protection for DRBs over the Un interface (36.323)	Samsung	
Yes	postponed		R2-106605	Fingerprint for Immediate MDT	LG Electronics Inc.	
Yes	not treated		R2-106606	Handling of Roaming MTC Devices	LG Electronics Inc.	
Yes	not treated		R2-106607	Mobility issues under pico cell deployment	Samsung	
Yes	noted		R2-106608	Validity of GNSS location information for Immediate MDT	LG Electronics Inc.	
Yes	not treated		R2-106609	Supporting integrity protection for DRBs over the Un interface (36.331)	Samsung	
Yes	noted		R2-106610	Applicability of Compressed Mode on all Carriers	Samsung	
No	withdrawn		R2-106611	Clarification on the release of Idle Logging Configuration	LG Electronics Inc.	
Yes	not treated		R2-106612	PHR MAC CE formats	Research In Motion UK Limited	
Yes	not treated		R2-106613	Use of Backoff for Overload Control	LG Electronics Inc.	
Yes	not treated		R2-106614	CR to 36.331 on Machine Type Communication	LG Electronics Inc.	
Yes	revised		R2-106615	Inclusion of PLMN id in the CSG Whitelist definition	Research In Motion UK Limited	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106616	Inclusion of PLMN id in the CSG Whitelist definition	Research In Motion UK Limited	note: HNB-supp is a REL-8 WI
Yes	not treated		R2-106617	Clarification on location information in measurement reporting	LG Electronics Inc.	
Yes	not treated		R2-106618	Handling layer1 parameters in RNReconfiguration message	Samsung	
Yes	revised		R2-106619	Enhanced Security Mode procedure handling in case of delayed L2 ACK	Research In Motion UK Limited, Qualcomm Incorporated	
Yes	not treated		R2-106620	Battery Impacts from DRX Configuration	Research In Motion UK Limited	
No	withdrawn	Late	R2-106621	LTE impacts for Large numbers of connected devices	Research In Motion UK Limited	
Yes	not treated		R2-106622	Measurement configuration for eICIC	Research In Motion UK Limited	
Yes	noted		R2-106623	Handling of dedicated A/N configuration at TAT expiry	NTT DOCOMO, INC.	
Yes	noted		R2-106624	SCell radio link monitoring	NTT DOCOMO, INC.	
Yes	not treated		R2-106625	Configuration and Reporting for MDT based ANR	Samsung	
Yes	not treated		R2-106626	Open issues in QCluu to DSCP mapping information	LG Electronics Inc.	
No	withdrawn		R2-106627	Issue on OAM Signaling in Phase I	LG Electronics Inc.	
Yes	revised		R2-106628	Rapporteur's proposed update of R2-106133 on Introduction of Carrier Aggregation	Rapporteur (Ericsson)	will be merged into R2-106860
Yes	noted		R2-106629	Mandating SPS for VoLTE capable UE	NTT DOCOMO, INC.	
No	withdrawn	Late	R2-106630	Uncertainty Information for Logged MDT report	NTT DOCOMO, INC.	
Yes	revised		R2-106631	Restriction of AC barring parameter setting	NTT DOCOMO, INC.	
Yes	noted		R2-106632	Consideration on Pcmax Reporting	HT mMobile Inc.	
Yes	revised		R2-106633	Restriction of AC barring parameter setting	NTT DOCOMO, INC.	real cat.A CR?
Yes	noted		R2-106634	Clean up of ACB related procedures	NTT DOCOMO, INC.	
Yes	not treated		R2-106635	Procedural RN Functionality Separation	Fujitsu	
Yes	noted		R2-106636	Connected-mode eICIC handling under mixed deployment	Intel Corporation (UK) Ltd.	
Yes	noted		R2-106637	Idle-mode eICIC handling under mixed deployment	Intel Corporation (UK) Ltd.	
Yes	not treated		R2-106638	Values of the Deactivation Timer	Huawei, HiSilicon	
Yes	not treated		R2-106639	Discussion on CN Overload Avoidance for MTC	Institute for Information Industry (III), Coiler Corporation	
Yes	revised	Late	R2-106640	Modification for MC-HSUPA for 1.28Mcp TDD	TD Tech	
Yes	revised		R2-106641	correction on equal priority in E-TFC selection for 1.28Mcps TDD	TD Tech	cat.F CR was in principle agreed in R2-105906 at RAN2 #71bis, however REL-9 cat.A CR R2-105536 was provided to RAN2 #71bis but not treated and REL-10 cat.A CR was not provided
Yes	revised		R2-106642	correction on equal priority in E-TFC selection for 1.28Mcps TDD	TD Tech	
Yes	not treated		R2-106643	Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at UE side.	Orange, Deutsche Telekom, Telecom Italia, Qualcomm	
No	withdrawn		R2-106644	Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side.	Orange SA, Deutsch Telekom	see R2-106645 instead
Yes	revised		R2-106645	Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side.	Orange SA, Deutsche Telekom, Telecom Italia	
Yes	not treated		R2-106646	Handling of MBR Greater than GBR in eNB	Orange SA	
No	withdrawn		R2-106647	Counting request reception clarification	Orange SA	see R2-106650 instead
No	withdrawn		R2-106648	Counting request reception clarification	Orange SA	see R2-106650 instead
No	withdrawn		R2-106649	Counting request reception clarification	Orange SA	see R2-106650 instead
Yes	revised		R2-106650	Counting request reception clarification	Orange SA	
No	withdrawn	Late	R2-106651	(draft) Introduction of detected set cell reselection for ANR	Nokia Corporation, Nokia Siemens Networks	

IPR2025-00720, OnePlus Ex. 1004
Page 690 of 700

Uploaded	status	Late	Tdoc	Title	Source	further information
No	withdrawn	Late	R2-106652	(draft) Introduction of ANR	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106653	correction on equal priority in E-TFC selection for 1.28Mcps TDD	TD Tech	
Yes	noted		R2-106654	On signalling in eICIC scenarios	Ericsson, ST-Ericsson	
Yes	noted		R2-106655	On the use of RLM on SCells	Ericsson, ST-Ericsson	
Yes	revised		R2-106656	Clarification of FGI settings non ANR periodical measurement reporting	Nokia Siemens Networks, NTT DoCoMo, Motorola	is a revision of R2-106226 and this also covers the contents of R2-106138 which was in principle agreed in RAN2#71bis
Yes	revised		R2-106657	Clarification of FGI settings non ANR periodical measurement reporting	Nokia Siemens Networks, NTT DOCOMO, INC., Motorola	is a revision of R2-106227 and this also covers the contents of R2-106139 which was in principle agreed in RAN2#71bis
Yes	postponed		R2-106658	Alignment of LPPa descriptions to stage 3	Ericsson, ST-Ericsson	will be discussed in RAN3 first
Yes	rejected	Late	R2-106659	HARQ operation for UL multiple antenna transmission	Huawei, HiSilicon, Nokia Siemens Networks	
Yes	not treated	Late	R2-106660	Issues with using establishment cause for Low priority and MTC indication	Vodafone	
Yes	not treated	Late	R2-106661	Analysis on sending the MTC Indicator to the network in Release 10	Nokia Siemens Networks, Nokia	intended for joint session
Yes	revised	Late	R2-106662	Change in the radio bearer mapping due to a system information message	Ericsson, ST-Ericsson	
Yes	revised	Late	R2-106663	Change in the radio bearer mapping due to a system information message	Ericsson, ST-Ericsson	
Yes	revised	Late	R2-106664	Change in the radio bearer mapping due to a system information message	Ericsson, ST-Ericsson	
Yes	not treated	Late	R2-106665	Text Proposal for the introduction of PHR MAC CE for CA	New Postcom	
Yes	agreed		R2-106666	Correction to the limitation of SI acquisition	Huawei, HiSilicon	
Yes	agreed		R2-106667	Correction to the limitation of SI acquisition	Huawei, HiSilicon	implicitly in principle agreed at RAN2 #71bis
Yes	revised		R2-106668	Removal of SEQUENCE OF SEQUENCE in UEInformationResponse	Alcatel-Lucent, Samsung	
Yes	not treated		R2-106669	MBR greater than GBR handling in the UE	Qualcomm Incorporated, Orange, Telecom Italia, Deutsche Telekom	
Yes	revised		R2-106670	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331	Alcatel-Lucent	
Yes	revised		R2-106671	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	REL-9 and REL-10 CR in R2-106406 and R2-106407
Yes	not treated		R2-106672	Solution for indicators in RRC Connection Request	ZTE	
Yes	not treated		R2-106673	Protection from roaming UEs configured for MTC	ZTE	
Yes	noted	Late	R2-106674	LS reply to R2-106030 on Counting for Activation of an MBMS Bearer Service (contact: Orange)	SA4	to: RAN2; decision about LS answer postponed to Fri (LS answer will be drafted if progress on counting); finally no LS answer from RAN2
Yes	noted	Late	R2-106675	Reply LS to S2-105305 on MBR>GBR bearers in MTSI (contact: Samsung)	SA4	cc: RAN2; note: S2-105305 was not sent to/cc RAN2; ECSRA_LAA: Enabling Coder Selection and Rate Adaptation for UTRAN and E-UTRAN for Load Adaptive Applications; no LS answer from RAN2
Yes	noted	Late	R2-106676	LS on impact of LTE air interface transmission delay on LTE system capacity for voice services (contact: Huawei)	SA4	to: RAN2; LS answer is postponed to RAN2 #72bis
Yes	noted		R2-106677	RAN2 input for joint WG meeting on MTC	Samsung (RAN2 chairman)	Tdoc was noted in joint session with SA2
Yes	not treated		R2-106678	MDT related Stage3 issue	Huawei, HiSilicon	
Yes	noted		R2-106679	HARQ operation for relay and Un subframe configuration	Samsung	
No	withdrawn		R2-106680	Inclusion of PLMN id in the CSG Whitelist definition	Research In Motion UK Limited	
No	withdrawn		R2-106681	Inclusion of PLMN id in the CSG Whitelist definition	Research In Motion UK Limited	note: HNB-supp is a REL-8 WI
Yes	revised		R2-106682	Stage 2 TS 37.320 v1.1.1 including agreements of RAN2 #72	NSN	captures agreements of e.g. R2-106198, R2-106191
Yes	postponed		R2-106683	Location Information definition in TS 37.320	NTT DOCOMO, INC.	
Yes	not treated		R2-106684	Discussion on PHR MAC CE design	ZTE	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	not treated		R2-106685	Overload control by rejecting access attempts	Qualcomm Incorporated	
Yes	withdrawn		R2-106686	Draft Reply LS to S2-105317 = R2-106059 on S1 handover/Iu relocation with LIPA connection removal	Alcatel-Lucent	LIPA: Local IP Access; SIPTO: Selected Internet IP Traffic Offload; offline discussion whether LS is needed; finally withdrawn
Yes	revised	Late	R2-106687	Text proposal for capturing UL-SM in 36.321	Ericsson, ST-Ericsson, Samsung, Panasonic	SM = Spatial Multiplexing
Yes	revised		R2-106688	Correction to the ODTOA assistance data	Nokia Siemens Networks, Nokia Corporation, Qualcomm Incorporated, Ericsson, ST-Ericsson	revised in R2-106699 which was withdrawn and then another revision was provided in R2-106920
Yes	revised		R2-106689	Clarification of FGI settings non ANR periodical measurement reporting	Nokia Siemens Networks, NTT DoCoMo, Motorola	CR was agreed during RAN2 #72 but as Panasonic detected a mistake after RAN2 #72 it was revised in R2-106945
Yes	agreed		R2-106690	Clarification of FGI settings non ANR periodical measurement reporting	Nokia Siemens Networks, NTT DOCOMO, INC., Motorola	
Yes	agreed		R2-106691	Clarification regarding default configuration value N/A	Samsung	
Yes	revised		R2-106692	Clarification regarding default configuration value N/A	Samsung	
Yes	agreed		R2-106693	Restriction of AC barring parameter setting	NTT DOCOMO, INC.	
Yes	agreed		R2-106694	Restriction of AC barring parameter setting	NTT DOCOMO, INC.	real cat.A CR?
Yes	agreed		R2-106695	UE frequency capability for LPP	Ericsson, ST-Ericsson	
Yes	agreed		R2-106696	Correction to LPP reliable transport	Qualcomm Incorporated	
Yes	agreed		R2-106697	Correction to LPP Error procedure	Qualcomm Incorporated	
Yes	agreed		R2-106698	Addition of missing reference to LPPe	Qualcomm Incorporated	
No	withdrawn		R2-106699	Correction to the ODTOA assistance data	Nokia Siemens Networks, Nokia Corporation, Qualcomm Incorporated, Ericsson, ST-Ericsson	
Yes	revised		R2-106700	Introduction of MU-MIMO for LCR TDD in 25.331	CATT	
Yes	noted		R2-106701	Inclusion of UTRA LCR TDD metrics for MDT	CATT, TD-Tech	
Yes	agreed		R2-106702	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	revised		R2-106703	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	revised		R2-106704	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	revised		R2-106705	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	agreed		R2-106706	Correction on CS voice over HSPA SDU discard timer configuration	Huawei, HiSilicon	REL-9 CR for REL-8 WI
Yes	revised		R2-106707	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	agreed		R2-106708	Correction of HSPA_RNTI_STORED_CELL_PCH handling	Nokia Corporation, Nokia Siemens Networks	
Yes	agreed		R2-106709	Correction of HSPA_RNTI_STORED_CELL_PCH handling	Nokia Corporation, Nokia Siemens Networks	
Yes	agreed		R2-106710	Correction of HSPA_RNTI_STORED_CELL_PCH handling	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106711	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
No	withdrawn		R2-106712	Correction to the setting of variable READY_FOR_COMMON_EDCH	Samsung	
No	withdrawn		R2-106713	Correction to the setting of variable READY_FOR_COMMON_EDCH	Samsung	
No	withdrawn		R2-106714	Correction to the setting of variable READY_FOR_COMMON_EDCH	Samsung	
Yes	revised		R2-106715	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	revised		R2-106716	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	revised		R2-106717	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	agreed		R2-106718	Corrections to ETWS primary notification with security procedure	Infineon Technologies	
Yes	agreed		R2-106719	Corrections to ETWS primary notification with security procedure	Infineon Technologies	
Yes	agreed		R2-106720	Corrections to ETWS primary notification with security procedure	Infineon Technologies	
Yes	revised		R2-106721	introduction of MC-HSUPA for 1.28Mcps TDD	TD Tech	
Yes	revised		R2-106722	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	revised		R2-106723	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	revised		R2-106724	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
Yes	revised		R2-106725	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
Yes	revised		R2-106726	Introduction of MCHSUPA for 1.28Mcsp TDD	ZTE	
Yes	revised		R2-106727	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	revised		R2-106728	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	revised		R2-106729	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	revised		R2-106730	Precoding weight set restriction setting for secondary cells	Ericsson, ST-Ericsson	
Yes	revised		R2-106731	Precoding weight set restriction setting for secondary cell	Ericsson, ST-Ericsson	
Yes	rejected		R2-106732	Procedural text to support measurements in the Secondary UL Frequency	Ericsson, ST-Ericsson	email discussion [72#11]
Yes	rejected		R2-106733	Procedural text to support measurements in the Secondary UL Frequency	Ericsson, ST-Ericsson	email discussion [72#11]
Yes	agreed		R2-106734	Introduction of REL-9 access stratum release indicator	ZTE	implicitly in principle agreed at RAN2 #71bis
Yes	agreed		R2-106735	Addition of UE ROHC capability in IRAT handover	Alcatel-Lucent	
Yes	agreed		R2-106736	Addition of UE ROHC capability in IRAT handover	Alcatel-Lucent	
Yes	technically endorsed		R2-106737	Adding support for ECN in UTRA	Ericsson, ST-Ericsson	note: 25.401 is a RAN3 TS; provided to RAN3 as R3-103701
Yes	revised		R2-106738	Modification for MC-HSUPA for 1.28Mcp TDD	TD Tech	
Yes	agreed		R2-106739	correction on equal priority in E-TFC selection for 1.28Mcps TDD	TD Tech	
Yes	agreed		R2-106740	correction on equal priority in E-TFC selection for 1.28Mcps TDD	TD Tech	
Yes	agreed		R2-106741	correction on equal priority in E-TFC selection for 1.28Mcps TDD	TD Tech	
Yes	revised		R2-106742	Introduction of MC-HSUPA for 1.28Mcps TDD	ZTE	revised in R2-106983 since wrong CR number was allocated
Yes	agreed		R2-106743	Modification for MC-HSUPA for 1.28Mcp TDD	TD Tech	
Yes	agreed		R2-106744	introduction of MC-HSUPA for 1.28Mcps TDD	TD Tech	
Yes	revised		R2-106745	Introduction of MCHSUPA for 1.28Mcsp TDD	ZTE	
Yes	agreed		R2-106746	introduction of MC-HSUPA for 1.28Mcps TDD	TD Tech	
Yes	revised		R2-106747	Some clarifications of 4C-HSDPA behavior	ZTE	
No	withdrawn		R2-106748	Introduction of 4C-HSDPA definitions	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	see R2-106752 instead
Yes	agreed		R2-106749	Corrections on 25.331 for 4C-HSDPA	Huawei, HiSilicon	
Yes	agreed		R2-106750	Corrections on 25.306 for 4C-HSDPA	Huawei, HiSilicon	
Yes	revised		R2-106751	Corrections to 4C-HSDPA	InterDigital	
Yes	revised		R2-106752	Introduction of 4C-HSDPA definitions	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	
Yes	revised		R2-106753	Draft LS to RAN3 on ANR way forward (contact: ZTE)	ZTE	
Yes	revised		R2-106754	Introduction of detected set measurements and reporting for Inter-frequency	Nokia Corporation, Nokia Siemens Networks	
Yes	agreed		R2-106755	Introduction of REL-10 access stratum release indicator	ZTE	
Yes	agreed		R2-106756	Some legacy editorial corrections for TEI10	ZTE	
Yes	agreed		R2-106757	Adding the 12.2/7.4/5.9/4.75 kbps speech without SRB#5	Nokia Siemens Networks, Nokia Corporation	
Yes	agreed		R2-106758	RLC reset on a Signalling Radio Bearer	Ericsson, ST-Ericsson	

IPR2025-00720, OnePlus Ex. 1004
Page 693 of 700

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106759	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
Yes	revised		R2-106760	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
Yes	revised		R2-106761	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
Yes	agreed		R2-106762	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	agreed		R2-106763	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	agreed		R2-106764	Clarifications for deletion of target cell preconfiguration for existing RL by ASU	Panasonic	
Yes	agreed		R2-106765	Introduction of MCHSUPA for 1.28Mcsp TDD	ZTE	
Yes	agreed		R2-106766	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	agreed		R2-106767	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	agreed		R2-106768	Correction to the IE name for determination of HS-DSCH retransmission number in Enhance CELL-FACH	ZTE	
Yes	agreed		R2-106769	Some clarifications of 4C-HSDPA behavior	ZTE	
Yes	revised		R2-106770	Introduction of 4C-HSDPA definitions	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	revised in R2-106984 since wrong CR number was allocated
Yes	agreed		R2-106771	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	agreed		R2-106772	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	agreed		R2-106773	Correction related to inter-RAT and inter-frequency measurements on a frequency other than the used frequency	Qualcomm Incorporated	
Yes	agreed		R2-106774	Enhanced Security Mode procedure handling in case of delayed L2 ACK	Research In Motion UK Limited, Qualcomm Incorporated	
Yes	agreed		R2-106775	Addition of Rel-10 critical extension in SRNS relocation message adding ROHC target mode	Alcatel-Lucent	
No	withdrawn		R2-106776	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.331	Alcatel-Lucent	email discussion [72#08]; finally withdrawn as no consensus was achieved before the deadline
Yes	agreed		R2-106777	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	email discussion [72#08]; REL-4 to REL-10 CRs see R2-106784 to R2-106789
Yes	agreed		R2-106778	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
Yes	agreed		R2-106779	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
Yes	agreed		R2-106780	RRC procedure performance requirements for Enhanced Uplink in CELL_FACH	Ericsson, ST-Ericsson	
Yes	postponed		R2-106781	Change in the radio bearer mapping due to a system information message	Ericsson, ST-Ericsson	
Yes	postponed		R2-106782	Change in the radio bearer mapping due to a system information message	Ericsson, ST-Ericsson	
Yes	postponed		R2-106783	Change in the radio bearer mapping due to a system information message	Ericsson, ST-Ericsson	
Yes	agreed		R2-106784	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	email discussion [72#08]
Yes	agreed		R2-106785	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	email discussion [72#08]
Yes	agreed		R2-106786	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	email discussion [72#08]
Yes	agreed		R2-106787	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	email discussion [72#08]
Yes	agreed		R2-106788	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	email discussion [72#08]
Yes	agreed		R2-106789	Add Expanded 1900 MHz Band for UTRA and LTE to TS25.307	Alcatel-Lucent	email discussion [72#08]
Yes	agreed		R2-106790	Introduction of MU-MIMO for LCR TDD in 25.331	CATT	
Yes	postponed		R2-106791	25.304 CR on MDT	NSN	related to email discussion [71b#04]
Yes	postponed		R2-106792	Introduction of Minimization of Drive Tests	Nokia Siemens Networks, Nokia Corporation	
Yes	revised		R2-106793	Draft LS to RAN3 on ANR way forward (contact: ZTE)	ZTE	
Yes	agreed		R2-106794	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
Yes	agreed		R2-106795	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	
Yes	agreed		R2-106796	Further corrections on actions related to HSPA_RNTI_STORED_CELL_PCH	Panasonic	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106797	Precoding weight set restriction setting for secondary cells	Ericsson, ST-Ericsson	
Yes	revised		R2-106798	Precoding weight set restriction setting for secondary cell	Ericsson, ST-Ericsson	
Yes	revised		R2-106799	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	revised		R2-106800	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	revised		R2-106801	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	
Yes	agreed		R2-106802	Corrections to 4C-HSDPA	InterDigital	
Yes	agreed		R2-106803	LS on ANR way forward (to: RAN3; cc: -; contact: ZTE)	RAN2	
Yes	revised		R2-106804	Precoding weight set restriction setting for secondary cells	Ericsson, ST-Ericsson	email discussion [72#10]
Yes	revised		R2-106805	Precoding weight set restriction setting for secondary cell	Ericsson, ST-Ericsson	email discussion [72#10]
Yes	technically endorsed		R2-106806	Introduction of detected set measurements and reporting for Inter-frequency	Nokia Corporation, Nokia Siemens Networks	email discussion [72#12] (note: CR was just technically endorsed as there was another idea for additions which might not be covered by the WID, however a CR to describe these additions was not available during RAN2 #72.)
Yes	revised		R2-106807	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	email discussion [72#09]
Yes	revised		R2-106808	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	email discussion [72#09]
Yes	revised		R2-106809	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	email discussion [72#09]
No	withdrawn		R2-106810	Void	-	
No	withdrawn		R2-106811	Void	-	
No	withdrawn		R2-106812	Void	-	
No	withdrawn		R2-106813	Void	-	
No	withdrawn		R2-106814	Void	-	
No	withdrawn		R2-106815	Void	-	
No	withdrawn		R2-106816	Void	-	
No	withdrawn		R2-106817	Void	-	
No	withdrawn		R2-106818	Void	-	
No	withdrawn		R2-106819	Void	-	
No	withdrawn		R2-106820	Void	-	
No	withdrawn		R2-106821	Void	-	
No	withdrawn		R2-106822	Void	-	
No	withdrawn		R2-106823	Void	-	
No	withdrawn		R2-106824	Void	-	
No	withdrawn		R2-106825	Void	-	
No	withdrawn		R2-106826	Void	-	
No	withdrawn		R2-106827	Void	-	
No	withdrawn		R2-106828	Void	-	
No	withdrawn		R2-106829	Void	-	
No	withdrawn		R2-106830	Void	-	
No	withdrawn		R2-106831	Void	-	
No	withdrawn		R2-106832	Void	-	
No	withdrawn		R2-106833	Void	-	
No	withdrawn		R2-106834	Void	-	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
No	withdrawn		R2-106835	Void	-	
No	withdrawn		R2-106836	Void	-	
No	withdrawn		R2-106837	Void	-	
No	withdrawn		R2-106838	Void	-	
No	withdrawn		R2-106839	Void	-	
No	withdrawn		R2-106840	Void	-	
No	withdrawn		R2-106841	Void	-	
No	withdrawn		R2-106842	Void	-	
No	withdrawn		R2-106843	Void	-	
No	withdrawn		R2-106844	Void	-	
No	withdrawn		R2-106845	Void	-	
No	withdrawn		R2-106846	Void	-	
No	withdrawn		R2-106847	Void	-	
No	withdrawn		R2-106848	Void	-	
No	withdrawn		R2-106849	Void	-	
Yes	revised		R2-106850	T321 timer fix	Samsung	
Yes	agreed		R2-106851	Corrections to the presence of IE regarding DRX and CQI	ASUSTeK	
Yes	agreed		R2-106852	Removal of SEQUENCE OF SEQUENCE in UEInformationResponse	Alcatel-Lucent, Samsung	
Yes	agreed		R2-106853	Corrections to RLF Report	NEC	
Yes	agreed		R2-106854	Corrections and new agreements on Carrier Aggregation	Nokia Siemens Networks (Rapporteur)	capturing RAN2 #72 agreements, e.g. of R2-106357, R2-106592
Yes	revised		R2-106855	Draft LS reply to R4-103962 = R2-106063 on Radio Link Monitoring for Carrier Aggregation (to: RAN4; cc: -; contact: NTT DOCOMO)	NTT DOCOMO, INC.	
Yes	agreed		R2-106856	Introduction of Carrier Aggregation and UL/ DL MIMO	Rapporteur (Samsung)	captures additional agreements of RAN2 #72, e.g. of R2-106438, R2-106207, R2-106211 , R2-106439, R2-106456, R2-106457, R2-106329, R2-106878, R2-106877, R2-106857; email discussion [72#02]
Yes	revised		R2-106857	Selection between Rel-8/9 and Rel-10 PHR format	Ericsson, ST-Ericsson	will bbe merged in rapporteur's CR R2-106856
Yes	revised		R2-106858	Additions and corrections to relaying description	Ericsson	
Yes	revised		R2-106859	Additions and corrections to relaying description	Ericsson	
Yes	revised		R2-106860	Introduction of Carrier Aggregation	Ericsson	outcome of the User Plane session
Yes	revised		R2-106861	Draft LS for Power Headroom Reporting (to: RAN4; cc: -; contact: Nokia)	Nokia Corporation	
Yes	agreed		R2-106862	Report of the LTE User Plane session	NSN (Vice-Chairman)	
Yes	agreed		R2-106863	HARQ operation for UL multiple antenna transmission	Ericsson	outcome of the User Plane session; Ericsson will draft LS to RAN1 in R2-106921
Yes	noted		R2-106864	LS on UE categories (contact: Ericsson)	RAN1	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106865	LS on "in-device coexistence between LTE and ISM" update of TR 36.816 (contact: CMCC)	RAN4	to: RAN2; no LS answer from RAN2; TP will be included in TR 36.816
Yes	not treated		R2-106866	Reply LS to S2-104444 on new Study Item on Core Network Overload issues (contact: Vodafone)	SA3	cc: RAN2
Yes	not treated		R2-106867	Reply LS to S3-101105 on Progress on relay node security (contact: Sagem)	CT6	cc: RAN2
Yes	not treated		R2-106868	LS on introduction of radio bearer combination for DC-HSDPA and MIMO (contact: Ericsson)	RAN5	to: RAN2
Yes	revised		R2-106869	Updated draft report of 2 #71bis, Xian, China, 11.10.-15.10.2010	ETSI MCC	
Yes	noted		R2-106870	LS on inclusion of RF measurements into MDT report (contact: Motorola)	SA5	to: RAN2; LS answer postponed to RAN #72bis
Yes	withdrawn		R2-106871	Review of MDT design and reply LS on Security Issues with Logged MDT (contact: NTT DOCOMO)	SA3	to: RAN2; withdrawn as it turned out that S3-101401 was not the final LS from SA3 (see R2-106876 instead)

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	noted		R2-106872	Request to enable UE-originated RLF reporting after fresh RRC connection setup (contact: NSN)	RAN3	to: RAN2; no LS answer from RAN2
Yes	noted		R2-106873	Counting request reception clarification	Orange SA, IPWireless	36.300 agreements will be merged into R2-106880, 36.331 part will be revised in TP R2-106881
Yes	noted		R2-106874	Reply LS to S3-101105 = R2-105306 on Progress on relay node security (contact: Qualcomm)	CT1	cc: RAN2; no LS answer from RAN2
Yes	noted		R2-106875	Reply LS to R2-106000 on Progress on relay node security (contact: NTT DOCOMO)	SA3	to: RAN2; NTT DOCOMO will LS reply in R2-106889 (final LS answer in R2-106913)
Yes	noted		R2-106876	Review of MDT design and reply LS on Security Issues with Logged MDT (contact: NTT DOCOMO)	SA3	to: RAN2; no LS answer from RAN2
Yes	revised		R2-106877	Physical layer parameters to be configured by RRC	Ericsson, ST-Ericsson	will be merged in R2-106856
Yes	revised		R2-106878	Clarification on measurement reporting in CA	HTC	will be merged in rapporteur's CR R2-106856
Yes	not treated		R2-106879	LS on MDT Stage 2 functionality (contact: NSN)	SA5	to: RAN2
Yes	agreed		R2-106880	LTE - Stage 2 agreements on MBMS enhancement	Huawei (Rapporteur)	
Yes	revised		R2-106881	Counting request reception clarification	Orange SA, IPWireless	
Yes	agreed		R2-106882	Stage-3 CR for MBMS enhancement	Huawei (Rapporteur)	captures additional agreements of RAN2 #72, e.g. of R2-106219, R2-106236/R2-106336, R2-
Yes	revised		R2-106883	36.304 CR on MDT	NSN	captures additional agreements of RAN2 #72, e.g. of R2-106202
Yes	revised		R2-106884	36.331 CR on MDT	NSN	captures additional agreements of RAN2 #72, e.g. of R2-106295, R2-106458, R2-106461
Yes	not treated		R2-106885	LS on Pcmax,c (contact: Qualcomm)	RAN1	to: RAN2
Yes	agreed		R2-106886	Introduction of relays in RRC	Ericsson	captures additional agreements of RAN2 #72, e.g. of R2-106440, R2-106448, R2-106231
Yes	agreed		R2-106887	CR to 36.300 adding e1xCSFB support for dual Rx/Tx UE	Motorola, Hitachi, KDDI, NEC, QUALCOMM Incorporated	
Yes	revised		R2-106888	Report of offline discussion on Clarification on when to log measured result	Panasonic	will be merged in TS update R2-106931
Yes	revised		R2-106889	Draft reply LS to S3-101417 = R2-106875 on relay node security (contact: NTT DOCOMO)	NTT DOCOMO, INC.	
Yes	agreed		R2-106890	Introduction of relays in MAC	Ericsson	CR cover updated?
Yes	rejected		R2-106891	Lightweight relay solution	Ericsson	
Yes	revised		R2-106892	UE capability signalling for CA and MIMO in REL10	Nokia, Nokia Siemens Networks	
Yes	revised		R2-106893	CA and UL/DL MIMO capabilities in REL10	Nokia Corporation, Nokia Siemens Networks	
Yes	revised		R2-106894	Draft LS on HARQ feedback for Relay (to: RAN1; cc: -; contact: Ericsson)	Ericsson	
Yes	revised		R2-106895	Introduction of CA to TS36.302	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	revised		R2-106896	Introduction of new PHR trigger to indicate the configured maximum UE power variation resulted due to dual transmission	Alcatel-Lucent	
Yes	revised		R2-106897	Introduction of enhanced ICIC	Qualcomm Incorporated	
Yes	agreed		R2-106898	Introduction of CA to TS36.302	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	
Yes	noted		R2-106899	LTE SAR issues and PHR	Qualcomm Incorporated	
Yes	agreed		R2-106900	36.304 CR on MDT	NSN	captures additional agreements of RAN2 #72
Yes	agreed		R2-106901	Clarification regarding default configuration value N/A	Samsung	
Yes	agreed		R2-106902	Reply LS to R4-103962 = R2-106063 on Radio Link Monitoring for Carrier Aggregation (to: RAN4; cc: RAN1; contact: NTT DOCOMO)	RAN2	
Yes	revised		R2-106903	Draft reply LS to S3-101417 = R2-106875 on relay node security (contact: NTT DOCOMO)	NTT DOCOMO, INC.	

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	revised		R2-106904	AC-Barring for Mobile Originating CSFB call	NTT DOCOMO, INC., NEC, Qualcomm Incorporated, Panasonic, ZTE	will include also agreements of R2-106586; R2-106904 is using T306 all the time; alternative see R2-106928; final version see R2-106940
Yes	revised		R2-106905	Counting request reception clarification	Orange SA, IPWireless	will be merged in rapporteur's CR R2-106882
Yes	agreed		R2-106906	Priority indication for CSFB with re-direction	ZTE	
Yes	agreed		R2-106907	Editorial Clean-Up	Nokia Siemens Networks (Rapporteur)	
Yes	revised		R2-106908	Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side.	Orange SA, Deutsche Telekom, Telecom Italia	
Yes	not treated		R2-106909	Introduction of new PHR trigger to indicate the configured maximum UE power variation resulted due to dual transmission	Alcatel-Lucent	
Yes	revised		R2-106910	Draft reply LS to G2-100392 = R2-106044 on RAN sharing for H(e)NB cells (to: GERAN; cc: RAN3, CT1, CT4, SA1, SA2; contact: Qualcomm)	Qualcomm Incorporated	
Yes	revised		R2-106911	UE power saving and Local release	NSN	
Yes	agreed		R2-106912	Combined Quantity Report for IRAT measurement of UTRAN	Huawei, HiSilicon, Deutsche Telekom, Ericsson, ST-Ericsson, TeliaSonera, Nokia Siemens Networks, ZTE	
Yes	agreed		R2-106913	Reply LS to S3-101417 = R2-106875 on relay node security (to: SA3; cc: RAN3; contact: NTT DOCOMO)	RAN2	sent out on Thu
Yes	noted		R2-106914	Report of offline discussion on 'RAN sharing for H(e)NBs'	Vodafone	
Yes	noted		R2-106915	Report of offline discussion on "Redirection based CSFB failure"	Qualcomm Incorporated	CR R2-106241 is revised in R2-106919
Yes	agreed		R2-106916	LS on HARQ feedback for RNs configured with R-PDCCH (to: RAN1; cc: -; contact: Ericsson)	RAN2	
Yes	agreed		R2-106917	Introduction of Carrier Aggregation	Ericsson	
Yes	agreed		R2-106918	LS on Power Headroom Reporting (to: RAN4; cc: RAN1; contact: Nokia)	RAN2	
Yes	agreed		R2-106919	Cell selection in case of redirection based CSFB procedure	Qualcomm Incorporated	
Yes	agreed		R2-106920	Correction to the ODTOA assistance data	Nokia Siemens Networks, Nokia Corporation, Qualcomm Incorporated, Ericsson, ST-Ericsson	revision of R2-106688 (note: rev1 in R2-106699 was withdrawn)
Yes	withdrawn		R2-106921	Draft LS on HARQ operation for UL multiple antenna transmission (to: RAN1; cc: -; contact: Ericsson)	Ericsson	
Yes	revised		R2-106922	Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side.	Orange SA, Deutsche Telekom, Telecom Italia	
Yes	agreed		R2-106923	T321 timer fix	Samsung	
Yes	agreed		R2-106924	Setting of Maximum Bit Rate (MBR) to be greater than the Guaranteed Bit Rate (GBR) over E-UTRA: MBR enforcement at eNB side.	Orange SA, Deutsche Telekom, Telecom Italia	
Yes	revised		R2-106925	TR 36.816 v0.3.1 on "Study on signalling and procedure for interference avoidance for in-device coexistence" to capture RAN2 #72 agreements	CMCC	email discussion [72#07]
Yes	revised		R2-106926	DRAFT Reply LS to S2-104449 = R2-105299 on Handling of UTRAN Mobility Information (to: SA2; cc: -; contact: Ericsson)	Ericsson	
Yes	withdrawn		R2-106927	Draft LS on TDM solutions for coexistence with Bluetooth (to: RAN4; cc: -; contact: Motorola)	Motorola	
Yes	revised		R2-106928	AC-Barring for Mobile Originating CSFB call	NTT DOCOMO, INC., NEC, Qualcomm Incorporated, Panasonic, ZTE	will include also agreements of R2-106586; R2-106928 uses T306 and T303; alternative see R2-106904; final version see R2-106940
Yes	agreed		R2-106929	Report of 2 #71bis, Xian, China, 11.10.-15.10.2010	ETSI MCC	

IPR2025-00720, OnePlus Ex. 1004
Page 698 of 700

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	agreed		R2-106930	Additions and corrections to relaying description	Ericsson	
Yes	revised		R2-106931	36.331 CR on MDT	NSN	
Yes	revised		R2-106932	Draft LS on Reporting more than one cell for SON ANR towards UMTS/CDMA (to: RAN4; cc: -; contact: Alcatel-Lucent)	Alcatel-Lucent	
Yes	rejected		R2-106933	Introduction of Carrier aggregation and UL/DL MIMO	Nokia Corporation, Nokia Siemens Networks	email discussion [72#01]; CR was finally not agreed to concerns raised by Ericsson
Yes	rejected		R2-106934	UE capability signalling for CA and MIMO in REL10	Nokia, Nokia Siemens Networks	email discussion [72#01]; CR was finally not agreed to concerns raised by Ericsson
Yes	noted		R2-106935	Offline discussion report on Inter-PLMN MDT report	NTT DOCOMO	
Yes	agreed		R2-106936	Stage 2 TS 37.320 v2.0.0 including agreements of RAN2 #72	NSN	will be submitted to RAN #50 for approval
Yes	agreed		R2-106937	Introduction of Minimization of Drive Tests	Nokia Siemens Networks, Nokia Corporation	email discussion [72#04]
Yes	revised		R2-106938	Draft reply LS to G2-100392 = R2-106044 on RAN sharing for H(e)NB cells (to: GERAN; cc: RAN3, CT1, CT4, SA1, SA2; contact: Qualcomm)	Qualcomm Incorporated	
Yes	agreed		R2-106939	Reply LS to S2-104449 = R2-105299 on Handling of UTRAN Mobility Information (to: SA2; cc: CT1; contact: Ericsson)	RAN2	
No	withdrawn		R2-106940	AC-Barring for Mobile Originating CSFB call	NTT DOCOMO, INC., NEC, Qualcomm Incorporated, Panasonic, ZTE	conclusion of alternative 1 R2-106904 and alternative 2 R2-106928; email discussion [72#05]; no consensus achieved by the email discussion deadline
Yes	agreed		R2-106941	UE power saving and Local release	Nokia Siemens Networks, Deutsche Telekom, NTT DOCOMO INC., Telecom Italia	email discussion [72#06]
Yes	agreed		R2-106942	Reply LS to G2-100392 = R2-106044 on RAN sharing for Home(e)NB cells (to: GERAN; cc: RAN3, CT1, CT4, SA1, SA2; contact: Qualcomm)	RAN2	
Yes	agreed		R2-106943	Introduction of enhanced ICIC	Qualcomm Incorporated	email discussion [72#21]
Yes	agreed		R2-106944	LS on Report Strongest Cells for SON (to: RAN4; cc: -; contact: Alcatel-Lucent)	RAN2	
Yes	agreed		R2-106945	Clarification of FGI settings non ANR periodical measurement reporting (contact: NSN)	Nokia Siemens Networks, NTT DoCoMo, Motorola	revision of R2-106689 for email agreement after RAN2 #72 (After RAN2 #72 it was detected that R2-106689 had a mistake (R1 changes disappeared) therefore R2-106689 was revised in R2-106945 R2 which was then agreed.)
Yes	agreed		R2-106946	Alignment of LPPa descriptions to stage 3 (contact: Ericsson)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106947	CR for Description of Energy Saving (contact: CMCC)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106948	S1 non UE associated message handling (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106949	Clarification to ANR Operation (contact: Samsung)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106950	P-GW function embedded in DeNB and addressing requirements (contact: ALU)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106951	eNB Configuration Update procedure in RN startup and detach procedure (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106952	Introduction of MCE initiated MBMS Session Start Request (contact: ALU)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106953	No NNSF function in RN (contact: Motorola)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106954	S1 handover routing toward RN (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106955	TNL address Handling (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106956	Correction on SPID Transfer (contact: Samsung)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106957	Support of ARP Pre-emption (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106958	Support of MBMS Service Counting Report procedure (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106959	Stage 2 for the X2 based mobility enhancement between HeNBs (contact: NSN)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106960	Introduction of event-triggered inter-RAT cell load reporting (contact: ALU)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106961	Introduction of LIPA function (contact: ALU)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106962	OAM requirements for QCI to DSCP mapping config for relays (contact: Qualcomm)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106963	Non UE associated message handling (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]

IPR2025-00720, OnePlus Ex. 1004

Uploaded	status	Late	Tdoc	Title	Source	further information
Yes	agreed		R2-106964	Introduction of MTC Overload Support (contact: ALU)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106965	Relay Node Un Signalling Transport Support (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106966	Complete S1 Interface Signalling Procedures (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	revised		R2-106967	X2 procedure and OAM requirements to support eICIC (contact: Qualcomm)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106968	Stage-2 updates to RN initial attachment (contact: Huawei)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106969	Functionality of SON MRO defined for Rel.10 (contact: NSN)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106970	Addition of integrity protection of DRBs in PDCP for RNs	Ericsson	email discussion [72#03]
Yes	agreed		R2-106971	TR 36.816 v1.0.0 on "Study on signalling and procedure for interference avoidance for in-device coexistence"	CMCC	email discussion [72#07]; will be provided to RAN #50 for information
Yes	agreed		R2-106972	X2 procedure and OAM requirements to support eICIC (contact: Qualcomm)	RAN3	email discussion [72#RAN3 CRs]
Yes	agreed		R2-106973	Precoding weight set restriction setting for secondary cells	Ericsson, ST-Ericsson, ZTE, Qualcomm Incorporated	email discussion [72#10]
Yes	agreed		R2-106974	Precoding weight set restriction setting for secondary cell	Ericsson, ST-Ericsson	email discussion [72#10]
Yes	agreed		R2-106975	Outcome of joint session SA2/RAN2/RAN3/CT1/CT4 on MTC	Samsung (RAN2 chairman)	
Yes	noted		R2-106976	Summary of offline discussion: Access barring feature for MTC	Ericsson, ST-Ericsson	
Yes	noted		R2-106977	Summary of offline Discussions on Wait Timer Handling at AS or NAS Level	Vodafone	
Yes	agreed		R2-106978	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	email discussion [72#09]
Yes	agreed		R2-106979	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	email discussion [72#09]
Yes	agreed		R2-106980	SIB5 changes for E-DCH in CELL_FACH and Idle Mode	Ericsson, ST-Ericsson	email discussion [72#09]
Yes	agreed		R2-106981	Correction for value range of total RLC AM, MAC-hs and MAC-ehs buffer size	Nokia Corporation, Nokia Siemens Networks	
Yes	agreed		R2-106982	Introduction of MU-MIMO for LCR TDD in 25.319	TD Tech	
Yes	agreed		R2-106983	Introduction of MC-HSUPA for 1.28Mcps TDD	ZTE	
Yes	agreed		R2-106984	Introduction of 4C-HSDPA definitions	Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Infineon	revised in R2-106984 since wrong CR number was allocated

IPR2025-00720, OnePlus Ex. 1004
Page 700 of 700