

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. 10,764,803

Case No. IPR2025-00756

DECLARATION OF FRIEDHELM RODERMUND
IN SUPPORT OF A PETITION FOR *INTER PARTES* REVIEW OF
U.S. PATENT NO. 10,764,803

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Declaration of Friedhelm Rodermund

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 R2-020088, which represents a 3GPP document with the title “Mobility examples when the UE has an HS-PDSCH assignment” (hereinafter “R2-020088” or “Ericsson”) (Ex. 1005)
- Version 5.5.0 of technical specification 3GPP TS 25.331 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 5)” (hereinafter “TS 25.331 V5.5.0”) (Ex. 1006)

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- Version 10.6.0 of technical specification 3GPP TS 36.300 (“Technical Specification Group (TSG) Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2 (Release 10)”) (hereinafter “TS 36.300 v10.6.0”) (Ex. 1008)
- Version 10.6.0 of technical specification 3GPP TS 36.321 (“Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA); Medium Access Control (MAC) protocol specification (Release 10)”) (hereinafter “TS 36.321 V10.6.0”) (Ex. 1009)
- Version 10.6.0 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 V10.6.0”) (Ex. 1010)

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

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records, I am able to testify regarding the authenticity of certain documents published by 3GPP and the timing of their publication.

4. I am also knowledgeable about document management practices and the usage of email reflectors in 3GPP TSG RAN WG2. This is due to the fact that all 3GPP working groups used the same document repository on <ftp.3gpp.org> and all working groups use the same email exploder tool. Thus, I'm able to testify regarding the availability and authenticity of any 3GPP documents.

5. 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.

6. I have been informed that Pantech Corporation ("Pantech" or "Patent Owner") is the current assignee of U.S. Patent No. 1,0764,803 ("the '803 Patent") (Ex. 1001). I have no financial interest in the Patent Owner or the '803 patent.

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

II. **BACKGROUND AND QUALIFICATIONS**

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8. 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.

9. 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.

10. 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).

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11. 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”).

12. 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.

13. 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.

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14. 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.

15. 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.

16. After I left ETSI, I worked from January 2005 to October 2014 at Vodafone, first as a Project Manager for Mobile Broadcast Standards, and then as Vice Chairman of the Device Management working group of the Open Mobile Alliance, and then as a Senior Standards Strategist, all with responsibilities as described on my curriculum vitae. At Vodafone, I was deeply involved in standards work with ETSI and 3GPP and other standards setting organizations, including as a delegate to 3GPP SA1 "Services." As part of my responsibilities, I attended selected

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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.

17. 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.

18. 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.

19. 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.

20. 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

21. It is my opinion that Ex. 1005 (Ericsson) is an authentic copy of 3GPP T-doc R2-020088 that was uploaded and made available via the 3GPP FTP server to 3GPP delegates and the general public by January 4, 2002, at the latest.

22. It is my opinion that Ex. 1006 is an authentic copy of technical specification TS 25.331 V5.5.0 published by 3GPP and would have been publicly accessible through ftp.3gpp.org as of June 24, 2003, at the latest.

23. It is my opinion that Ex. 1008 is an authentic copy of technical specification TS 36.300 V10.6.0 published by 3GPP and would have been publicly accessible through ftp.3gpp.org as of December 20, 2011, at the latest.

24. It is my opinion that Ex. 1009 is an authentic copy of technical specification TS 36.321 V10.6.0 published by 3GPP and would have been publicly accessible through ftp.3gpp.org as of September 21, 2012, at the latest.

25. It is my opinion that Ex. 1010 is an authentic copy of technical specification TS 36.331 V10.6.0 published by 3GPP and would have been publicly accessible through ftp.3gpp.org as of July 2, 2012, at the latest.

IV. PUBLICATION OF 3GPP SPECIFICATIONS AND RELATED DOCUMENTS

A. General Practices

26. Unless otherwise noted, the foregoing and following is an accurate description of 3GPP general practices from 1998 to the present, including in 2002/2003 and 2011/2012, regardless of whether I use the present or past tense to describe those practices.

27. 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”),

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Telecommunications Technology Association, Korea (“TTA”), and Telecommunication Technology Committee, Japan (“TTC”). In addition to being one of the founding partners, ETSI hosts the Mobile Competence Centre (“MCC”), which provides administrative and technical support for the day-to-day work of 3GPP. Furthermore, ETSI manages 3GPP’s IT services such as the 3GPP website, FTP server, and email exploders.

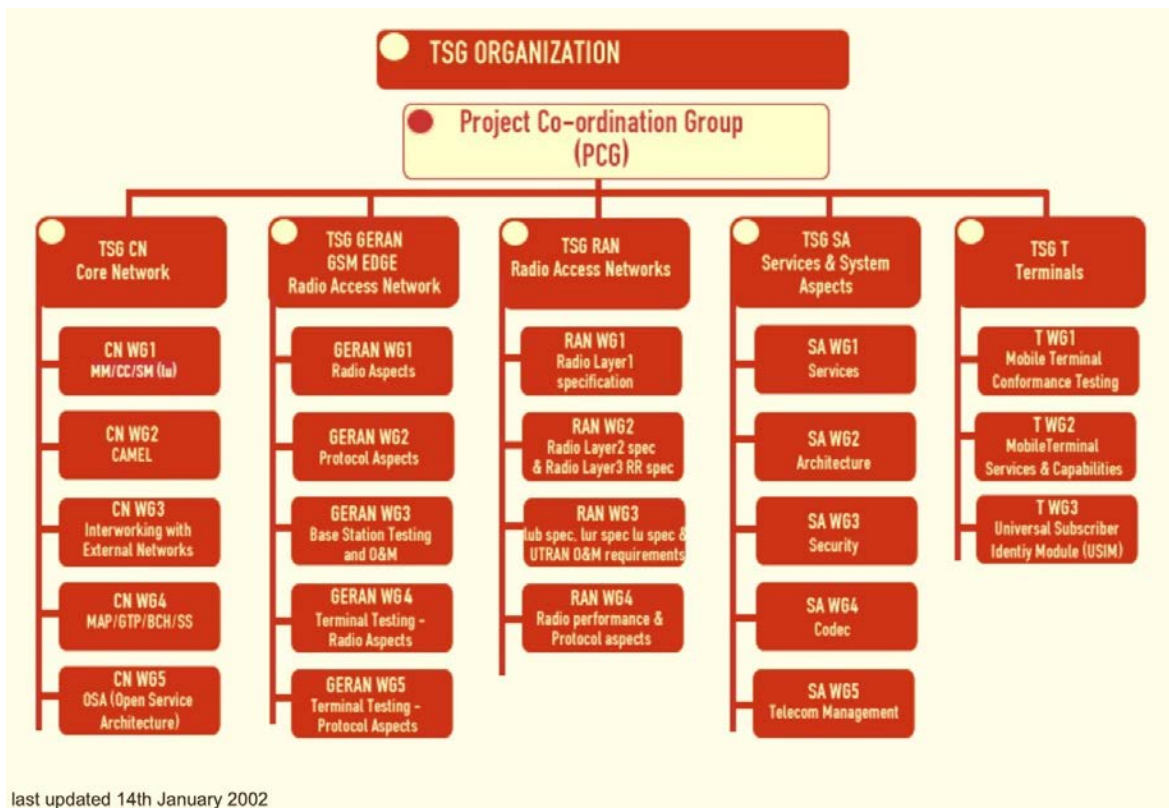
28. 3GPP is the world’s leading organization for developing and maintaining cellular telecommunications standards, which it has done since its foundation in 1998. As noted above and in my curriculum vitae, I began working for 3GPP, as part of my work at ETSI, the European-based organizational partner of 3GPP.

29. 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.

30. In the ordinary course of 3GPP’s regularly conducted business activities, and pursuant to its standard business practices, all draft technical

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

31. The names and the structure of 3GPP working groups, as of in 2002, can be found at below (source: Internet Archive¹):



¹ <https://web.archive.org/web/20021004052455/http://www.3gpp.org:80/TB/home.htm>

32. 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 2002/2003 was one of G (GSM EDGE Radio Access Network), R (Radio Access Network), C (Core Network), 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).

33. 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](ftp://ftp.3gpp.org).

34. 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.

35. 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.

36. 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.

37. 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.

38. 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.

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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		

39. 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:

Specification number	Title	Status	Primary Responsible Group	Release
25.000	Network architecture	Under change control	R2	R12
25.003	Numbering, addressing and identification	Under change control	C4	R12
25.007	Registration procedures	Under change control	C4	R12
25.008	Organization of subscriber data	Under change control	C4	R12
25.009	Handover procedures	Under change control	C4	R12
25.010	QoS for Public Land Mobile Network (PLMN) Connection Types	Withdrawn under change control	-	R12
25.011	Technical realization of Supplementary Services	Under change control	C4	R12
25.012	Location management procedures	Under change control	C4	R12
25.014	Support of Dual Time Multi-Access (DTMA) signaling	Under change control	C1	R12
25.015	Technical realization of Operator Determined Barring (ODB)	Under change control	C4	R12
25.016	Subscriber data management, Stage 2	Under change control	C4	R12
25.018	Basic call handling, Technical realization	Under change control	C4	R12
25.019	General UMTS architecture	Withdrawn under change control	R2012	R12
25.022	Functions related to Mobile Station (MS) in idle mode and group receive mode	Withdrawn under change control	-	R12
25.024	3G Security: Fraud Information Gathering System (FIGS), Technical realization, Stage 2	Under change control	S3	R12
25.025	Universal Designated Area Description (UDAD)	Under change control	S3	R12
25.026	High Speed Circuit Switched Data (HSCSD), Stage 2	Under change control	C1	R12
25.028	Immediate Service Termination (IST), Stage 2	Under change control	S3	R12
25.029	Alphanumeric and language-specific information	Under change control	C1	R12
25.030	Interface Protocols for the connection of Short Message Service Centers (SMSCs) to Short Message Entities (SMEs)	Under change control	C1	R12
25.031	Technical realization of the Short Message Service (SMS)	Under change control	C1	R12
25.041	Technical realization of Cell Broadcast Service (CBS)	Under change control	C1	R12
25.042	Compression algorithms for text messaging services	Under change control	C1	R12
25.043	Support of WAP	Withdrawn under change control	-	R12
25.044	Support of WAP	Withdrawn under change control	-	R12
25.045	Technical Realization of Facsimile Group 3 Service - transparent	Withdrawn under change control	N3	R12
25.046	Technical realization of Facsimile Group 3 Service - non-transparent	Withdrawn under change control	-	R12
25.047	Security mechanisms for the GPRS association setup, Stage 2	Under change control	C8	R12
25.048	Transfer Free Operation (TFO), Service description, Stage 2	Under change control	S4	R12
25.049	Shared Interworking Functions (SIF), Stage 2	Withdrawn under change control	N3	R12
25.050	Mobile Execution Environment (MEE), Functional description, Stage 2	Under change control	S2	R12
25.051	UMTS Network architecture	Withdrawn under change control	-	R12
25.052	General Packet Radio Service (GPRS), Service description, Stage 2	Under change control	S2	R12
25.053	Support of Mobile Number Portability (MNP), Technical realization, Stage 2	Under change control	C4	R12
25.054	Enhanced Multi-Layer Precedence and Preemption Service (MLPP), Stage 2	Under change control	C4	R12
25.055	Voice Broadcast service (VBS), Stage 2	Withdrawn under change control	N1	R12
25.056	Flowing of data within Public Data Network (PDN) and the GPRS Public Land Mobile Network (PLMN)	Withdrawn under change control	-	R12
25.057	Location Services (LS), Functional description, Stage 2	Withdrawn under change control	-	R12
25.058	Call Definition (CD) supplementary service, Stage 2	Under change control	C4	R12

40. 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. Each UMTS specification can span from a few pages to hundreds of pages.

41. 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.

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

43. 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).

44. 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.

45. At least as early as July 1999, all of 3GPP's email archives, including the dedicated email lists for TSG RAN WG2, were freely accessible to the general public with no login, password, or membership requirement and subscription was possible for every interested individual. The screenshot below represents the subscription page of the 3GPP RAN WG2 email list on list.etsi.org² demonstrating that this webpage is publicly available and that only an email address and name had to be entered to join the email list. In 2006, the registration webpage looked as follows:³

² In the past there was also list.3gpp.org which did not represent a dedicated website but instead redirected to list.etsi.org.

³ https://web.archive.org/web/20060105222647/http://list.etsi.org/scripts/wa.exe?SUBED1=3gpp_tsg_ran_wg2&A=1.

Subscription Settings

Subscriber's Corner
Server Archives
Help
Log off

Join or Leave the 3GPP_TSG_RAN_WG2 List

This screen allows you to join or leave the 3GPP_TSG_RAN_WG2 list. To confirm your identity and prevent third parties from subscribing you to a list against your will, an e-mail message with a confirmation code will be sent to the address you specify in the form. Simply wait for this message to arrive, then follow the instructions to confirm the operation.

Alternatively, you can [login with your LISTSERV password](#) (if you have one) and update your subscription interactively, without e-mail confirmation.

Your E-Mail Address:

Your Name:

Subscription Type:

- ☒ Regular [NODIGEST]
- ☐ Digest (traditional) [NOMIME DIGEST]
- ☐ Digest (MIME format) [NOHTML MIME DIGEST]
- ☐ Digest (HTML format) [HTML DIGEST]
- ☐ Index (traditional) [NOHTML INDEX]
- ☐ Index (HTML format) [HTML INDEX]

Mail Header Style:

- ☒ Normal LISTSERV-style header [FULLHDR]
- ☐ LISTSERV-style, with list name in subject [SUBJECTHDR]
- ☐ LISTSERV-style, short [SHORTHDR]
- ☐ "Dual" (second header in mail body) [DUALHDR]
- ☐ sendmail-style [IETFHDR]

Acknowledgements:

- ☐ No acknowledgements [NOACK NOREPRO]
- ☐ Short message confirming receipt [ACK NOREPRO]
- ☐ Receive copy of own postings [NOACK REPRO]
- ☒ [Special or obsolete setting]

Miscellaneous:

- ☐ Mail delivery disabled temporarily [NOMAIL]
- ☐ Address concealed from REVIEW listing [CONCEAL]

LIST.ETSI.ORG

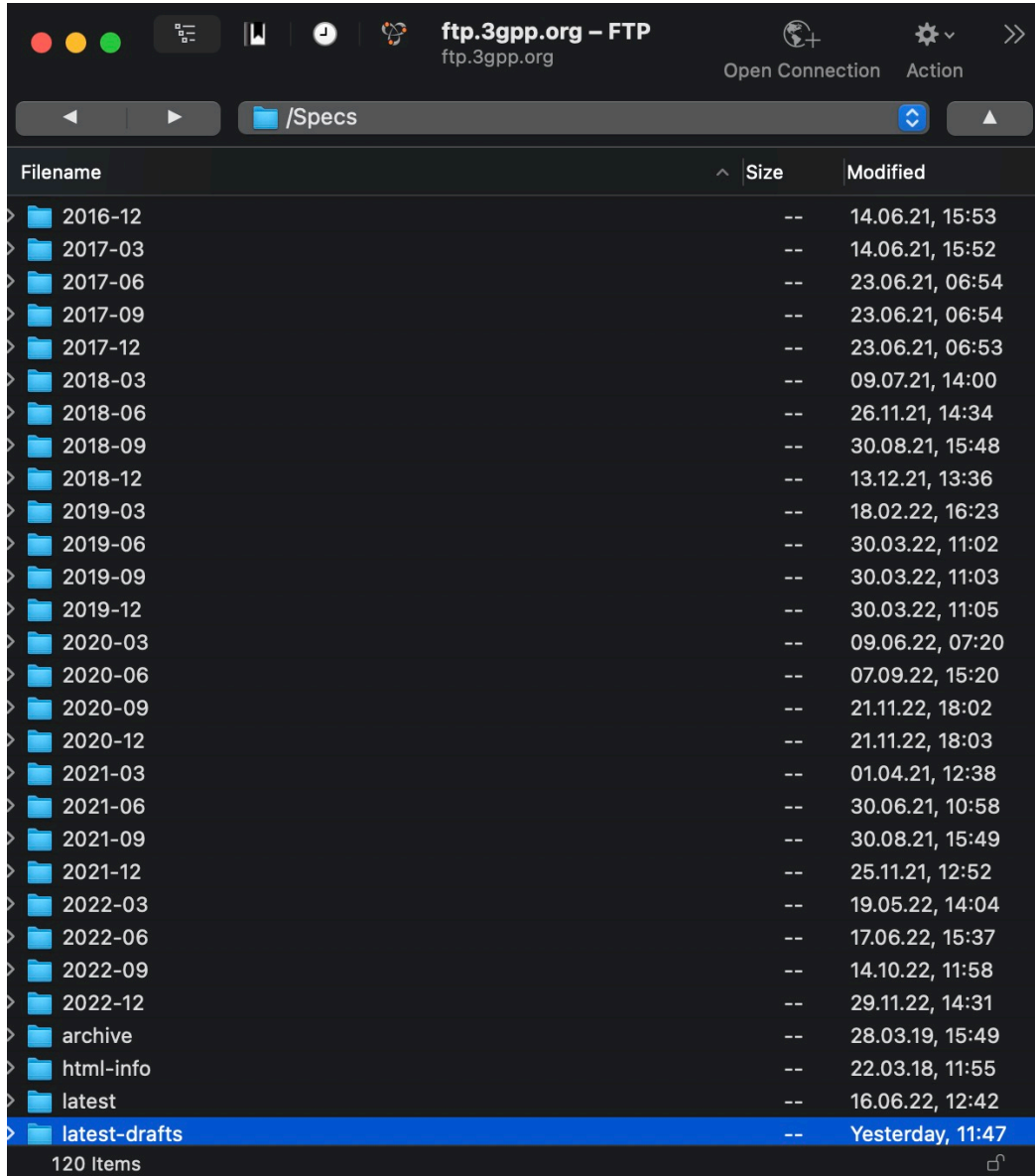
46. Alternatively, anyone interested can obtain a LISTSERV password for managing subscriptions interactively without email confirmations.

47. Each of 3GPP's member companies typically assigned one or more individuals to regularly participate in these email lists. Thus, not only did the general public have access to the emails in 3GPP's email archives, but some of the most interested members of the public—those working to develop standards for cellular telecommunication—personally received copies of such emails through their participation in the email lists.

48. By June 1999, 3GPP's email archives were well-known to persons in the cellular telecommunications industry as a source of public information and for technical specifications, proposals, meeting announcements, technical discussions and reports regarding industry standards and technological advances.

49. 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>:

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Filename	Size	Modified
> 2016-12	--	14.06.21, 15:53
> 2017-03	--	14.06.21, 15:52
> 2017-06	--	23.06.21, 06:54
> 2017-09	--	23.06.21, 06:54
> 2017-12	--	23.06.21, 06:53
> 2018-03	--	09.07.21, 14:00
> 2018-06	--	26.11.21, 14:34
> 2018-09	--	30.08.21, 15:48
> 2018-12	--	13.12.21, 13:36
> 2019-03	--	18.02.22, 16:23
> 2019-06	--	30.03.22, 11:02
> 2019-09	--	30.03.22, 11:03
> 2019-12	--	30.03.22, 11:05
> 2020-03	--	09.06.22, 07:20
> 2020-06	--	07.09.22, 15:20
> 2020-09	--	21.11.22, 18:02
> 2020-12	--	21.11.22, 18:03
> 2021-03	--	01.04.21, 12:38
> 2021-06	--	30.06.21, 10:58
> 2021-09	--	30.08.21, 15:49
> 2021-12	--	25.11.21, 12:52
> 2022-03	--	19.05.22, 14:04
> 2022-06	--	17.06.22, 15:37
> 2022-09	--	14.10.22, 11:58
> 2022-12	--	29.11.22, 14:31
> archive	--	28.03.19, 15:49
> html-info	--	22.03.18, 11:55
> latest	--	16.06.22, 12:42
> latest-drafts	--	Yesterday, 11:47

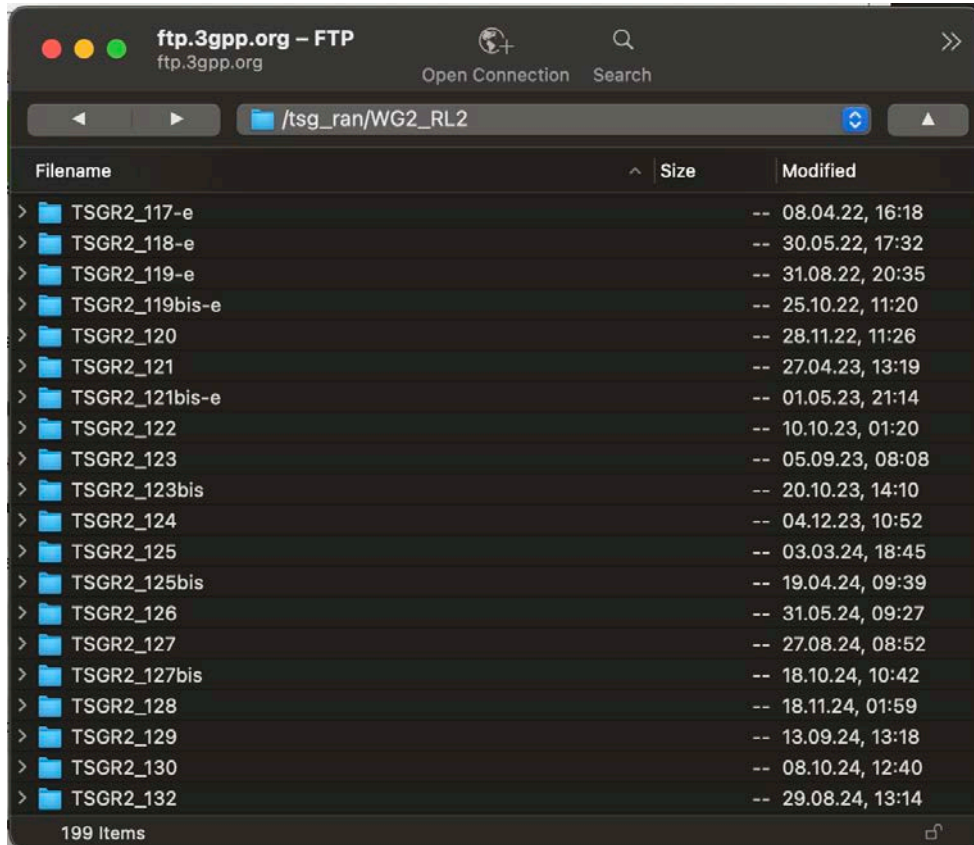
120 Items

50. 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

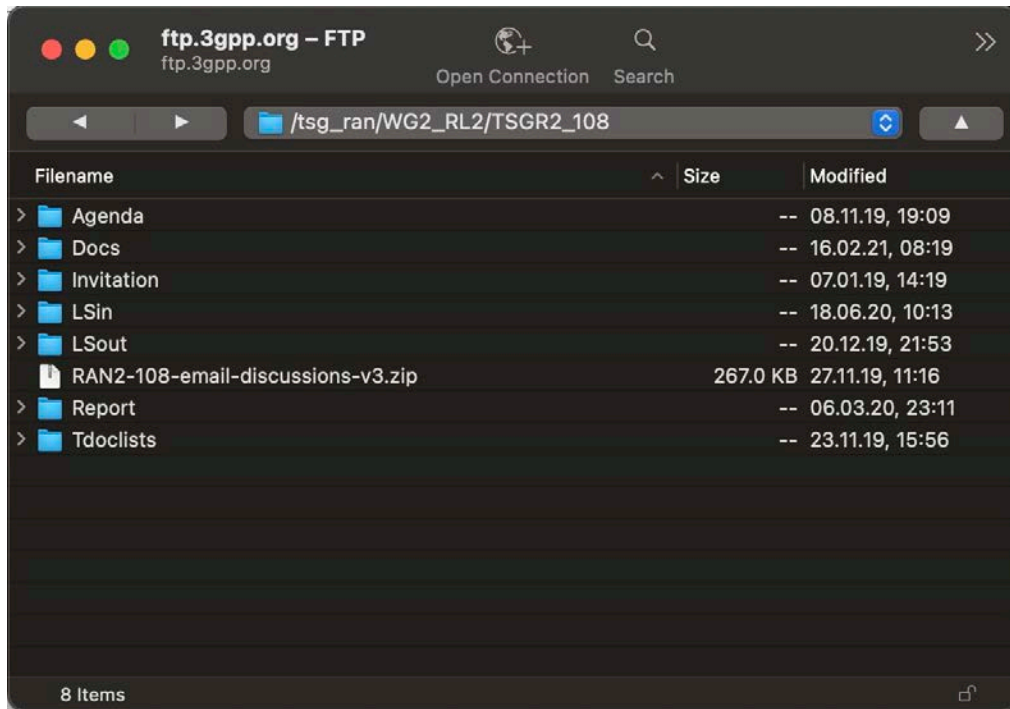
soon as the working group decides to submit the specification to the plenary meeting for information or approval). In many cases, the TDocs are also distributed on the email exploder of the working group prior to the meeting, making the TDocs available to all those subscribed to the email distribution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

51. 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.

52. 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:



53. 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):



54. 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.

55. 3GPP maintains a set of publicly accessible documents⁴ providing further details on its way of working:

⁴ All available from <https://www.3gpp.org/delegates-corner/3gpp-working-procedures>

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

B. Specific Documents

1. TDoc R2-020088 (Ericsson)

56. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1005 as a true and correct copy of 3GPP TDoc R2-020088, which represents a 3GPP document with the title "Mobility examples when the UE has an HS-PDSCH assignment". The document was authored by Ericsson and proposes signaling message sequences related to mobility.

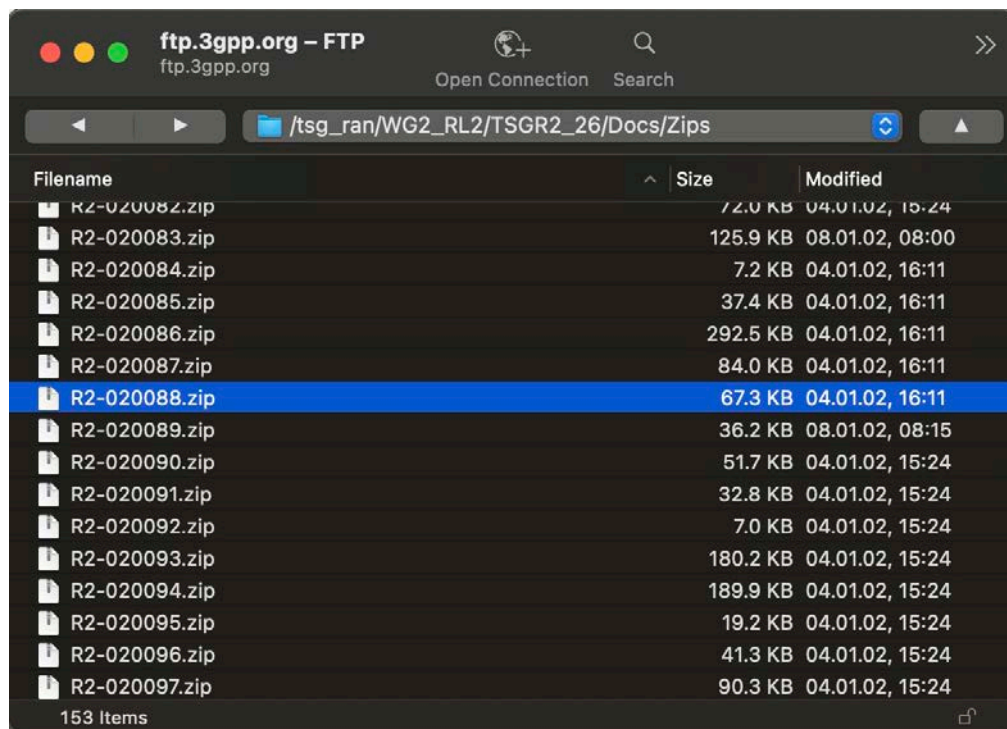
57. On its face, R2-020088 refers to the RAN WG2 meeting #26 held on January 7 – 11, 2002, in Sophia Antipolis, France. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, this information tells me that R2-020088 was available either prior to or during or shortly after that meeting to all attending 3GPP members and to the general public.

58. The public availability of the document is confirmed by the date stamp, January 4, 2002, shown on the historic 3GPP FTP server for the corresponding downloadable file ("R2-020088.zip"), as maintained by the Internet

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Archive at

https://web.archive.org/web/20031122122304/http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_26/Docs/Zips/. 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_26/Docs/Zips as shown in the screenshot below:



59. 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.

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60. In addition, metadata information for the downloaded and extracted TDoc file states a last Modified date of “4. January 2002,” as shown in the screenshot below.

1

3GPP TSG-RAN WG2#26 R2-020088
Sophia Antipolis, France, January 7 – 11, 2002

Agenda Item: 9.2.2
Source: Ericsson
Title: **Mobility examples when the UE has an HS-DSCH assignment**
Document for: Discussion and decision

1 Introduction

In [1], a categorisation of mobility related concepts and procedures have been proposed. This contribution illustrates a selection of these procedures as signalling message sequence examples. The message sequences are very similar to the sequences presently given in TS 25.303 and TS 25.931 for ordinary DCH handover cases.

One objective of this contribution is the identification of necessary modifications in the existing mobility procedures, which are implied by the incorporation of HS-DSCH in the CELL_DCH state. Section 2 includes a discussion of some important mobility aspects. In Section 3 of this contribution, we consider the following examples:

- Intra-Node B synchronised serving HS-DSCH cell change:
The serving HS-DSCH cell is changed without change of the active set. The same Node B controls source and target HS-DSCH cells.
- Inter-Node B synchronised serving HS-DSCH cell change during hard handover
The serving HS-DSCH cell is changed in combination with, e.g., an inter-frequency hard handover, at a given activation time. Source and target HS-DSCH cell are controlled by different Node Bs.
- Inter-Node B synchronised serving HS-DSCH cell change after active set update (radio link addition)
The serving HS-DSCH cell is changed subsequently after the addition of a new radio link to the active set. Source and target HS-DSCH cell are controlled by different Node Bs.

If agreement on the basic handover principles employed here can be achieved, it is straightforward to derive signalling message sequences for other conditions. The examples presented in the contribution are considered as a starting point to achieve a common understanding of the basic principles.

2 Discussion of mobility procedures

2.1 General aspects

Due to the similarity of DSCH and HS-DSCH it is straightforward to design the respective handover procedures alike.

In Release 99 and Release 4 support for the following DSCH handover scenarios is provided:

- Change of serving DSCH cell within the given active set;
- Hard handover comprised of following steps: DCH and DSCH resources are released in the source cell, a DCH is established in the target cell, DSCH is assigned in the new cell.

HS-DSCH handovers could be performed basically in the same way requiring only minor changes of the existing RRC connection mobility procedures in CELL_DCH state (i.e. Physical channel reconfiguration, Transport channel reconfiguration) as well as the respective NBAP/RNSAP procedures.

Due to existence of additional transmission queues in Node B MAC-bis, the question arises how to handle data contained in the buffers at handover. This issue is discussed further below.

2.2 Synchronised versus unsynchronised handover

The timing of synchronised and unsynchronised handover is illustrated Figure 1. With regard to HS-DSCH transmission and reception, the following notation is assumed:

t_{H} time instant where the handover decision in the network is made;

R2-020088 HS-DSCH MobilityExamples.doc

276 KB

Information[Show Less](#)

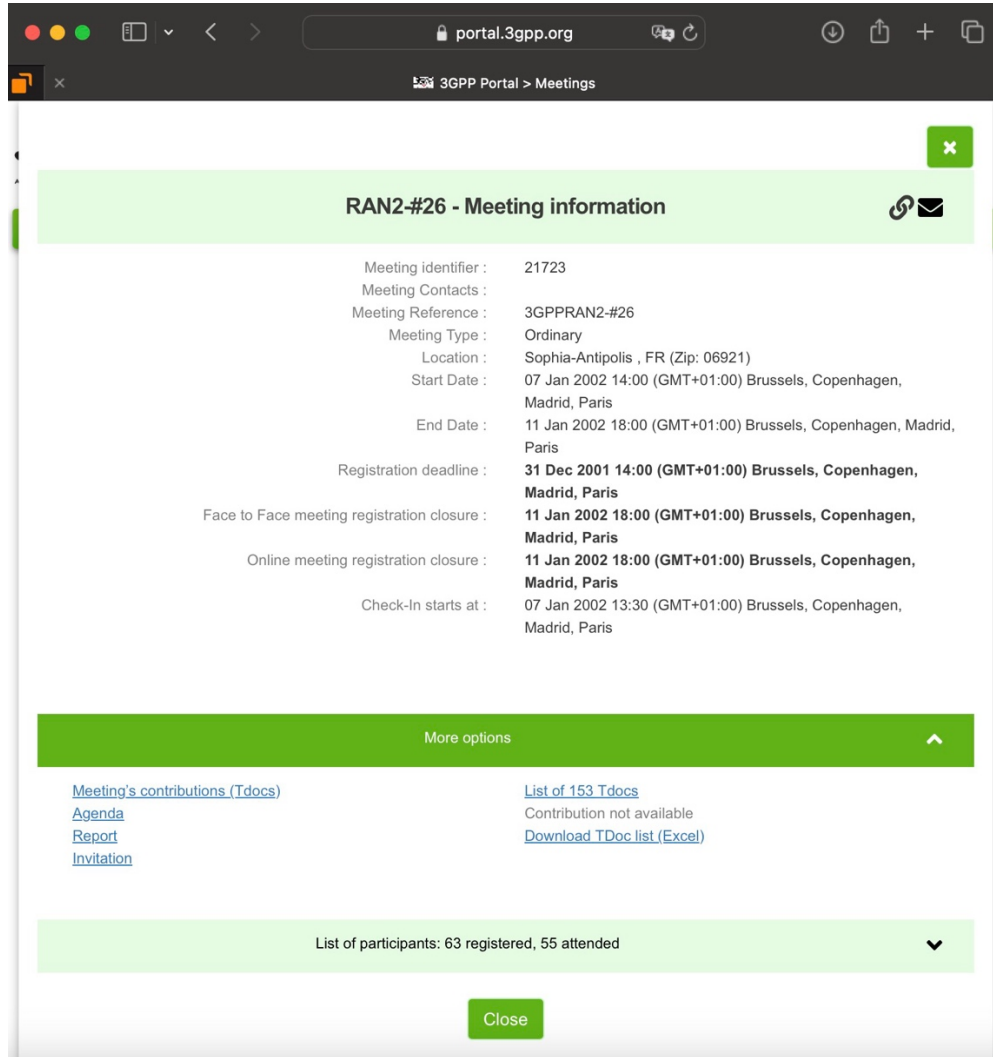
Created 4. January 2002 at 13:37

Modified 4. January 2002 at 13:37

61. This last modified date is consistent with the January 4, 2002, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

62. The final meeting report of the RAN WG2 meeting #26 held on January 7 – 11, 2002, in Sophia Antipolis, 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 55 individuals (out of 63 registered participants):

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63. The meeting report mentions R2-020088 on page 19 and page 38 which clearly indicates that the document was registered for this meeting. Furthermore, the document was presented and discussed (together with a related document R2-020100) as can be seen by the excerpt from page 19 below:

Mobility

R2-020088 Mobility examples when the UE has an HS-PDSCH assignment (Ericsson)

Joakim Bergström (Ericsson) presented this document.

Discussion: The intention was for this to be captured in 25.308 in section 3 (adding the missing 'serving'), as there was some NBAP information that would be less appropriate for 25.303.

Decision: The document was noted. The contents were agreed and would be merged with those in R2-020100 and put into 25.308.

R2-020100 HSDPA Mobility Procedures (Siemens)

Norbert Kroth (Siemens) presented this document.

Discussion: The proposal was very similar to the one in R2-020088.

Decision: The document was noted. The contents were agreed and would be merged with those in R2-020088 and put into 25.308.

64. Furthermore, the document was distributed via the 3GPP_TSG_RAN_WG2 email exploder on January 4, 2002, as shown in Appendix D. At that time this email exploder had around 972 subscribers as can be seen by the Internet Archive at <https://web.archive.org/web/20020604215730/http://list.etsi.org/>.

65. Thus, based on my personal knowledge and experience with ETSI's and 3GPP's standard business practices, Ex. 1005 is an authentic copy of 3GPP TDoc R2-020088 that was uploaded and made available via the 3GPP FTP server to the general public by January 4, 2002, at the latest.

2. TS 25.331 V5.5.0

66. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1006 as a true and correct copy of version 5.5.0 of technical specification 3GPP TS 25.331 ("3rd Generation Partnership Project; Technical

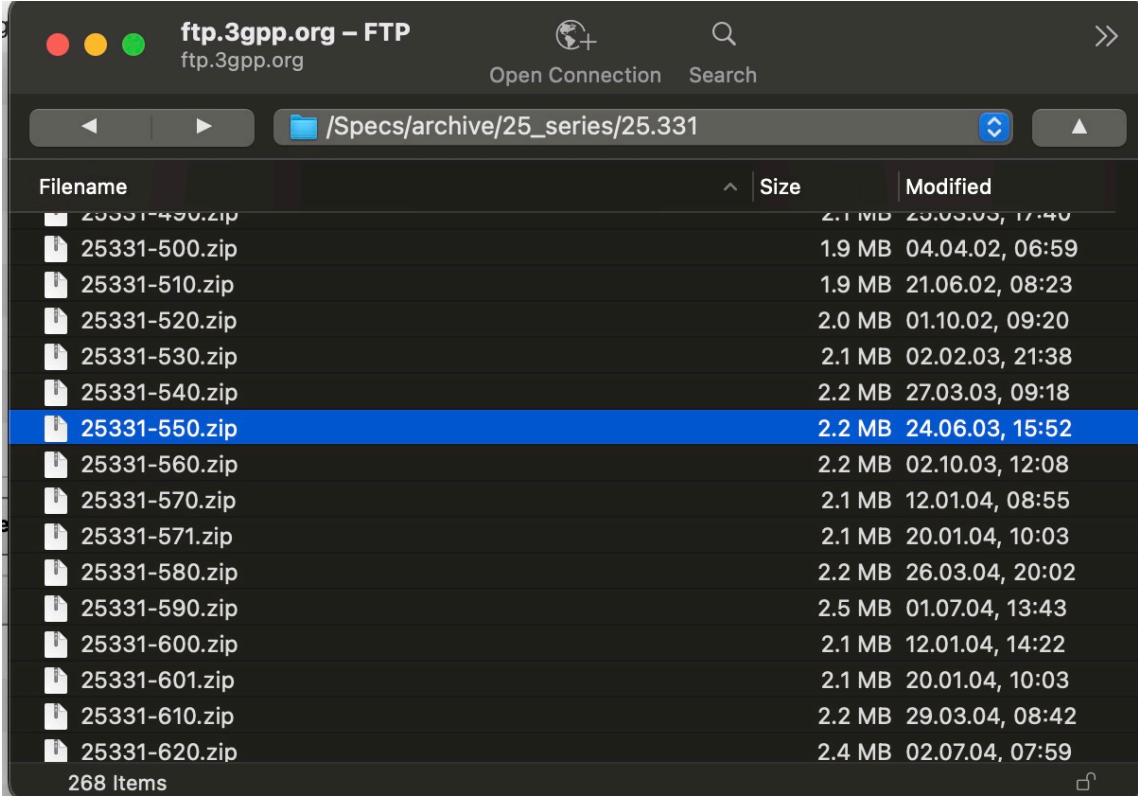
Specification Group Radio Access Network; Radio Resource Control (RRC); Protocol Specification (Release 5)”)⁵, which shows on its cover page “2003-06” as the year (2003) and month (June) during which this document was released by 3GPP.

67. The document was published and freely available on 3GPP’s FTP server by June 24, 2003. This is confirmed by the date stamp shown on the historic 3GPP FTP server for the corresponding downloadable file (“25331-550.zip”), as maintained by the Internet Archive at

https://web.archive.org/web/20030630060805/http://www.3gpp.org/ftp/Specs/archive/25_series/25.331/. 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/25_series/25.331, as shown by the screenshot below:

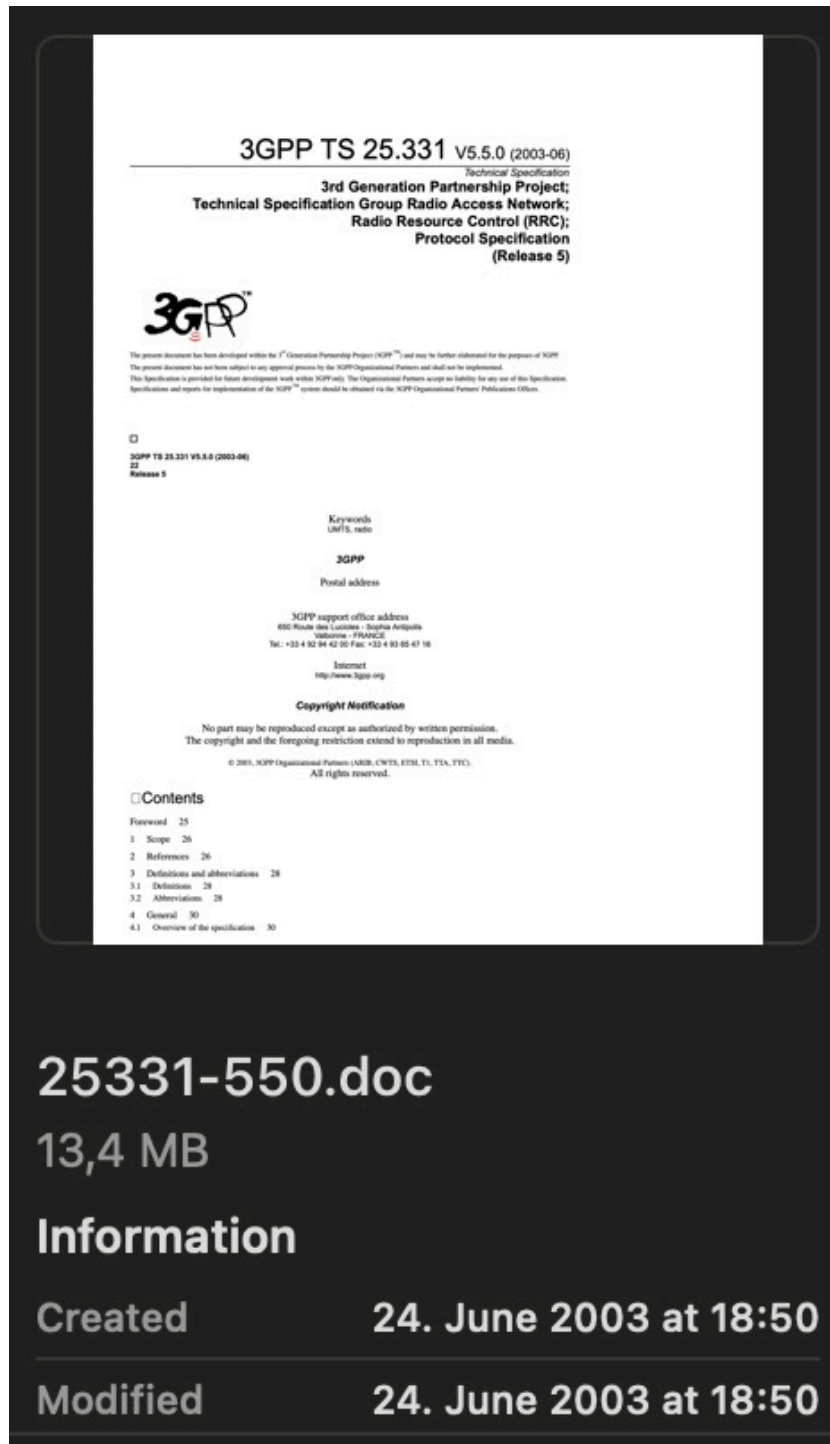
⁵ Page 1 and page 2 of the document are corrupted so that the title is only shown in Outline and Draft view of the MSWord version.



Filename	Size	Modified
25331-490.zip	2.1 MB	23.03.03, 17:40
25331-500.zip	1.9 MB	04.04.02, 06:59
25331-510.zip	1.9 MB	21.06.02, 08:23
25331-520.zip	2.0 MB	01.10.02, 09:20
25331-530.zip	2.1 MB	02.02.03, 21:38
25331-540.zip	2.2 MB	27.03.03, 09:18
25331-550.zip	2.2 MB	24.06.03, 15:52
25331-560.zip	2.2 MB	02.10.03, 12:08
25331-570.zip	2.1 MB	12.01.04, 08:55
25331-571.zip	2.1 MB	20.01.04, 10:03
25331-580.zip	2.2 MB	26.03.04, 20:02
25331-590.zip	2.5 MB	01.07.04, 13:43
25331-600.zip	2.1 MB	12.01.04, 14:22
25331-601.zip	2.1 MB	20.01.04, 10:03
25331-610.zip	2.2 MB	29.03.04, 08:42
25331-620.zip	2.4 MB	02.07.04, 07:59

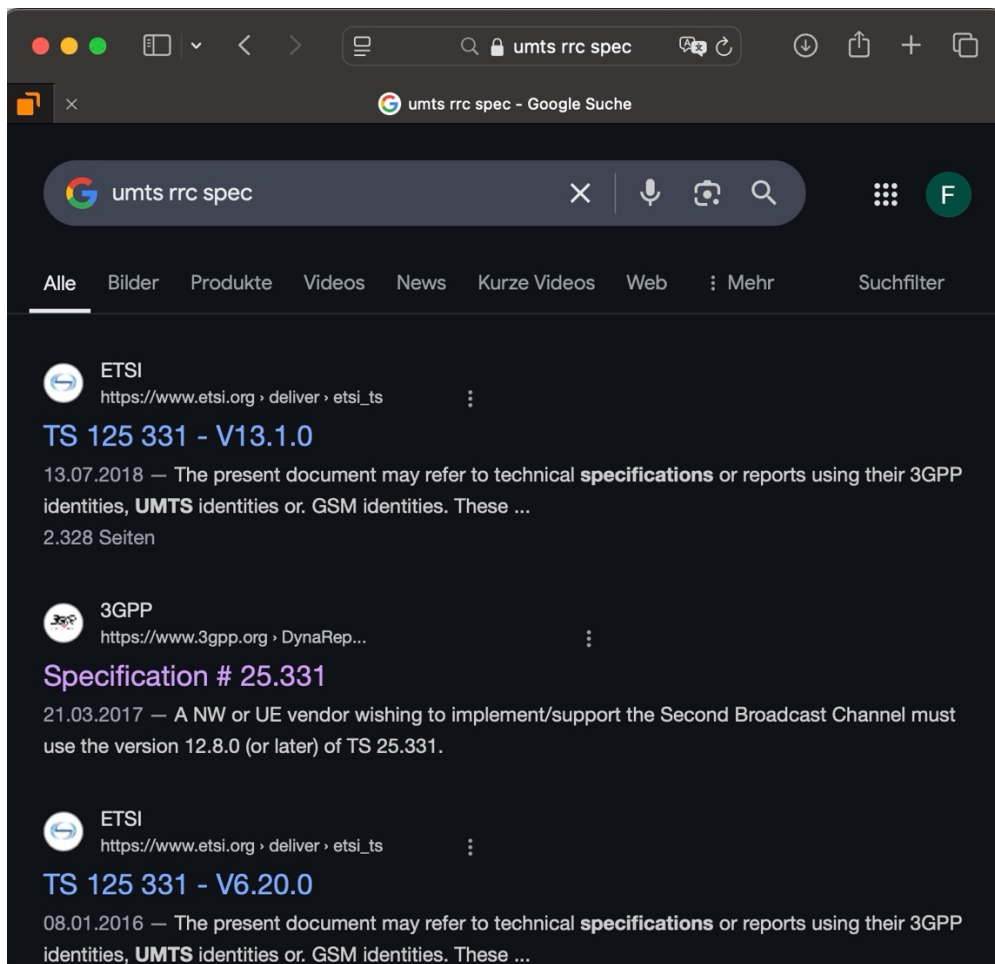
268 Items

68. In addition, metadata information for the downloaded and extracted specification file states a last Modified date of “24. June 2003”, as shown in the screenshot below:



69. This last modified date well aligned with the June 24, 2003, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

70. 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 “umts rrc spec” provides the TS number “25.331” as one of the top results as can be seen in the screenshot below:



71. Following the provided search result link “Specification # 25.331” leads to a 3GPP web page offering under the tab “Versions” download links to all versions of TS 25.331 including version 5.5.0, as shown by the screenshot below:

3GPP Portal

Specification # 25.331

General Versions Responsibility Related

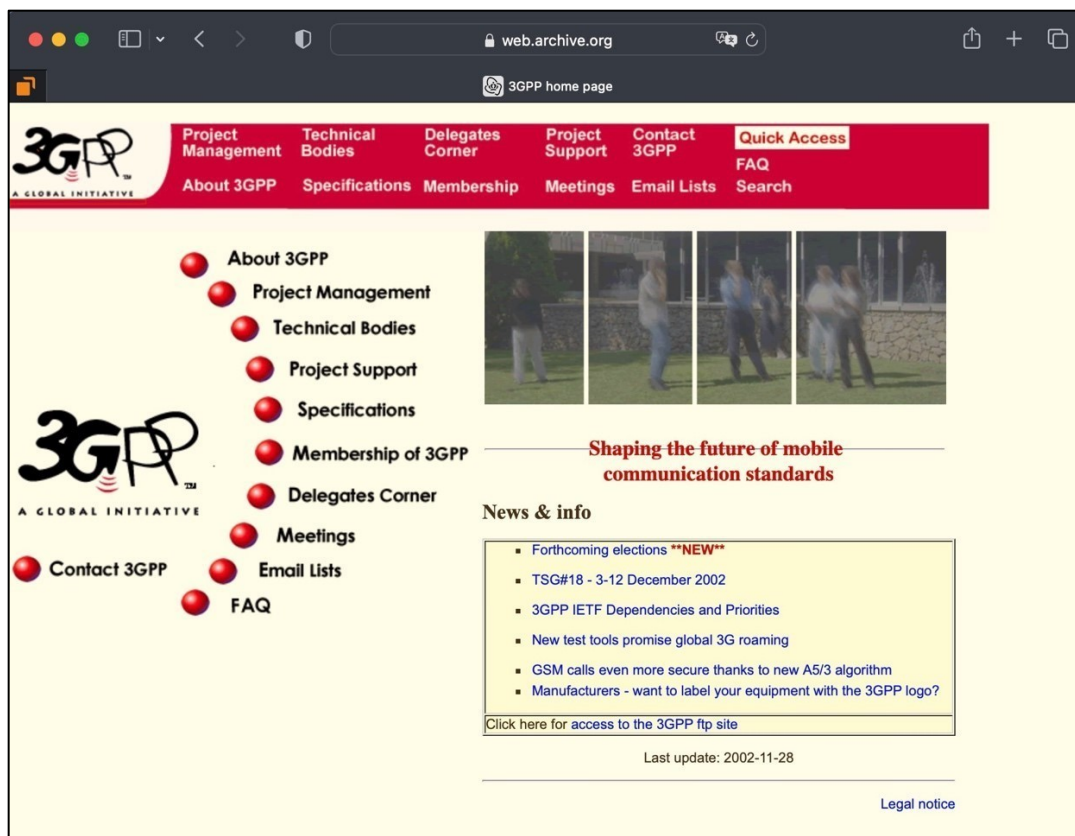
RAN#	Version	Date	ETSI	TDG	CR
RAN#27	5.12.0	2005-03-24			
RAN#26	5.11.0	2004-12-23			
RAN#25	5.10.0	2004-09-27			
RAN#24	5.9.0	2004-07-01			
RAN#23	5.8.0	2004-03-29			
RAN#22	5.7.1	2004-01-20			
RAN#22	5.7.0	2004-01-12			
RAN#21	5.6.0	2003-10-02			
RAN#20	5.5.0	2003-06-25			
RAN#19	5.4.0	2003-03-27			
RAN#18	5.3.0	2003-02-03			
RAN#17	5.2.0	2002-10-01			
RAN#16	5.1.0	2002-06-21			
RAN#15	5.0.0	2002-04-04			

72. 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 25.331, including version 5.5.0, for download.

73. The above search was performed at the time of writing this report. According to my personal experience, in June 2003 or around that timeframe it

would have been similarly straightforward to locate a path to download version 5.5.0 of TS 25.331.

74. By June 2003, in addition to a possible internet search, any interested person would have been able to locate TS 25.331 V5.5.0 via the 3GPP website in a number of ways. As one example, the 3GPP home page as of September 2002 already provided a link to specifications as can be seen below⁶:

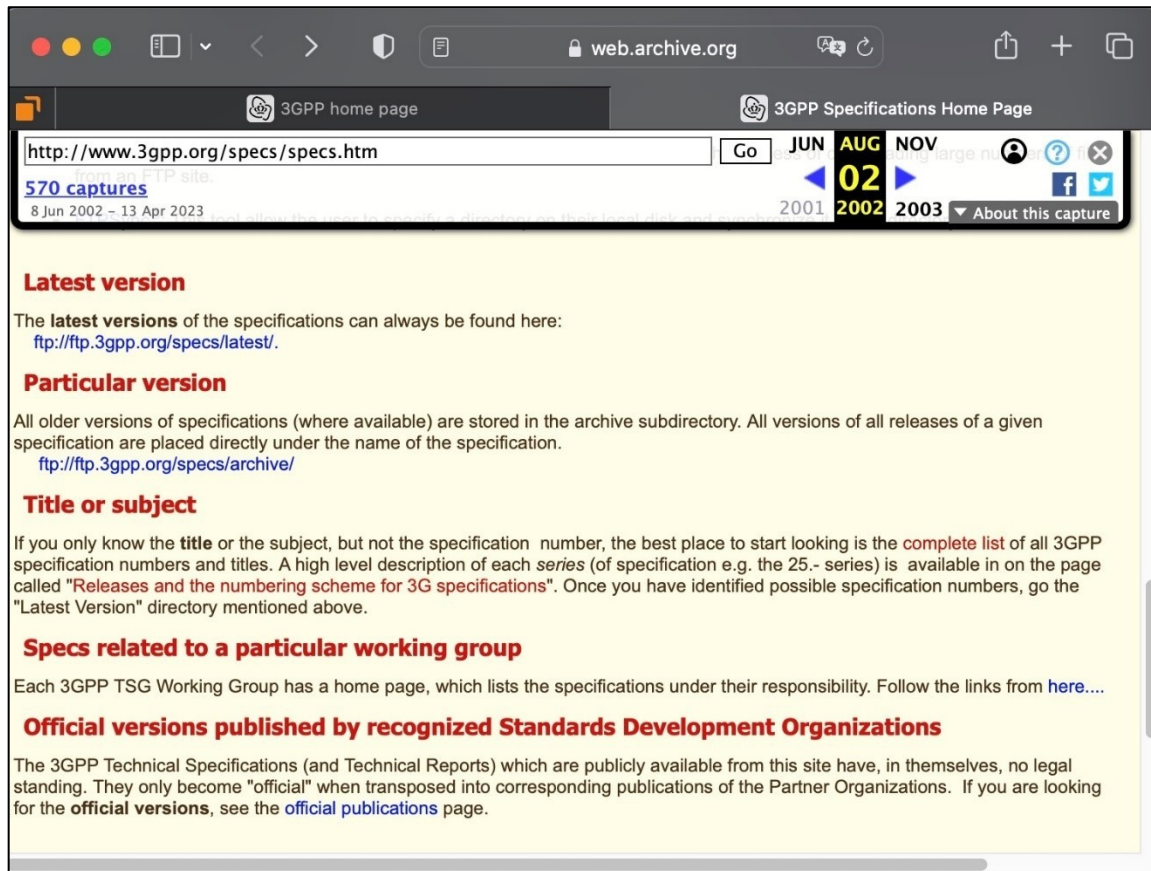


75. Clicking on the “Specifications” link provided a specifications webpage with various paths for locating specific specifications, such as “Latest

⁶ <https://web.archive.org/web/20020926134824/http://www.3gpp.org:80/>

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version”, “Title or subject”, and “Specs related to a particular working group,” as shown below:⁷



76. For example, the subjects of the individual specification series for the 3GPP 3G and UTMS standards were explained on 3GPP’s website by clicking on the “Releases and the numbering scheme for 3G specifications” link on the specifications webpage identified above.⁸ Then, the subjects of the individual

⁷ <https://web.archive.org/web/20020802092436/http://www.3gpp.org/specs/specs.htm>

⁸ <https://web.archive.org/web/20020802092436/http://www.3gpp.org/specs/specs.htm>

specification series were explained on the “Numbering scheme” 3GPP webpage, as shown below:⁹

3GPP Specifications - Numbering scheme

Spec download | Titles and spec numbers | Current version | Releases | Numbering scheme | Change Requests
Published specifications | Historical information | Work plan | TSG Working methods | Drafting rules | Delegates corner | ASN.1

All 3G and GSM specifications have a 3GPP specification number consisting of 4 or 5 digits. (e.g. 09.02 or 29.002). The first two digits define the series as listed in the table below. They are followed by 2 further digits for the 01 to 13 series or 3 further digits for the 21 to 55 series. The term "3G" means a 3GPP system using a UTRAN radio access network; the term "GSM" means a 3GPP system using a GERAN radio access network. (Thus "GSM" includes GPRS and EDGE features.)

The full title, specification number and latest version number for every specification can be found in the status list (see [main specs page](#)) and more information about terms such as R99 and Rel-4 can be found on the [Releases and phases](#) page.

A specification in the 21 to 35 series may apply either to 3G only or to GSM *and* 3G. A clue lies in the third digit, where a "0" indicates that it applies to both systems. For example, 29.002 applies to 3G and GSM systems whereas 25.101 and 25.201 apply only to 3G. Most specs in all other series apply only to GSM systems. However, as the spec numbering space has been used up, this guide is more frequently broken, and it is necessary to examine the information page for each spec (see the table below) or to check the lists in 01.01 / 41.101 (GSM) and 21.101 (3G) for the definitive specification sets for each system and each Release.

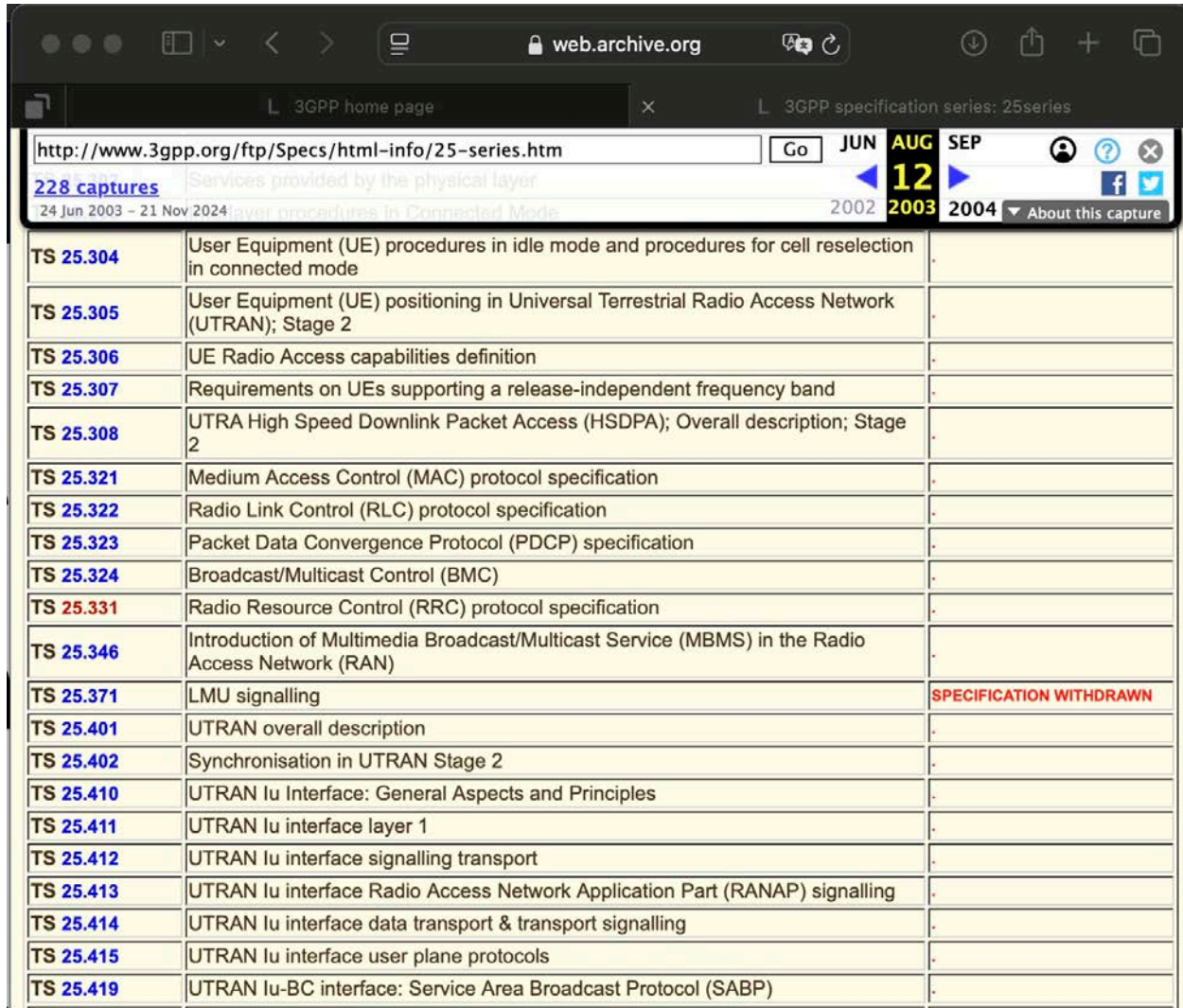
Subject of specification series	3G/GSM R99 and later	GSM only (Rel-4 and later)	GSM only (before Rel-4)
General information (<i>long defunct</i>)			00 series
Requirements	21 series	41 series	01 series
Service aspects ("stage 1")	22 series	42 series	02 series
Technical realization ("stage 2")	23 series	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
User Identity Module (SIM / USIM)	31 series	51 series	11 series
O&M	32 series	52 series	12 series
Access requirements and test specifications		13 series (1)	13 series (1)
Security aspects	33 series	(2)	(2)
SIM and test specifications	34 series	(2)	11 series
Security algorithms (3)	35 series	55 series	(4)

77. For instance, the radio aspects of the 3GPP UMTS standard are covered in the “25 series,” as shown above, and are further subdivided into separate sections

⁹ <https://web.archive.org/web/20030801071011/http://www.3gpp.org/specs/numbering.htm>

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or specifications. Following the “25 series” link led to a website¹⁰ listing all the 25-series specifications as can be seen below:



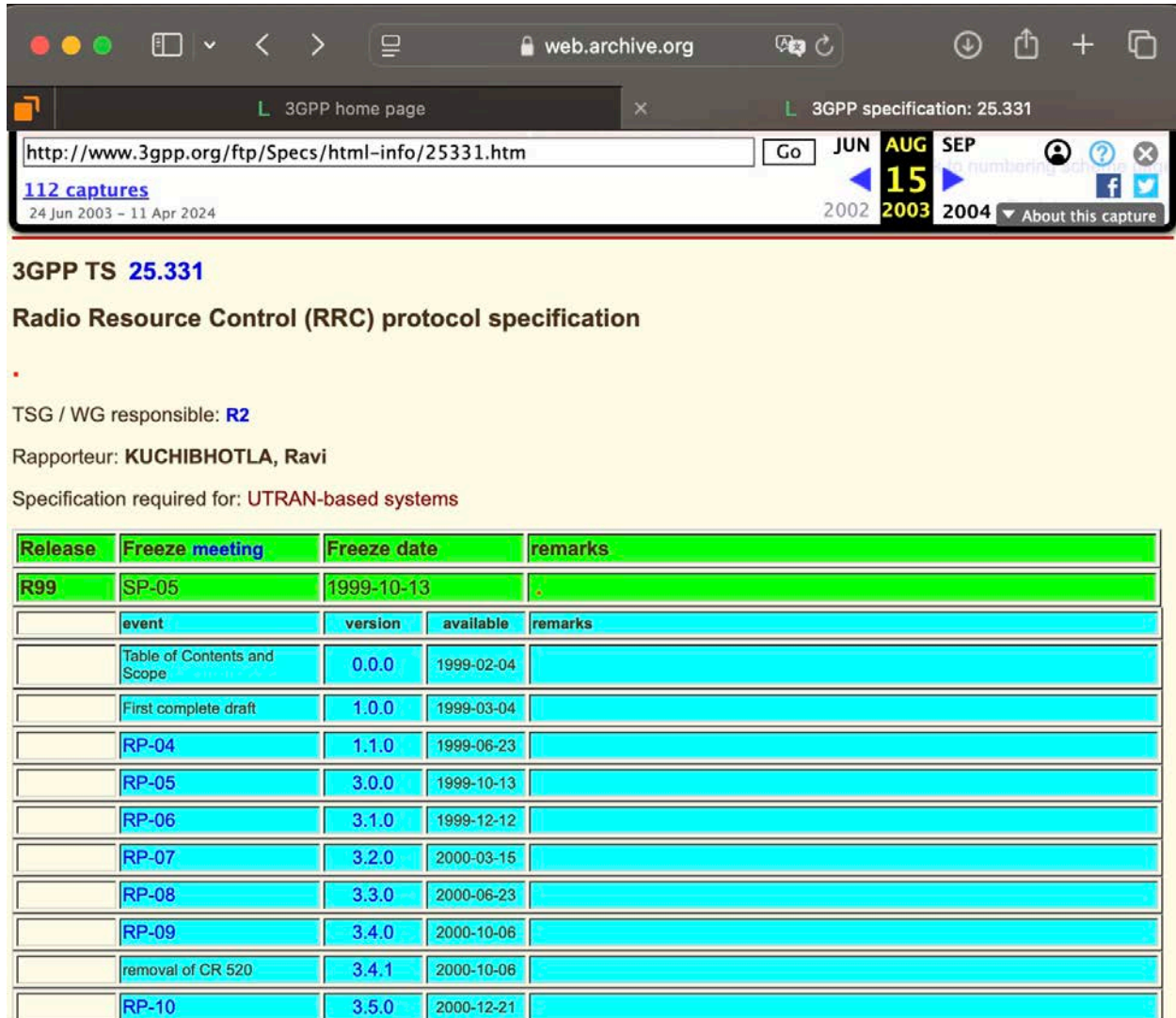
TS 25.304	User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode	-
TS 25.305	User Equipment (UE) positioning in Universal Terrestrial Radio Access Network (UTRAN); Stage 2	-
TS 25.306	UE Radio Access capabilities definition	-
TS 25.307	Requirements on UEs supporting a release-independent frequency band	-
TS 25.308	UTRA High Speed Downlink Packet Access (HSDPA); Overall description; Stage 2	-
TS 25.321	Medium Access Control (MAC) protocol specification	-
TS 25.322	Radio Link Control (RLC) protocol specification	-
TS 25.323	Packet Data Convergence Protocol (PDCP) specification	-
TS 25.324	Broadcast/Multicast Control (BMC)	-
TS 25.331	Radio Resource Control (RRC) protocol specification	-
TS 25.346	Introduction of Multimedia Broadcast/Multicast Service (MBMS) in the Radio Access Network (RAN)	-
TS 25.371	LMU signalling	SPECIFICATION WITHDRAWN
TS 25.401	UTRAN overall description	-
TS 25.402	Synchronisation in UTRAN Stage 2	-
TS 25.410	UTRAN Iu Interface: General Aspects and Principles	-
TS 25.411	UTRAN Iu interface layer 1	-
TS 25.412	UTRAN Iu interface signalling transport	-
TS 25.413	UTRAN Iu interface Radio Access Network Application Part (RANAP) signalling	-
TS 25.414	UTRAN Iu interface data transport & transport signalling	-
TS 25.415	UTRAN Iu interface user plane protocols	-
TS 25.419	UTRAN Iu-BC interface: Service Area Broadcast Protocol (SABP)	-

78. A search by the subject matter “radio resource control” would have revealed that TS 25.331 is the relevant specification, and clicking on this TS number

¹⁰ <https://web.archive.org/web/20030812072205/http://www.3gpp.org/ftp/Specs/html-info/25-series.htm>

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would have opened the following website¹¹ from where it was possible to download all available versions of TS 25.331 including version 5.5.0:



3GPP TS 25.331

Radio Resource Control (RRC) protocol specification

TSG / WG responsible: **R2**

Rapporteur: **KUCHIBHOTLA, Ravi**

Specification required for: **UTRAN-based systems**

Release	Freeze meeting	Freeze date	remarks
R99	SP-05	1999-10-13	
	event	version	available
	Table of Contents and Scope	0.0.0	1999-02-04
	First complete draft	1.0.0	1999-03-04
	RP-04	1.1.0	1999-06-23
	RP-05	3.0.0	1999-10-13
	RP-06	3.1.0	1999-12-12
	RP-07	3.2.0	2000-03-15
	RP-08	3.3.0	2000-06-23
	RP-09	3.4.0	2000-10-06
	removal of CR 520	3.4.1	2000-10-06
	RP-10	3.5.0	2000-12-21

¹¹ <https://web.archive.org/web/20030815090428/http://www.3gpp.org/ftp/Specs/html-info/25331.htm>

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	RP-15	4.4.0	2002-03-25	
	RP-16	4.5.0	2002-06-20	
	RP-17	4.6.0	2002-09-20	Do not use this version: contains wrong ASN.1
	Misimplemented RP-17 CR	4.7.0	2002-09-23	v4.6.0 omitted ASN.1 in error
	RP-18	4.8.0	2003-02-03	
	RP-19	4.9.0	2003-03-27	
	RP-20	4.10.0	2003-06-25	
Rel-5	RP-15	2002-03-08		
	event	version	available	remarks
	RP-15	5.0.0	2002-04-04	
	RP-16	5.1.0	2002-06-21	
	RP-17	5.2.0	2002-10-01	
	RP-18	5.3.0	2003-02-03	
	RP-19	5.4.0	2003-03-27	
	RP-20	5.5.0	2003-06-25	

Change Requests for this spec: [click here](#).

Genealogy of this spec:

antecedent(s)	this spec	descendant(s)
(no antecedents)	25.331	(no descendants)

page last updated: 2003-07-31 17:06:11

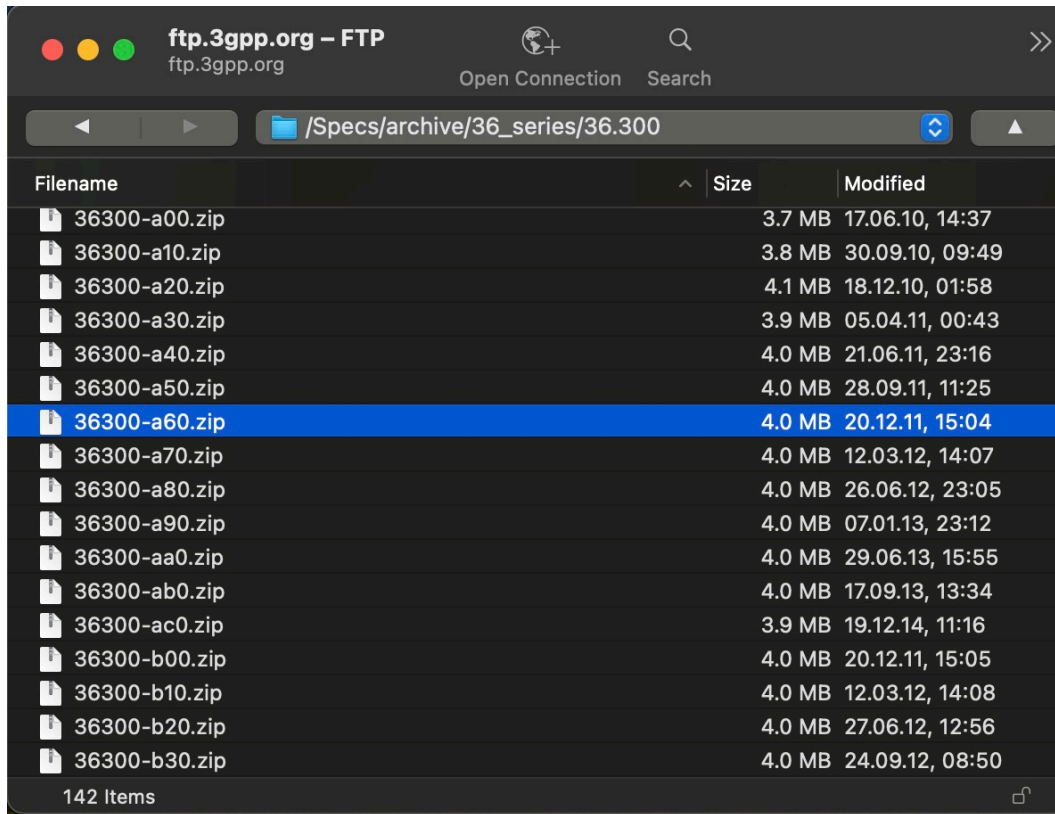
79. The above example illustrates that in 2003 it was straightforward for anyone interested without prior knowledge of the TS number to discover that TS 25.331 related to radio aspects of the 3G standard, specifically radio resource control, and that it was easy to find and to download the document. The above example was one of several possible paths to locate TS 25.331 V5.5.0 in 2003.

80. 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 June 24, 2003, at the latest.

3. TS 36.300 V10.6.0

81. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1008 as a true and correct copy of version 10.6.0 of technical specification 3GPP TS 36.300 ("Technical Specification Group (TSG) Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2 (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.

82. 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 ("36300-a6.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20140714052548/http://3gpp.org/ftp/specs/archive/36_series/36.300/. This information is also shown on the date stamp for the present-day listing of the same document on the 3GPP FTP server at https://www.3gpp.org/ftp/Specs/archive/36_series/36.300/, as shown by the screenshot below:

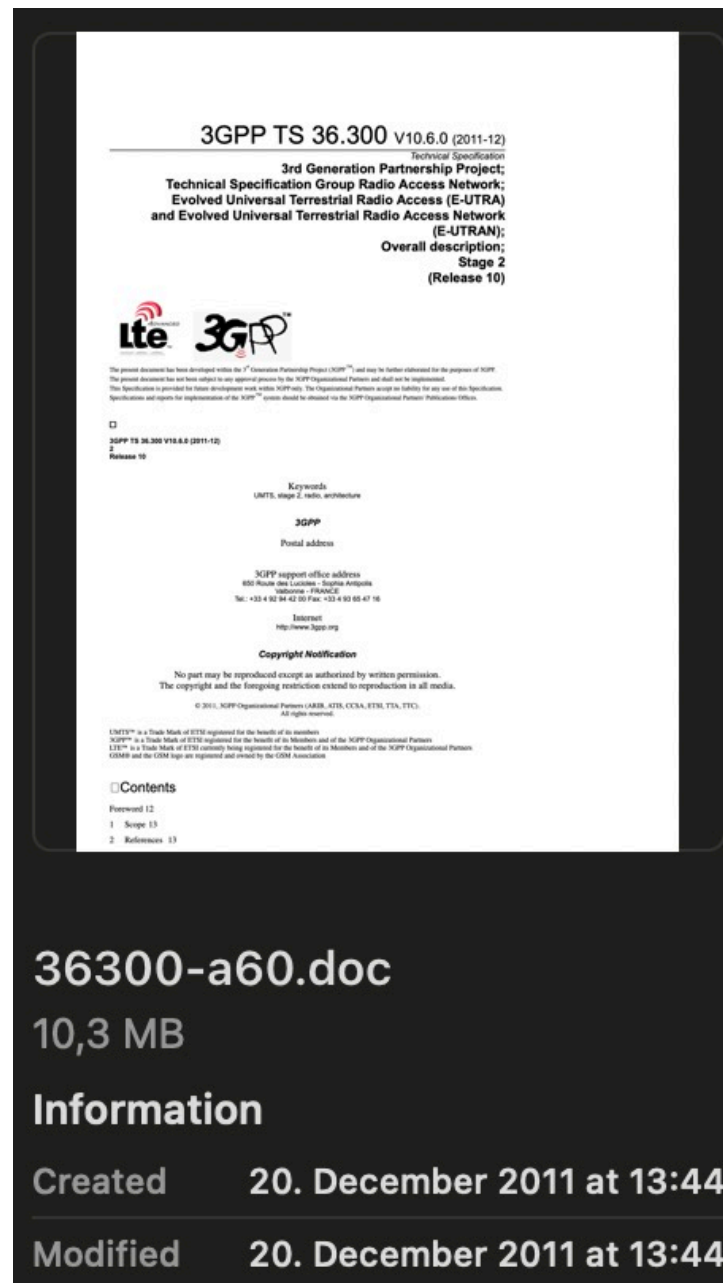


The screenshot shows an FTP client window titled "ftp.3gpp.org – FTP" with the address bar displaying "/Specs/archive/36_series/36.300". The file list is as follows:

Filename	Size	Modified
36300-a00.zip	3.7 MB	17.06.10, 14:37
36300-a10.zip	3.8 MB	30.09.10, 09:49
36300-a20.zip	4.1 MB	18.12.10, 01:58
36300-a30.zip	3.9 MB	05.04.11, 00:43
36300-a40.zip	4.0 MB	21.06.11, 23:16
36300-a50.zip	4.0 MB	28.09.11, 11:25
36300-a60.zip	4.0 MB	20.12.11, 15:04
36300-a70.zip	4.0 MB	12.03.12, 14:07
36300-a80.zip	4.0 MB	26.06.12, 23:05
36300-a90.zip	4.0 MB	07.01.13, 23:12
36300-aa0.zip	4.0 MB	29.06.13, 15:55
36300-ab0.zip	4.0 MB	17.09.13, 13:34
36300-ac0.zip	3.9 MB	19.12.14, 11:16
36300-b00.zip	4.0 MB	20.12.11, 15:05
36300-b10.zip	4.0 MB	12.03.12, 14:08
36300-b20.zip	4.0 MB	27.06.12, 12:56
36300-b30.zip	4.0 MB	24.09.12, 08:50

The status bar at the bottom indicates "142 Items".

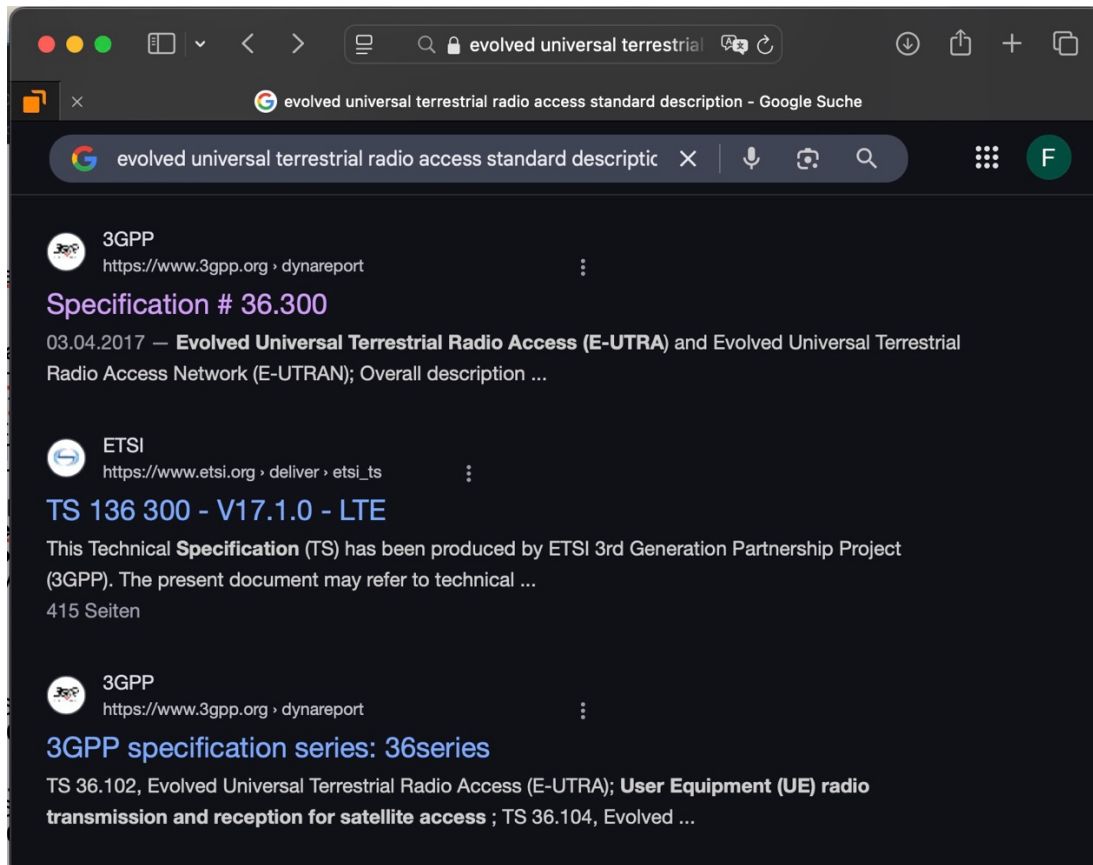
83. In addition, metadata information for the downloaded and extracted specification file states a last modified date of “20. December 2011”, as shown in the screenshot below:



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

85. Furthermore, the document was announced by the RAN WG 2 secretary via the 3GPP_TSG_RAN_WG2 email exploder as available for download from the 3GPP FTP server on December 22, 2011, as shown in Appendix E. At about that time, this email exploder had around 900 subscribers, as can be seen by the Internet Archive at <https://web.archive.org/web/20120309181952/http://list.etsi.org:80/>.

86. 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 “evolved universal terrestrial radio access standard description” provides the TS number “36.300” as one of the top results, as can be seen in the screenshot below:



87. Following the provided search result link “Specification # 36.300” leads to a 3GPP web page offering under the tab “Versions” download links to all versions of TS 36.300 including version 10.6.0, as shown by the screenshot below:

The screenshot shows the 3GPP Portal website. The browser address bar displays `portal.3gpp.org`. The page title is "Specification # 36.300". The navigation tabs are "General", "Versions", "Responsibility", and "Related". The "Versions" tab is selected, and a red box highlights "Specification #: 36.300".

Under the "Versions" tab, there are two sections: "Release 10(Spec is UCC for this Release)" and "Release 9(Spec is UCC for this Release)". The "Release 10" section has a "Latest Remark: (2015-01-22)".

Meetings	Version	Upload date	Comment
RAN#66	10.12.0	2015-01-05	
RAN#61	10.11.0	2013-09-19	
RAN#60	10.10.0	2013-07-03	
RAN#58	10.9.0	2013-01-08	
RAN#56	10.8.0	2012-07-02	
RAN#55	10.7.0	2012-03-14	
RAN#54	10.6.0	2011-12-22	
RAN#53	10.5.0	2011-10-03	
RAN#52	10.4.0	2011-06-24	
RAN#51	10.3.0	2011-04-05	
RAN#50	10.2.0	2010-12-21	
RAN#49	10.1.0	2010-10-04	
RAN#48	10.0.0	2010-06-18	

Below the "Release 10" section is the "Release 9" section, which has a "Latest Remark:" field. It also contains a table of versions, with the first row showing "RAN#58" and "9.10.0" from "2013-01-08".

At the bottom left of the page, there is a green "Exit" button.

88. 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 36.300, including version 10.6.0, for download.

89. The above search was performed at the time of writing this report. According to my personal experience, similar searches done in December 2011 or around that timeframe would have similarly provided the path to download version 10.6.0 of TS 36.300.

90. By December 2011, in addition to a possible internet search, any interested person would have been able to locate TS 36.300 V10.6.0 via the 3GPP website in a number of ways. As one example, the 3GPP home page from 2011 provided a link to specifications as can be seen below¹²:

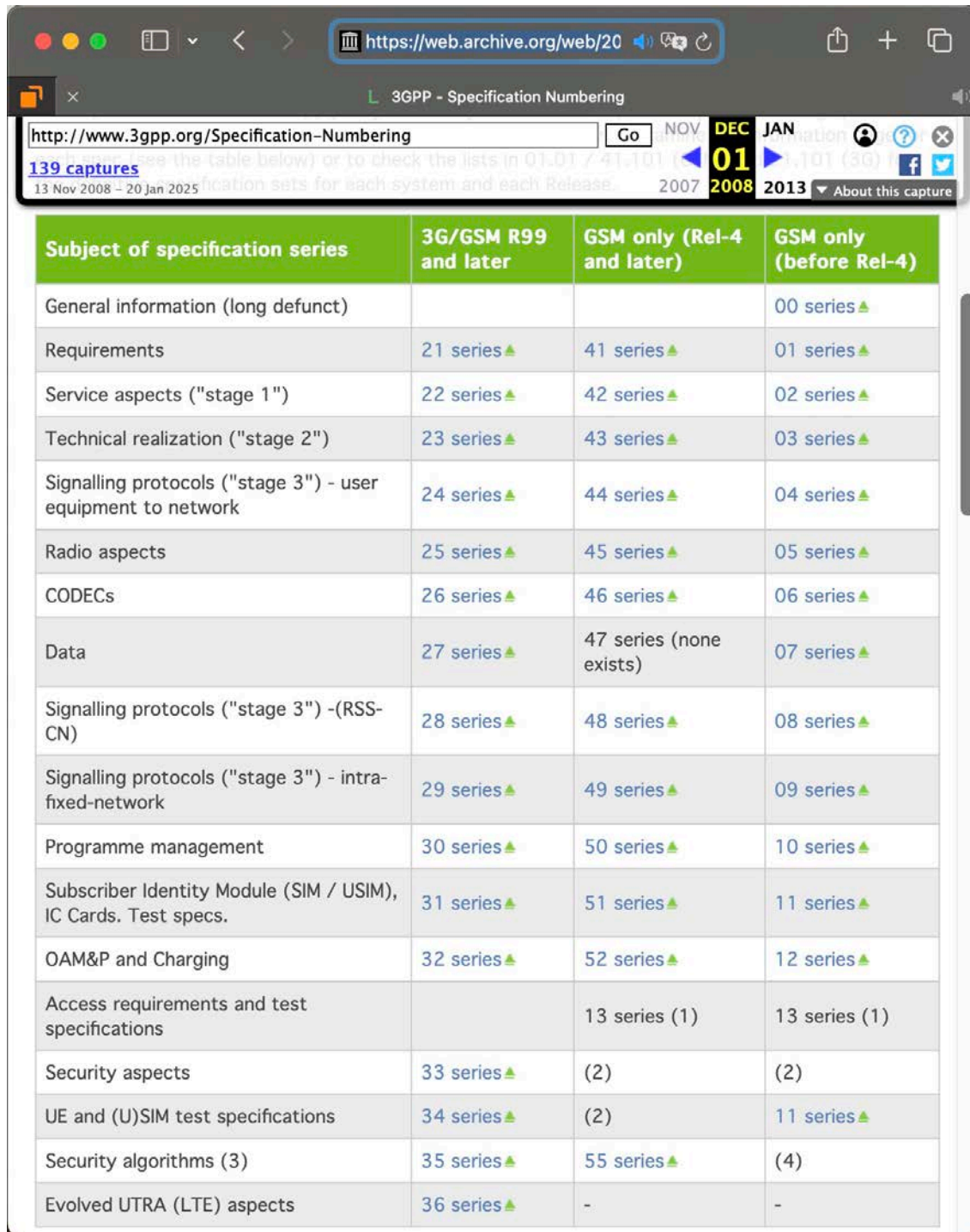
¹² <https://web.archive.org/web/20110211204835/http://3gpp.org/>



91. 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 above¹³, as shown below:¹⁴

¹³ 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.

¹⁴ <https://web.archive.org/web/20081201021150/http://www.3gpp.org:80/Specification-Numbering>

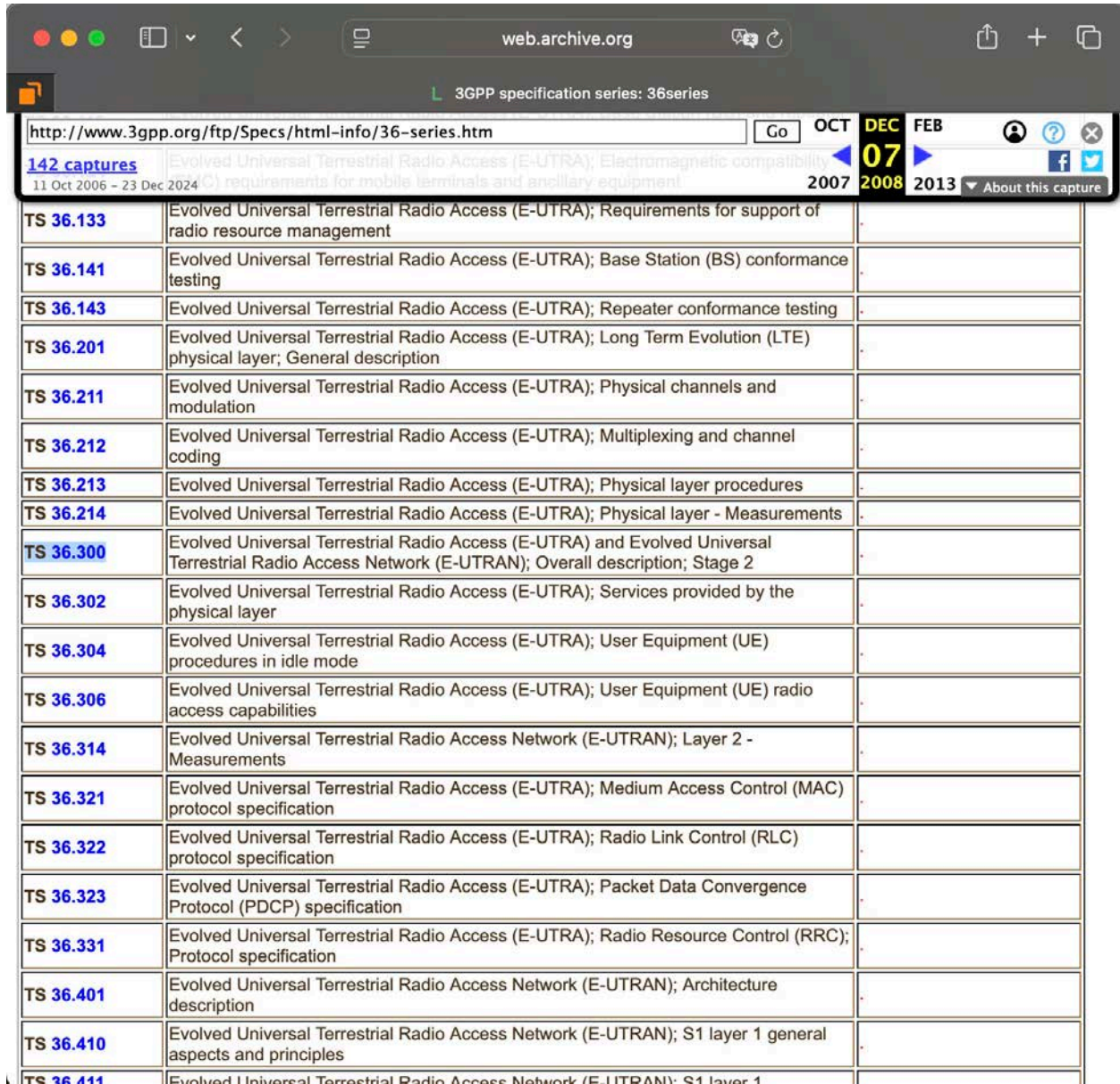


Subject of specification series	3G/GSM R99 and later	GSM only (Rel-4 and later)	GSM only (before Rel-4)
General information (long defunct)			00 series ▲
Requirements	21 series ▲	41 series ▲	01 series ▲
Service aspects ("stage 1")	22 series ▲	42 series ▲	02 series ▲
Technical realization ("stage 2")	23 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 ▲	-	-

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

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specifications. Following the “36 series” link led to a website¹⁵ listing all the 36-series specifications as can be seen below:



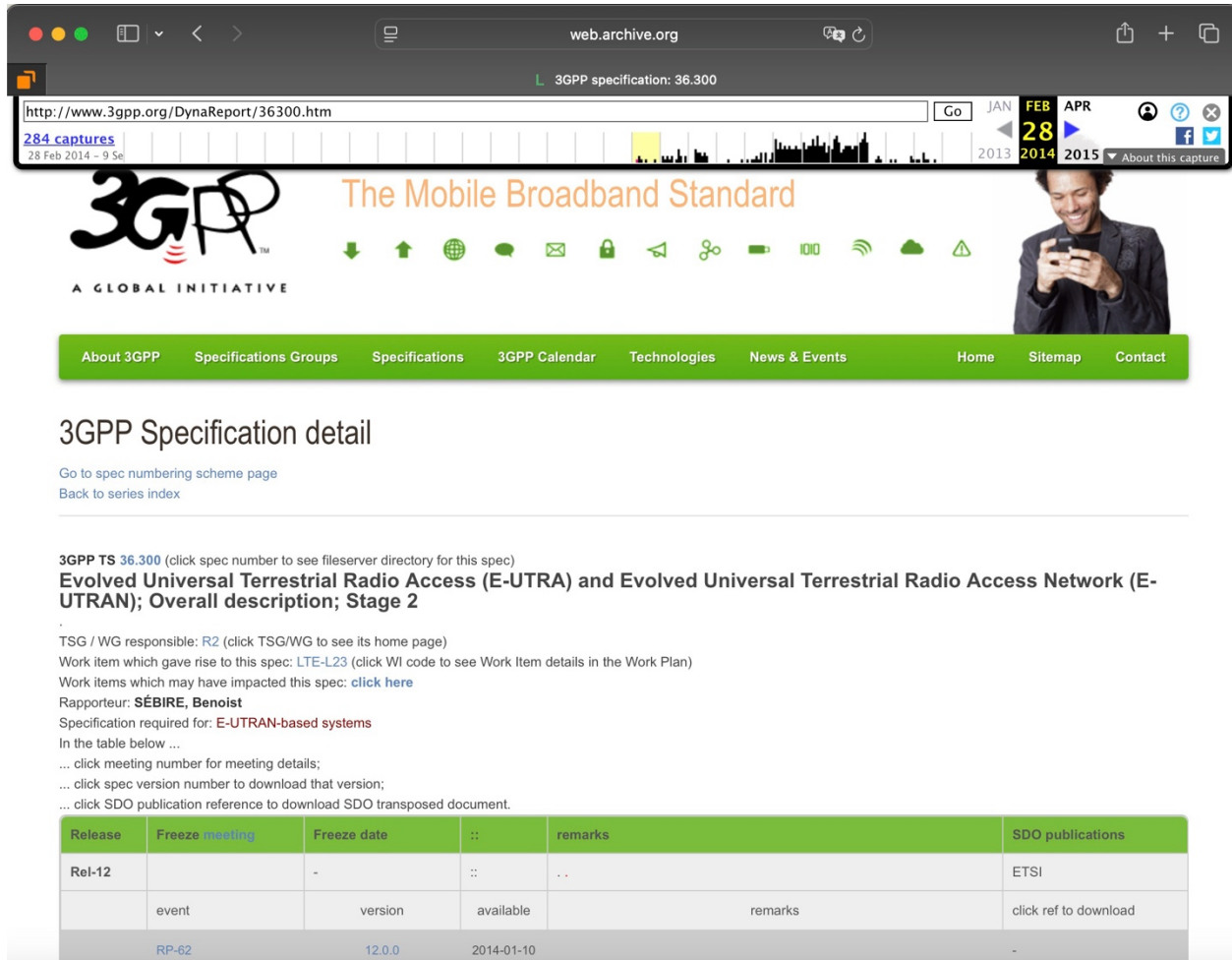
TS 36.133	Evolved Universal Terrestrial Radio Access (E-UTRA); Requirements for support of radio resource management	*
TS 36.141	Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) conformance testing	*
TS 36.143	Evolved Universal Terrestrial Radio Access (E-UTRA); Repeater conformance testing	*
TS 36.201	Evolved Universal Terrestrial Radio Access (E-UTRA); Long Term Evolution (LTE) physical layer; General description	*
TS 36.211	Evolved Universal Terrestrial Radio Access (E-UTRA); Physical channels and modulation	*
TS 36.212	Evolved Universal Terrestrial Radio Access (E-UTRA); Multiplexing and channel coding	*
TS 36.213	Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures	*
TS 36.214	Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer - Measurements	*
TS 36.300	Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2	*
TS 36.302	Evolved Universal Terrestrial Radio Access (E-UTRA); Services provided by the physical layer	*
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	*

93. A search by the subject matter “overall description” would have revealed that TS 36.300 is the relevant specification, and clicking on this TS number

¹⁵ <https://web.archive.org/web/20081207063329/http://www.3gpp.org/ftp/Specs/html-info/36-series.htm>

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would have opened the following website¹⁶ from where it was possible to download all available versions of TS 36.300 including version 10.6.0:



The screenshot shows a web browser window displaying the 3GPP website. The address bar shows the URL <http://www.3gpp.org/DynaReport/36300.htm>. The page features the 3GPP logo and the tagline "The Mobile Broadband Standard". Below the header, there is a navigation menu with links: About 3GPP, Specifications Groups, Specifications, 3GPP Calendar, Technologies, News & Events, Home, Sitemap, and Contact. The main content area is titled "3GPP Specification detail". It includes links to the specification scheme page and the series index. The specification is identified as "3GPP TS 36.300 (click spec number to see fileservers directory for this spec)" and is titled "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2". It lists the TSG / WG responsible as R2, the work item as LTE-L23, and the rapporteur as SÉBIRE, Benoist. The specification is required for E-UTRAN-based systems. A table below provides details about the release, freeze meeting, freeze date, version, and SDO publications.

Release	Freeze meeting	Freeze date	::	remarks	SDO publications
Rel-12		-	::	-	ETSI
	event	version	available	remarks	click ref to download
RP-62		12.0.0	2014-01-10		-

¹⁶ <https://web.archive.org/web/20140228134853/http://www.3gpp.org/DynaReport/36300.htm>

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Rel-11	SP-57	2012-09-12	::	..	ETSI
	event	version	available	remarks	click ref to download
	RP-62	11.8.0	2014-01-07		RTS/TSGR-0236300vb80
	RP-61	11.7.0	2013-09-19		RTS/TSGR-0236300vb70
	RP-60	11.6.0	2013-07-08		RTS/TSGR-0236300vb60
	RP-59	11.5.0	2013-03-18		RTS/TSGR-0236300vb50
	RP-58	11.4.0	2013-01-03		RTS/TSGR-0236300vb40
	RP-57	11.3.0	2012-09-26		RTS/TSGR-0236300vb30
	RP-56	11.2.0	2012-07-02		-
	RP-55	11.1.0	2012-03-14		-
	RP-54	11.0.0	2011-12-22		-
Rel-10	SP-51	2011-03-23	::	..	ETSI
	event	version	available	remarks	click ref to download
	RP-61	10.11.0	2013-09-19		RTS/TSGR-0236300vab0
	RP-60	10.10.0	2013-07-03		RTS/TSGR-0236300vaa0
	RP-58	10.9.0	2013-01-08		RTS/TSGR-0236300va90
	RP-56	10.8.0	2012-07-02		RTS/TSGR-0236300va80
	RP-55	10.7.0	2012-03-14		RTS/TSGR-0236300va70
	RP-54	10.6.0	2011-12-22		RTS/TSGR-0236300va60
	RP-53	10.5.0	2011-10-03		RTS/TSGR-0236300va50

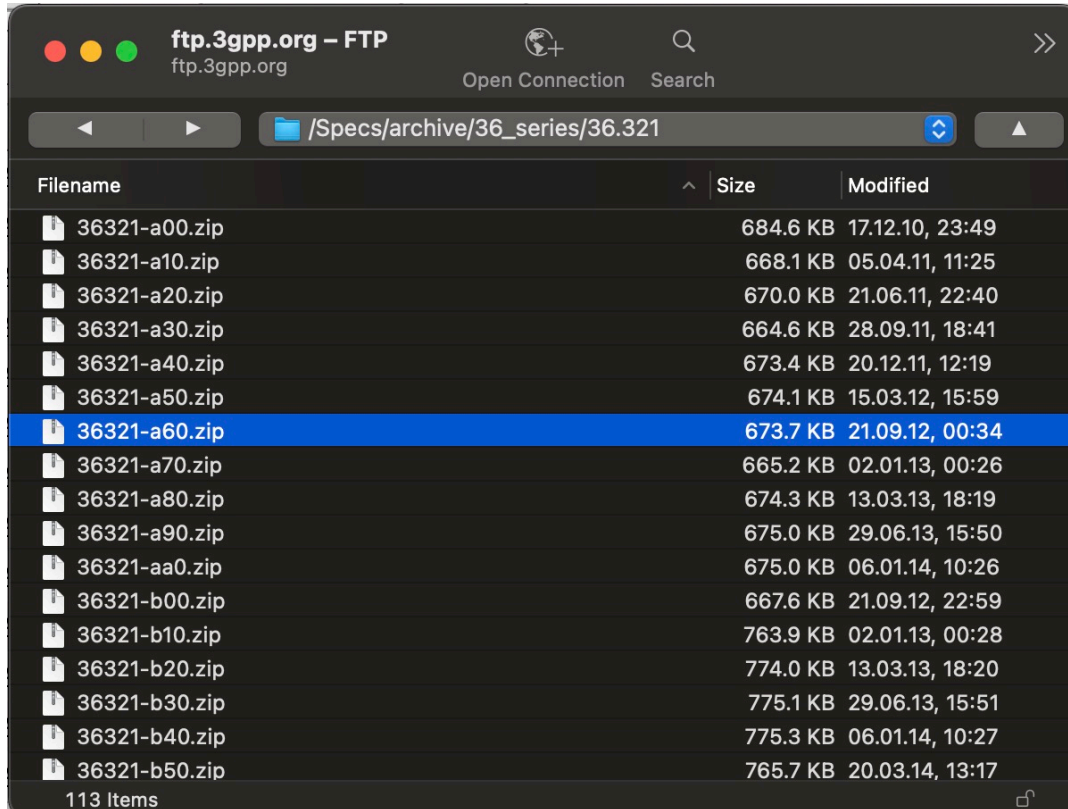
94. The above example illustrates that in 2011 it was straightforward for anyone interested without prior knowledge of the TS number to discover that TS 36.300 related to radio aspects of the LTE standard, specifically the overall description, and that it was easy to find and to download the document. The above example was one of several possible paths to locate TS 36.300 V10.6.0 in 2011.

95. 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.

4. TS 36.321 V10.6.0

96. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1009 as a true and correct copy of version 10.6.0 of technical specification 3GPP TS 36.321 ("Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA); Medium Access Control (MAC) protocol specification (Release 10)"), which shows on its cover page "2012-09" as the year (2012) and month (September) during which this document was released by 3GPP.

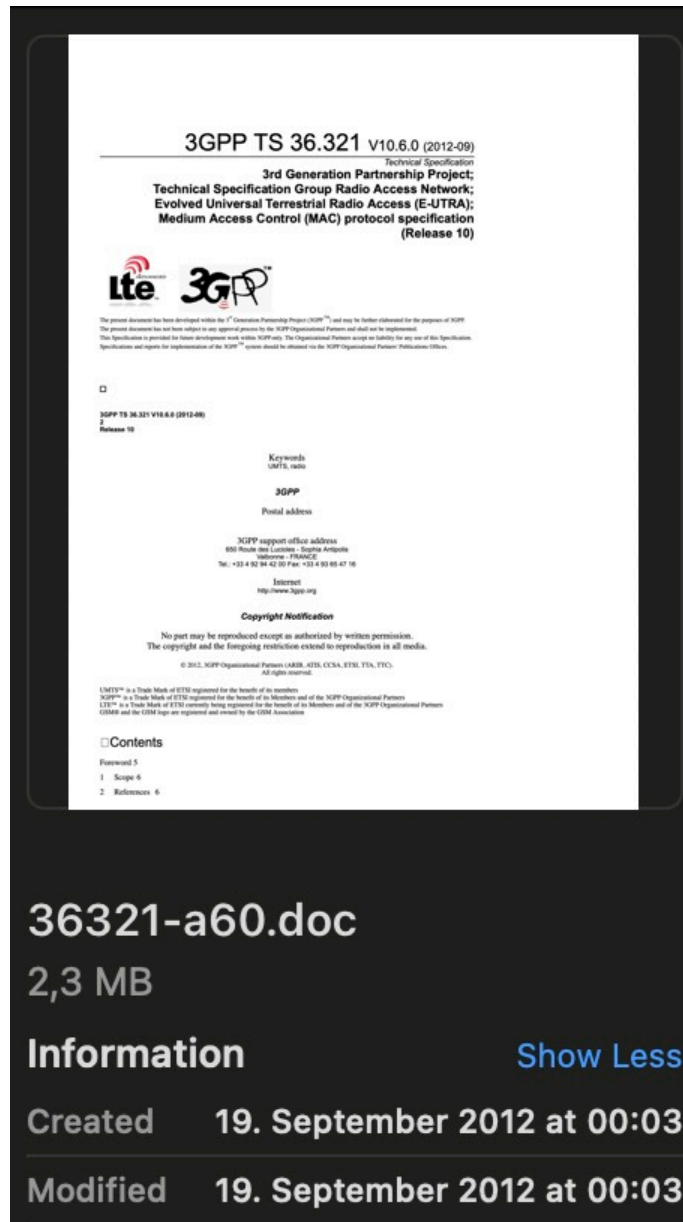
97. The document was published and freely available on 3GPP's FTP server by September 21, 2012. This is confirmed by the date stamp shown on the historic 3GPP FTP server for the corresponding downloadable file ("36321-a60.zip"), as maintained by the Internet Archive at https://web.archive.org/web/20140714013900/http://3gpp.org/ftp/specs/archive/36_series/36.321/. 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/36.321, as shown by the screenshot below:



The screenshot shows an FTP client window titled "ftp.3gpp.org - FTP" with the address bar set to "/Specs/archive/36_series/36.321". The window displays a list of files with columns for "Filename", "Size", and "Modified". The file "36321-a60.zip" is highlighted in blue, indicating it is the selected item. The list includes various zip files with their respective sizes and modification dates. At the bottom, it indicates "113 Items".

Filename	Size	Modified
36321-a00.zip	684.6 KB	17.12.10, 23:49
36321-a10.zip	668.1 KB	05.04.11, 11:25
36321-a20.zip	670.0 KB	21.06.11, 22:40
36321-a30.zip	664.6 KB	28.09.11, 18:41
36321-a40.zip	673.4 KB	20.12.11, 12:19
36321-a50.zip	674.1 KB	15.03.12, 15:59
36321-a60.zip	673.7 KB	21.09.12, 00:34
36321-a70.zip	665.2 KB	02.01.13, 00:26
36321-a80.zip	674.3 KB	13.03.13, 18:19
36321-a90.zip	675.0 KB	29.06.13, 15:50
36321-aa0.zip	675.0 KB	06.01.14, 10:26
36321-b00.zip	667.6 KB	21.09.12, 22:59
36321-b10.zip	763.9 KB	02.01.13, 00:28
36321-b20.zip	774.0 KB	13.03.13, 18:20
36321-b30.zip	775.1 KB	29.06.13, 15:51
36321-b40.zip	775.3 KB	06.01.14, 10:27
36321-b50.zip	765.7 KB	20.03.14, 13:17

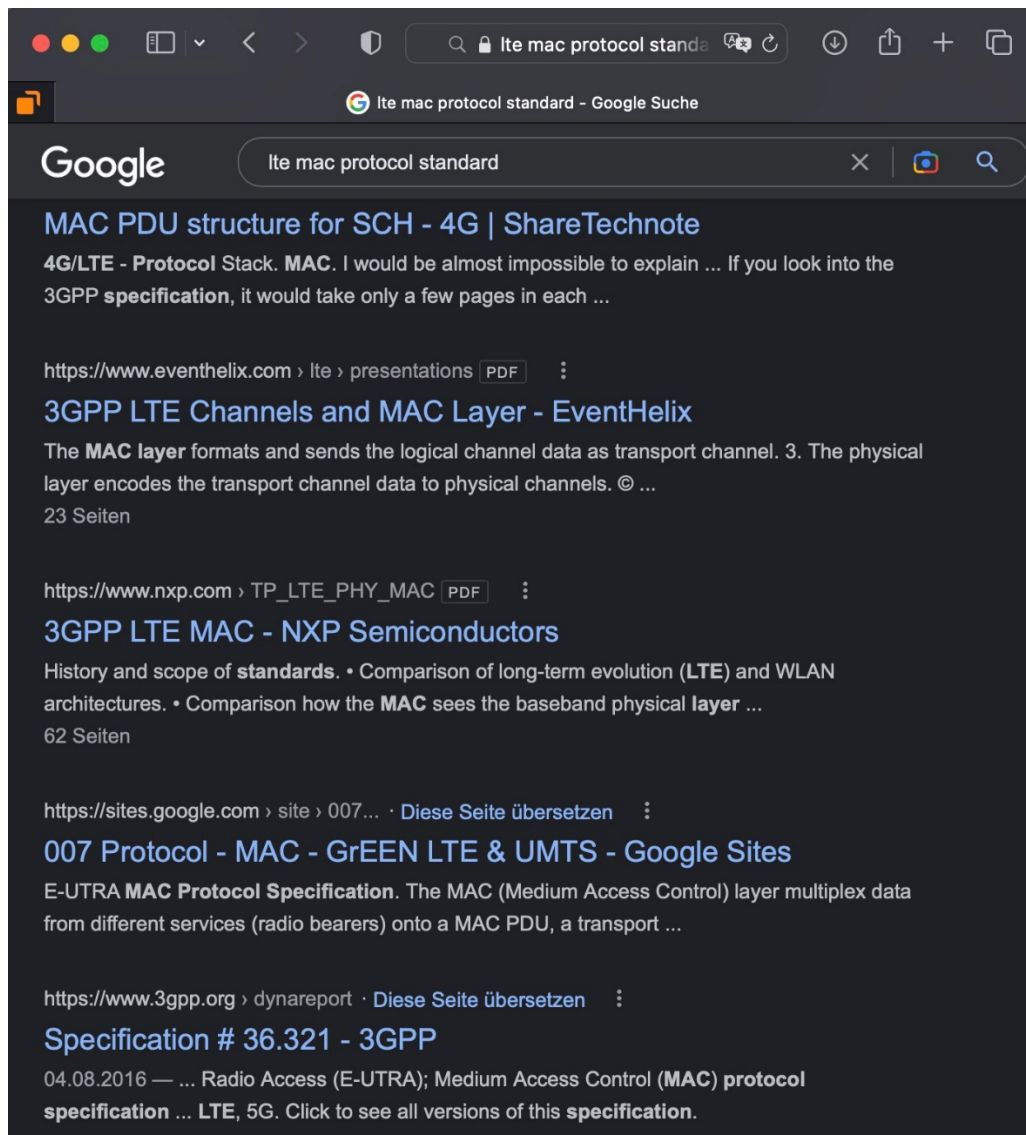
98. In addition, metadata information for the downloaded and extracted specification file states a last modified date of “19. September 2012”, as shown in the screenshot below:



99. This last modified date well aligned with the September 21, 2012, upload date of the document, and the standard business practice among 3GPP participants to upload documents shortly after completing them. In this case, the upload was sightly delayed probably due to Christmas holidays.

100. Furthermore, the document was announced by the RAN WG 2 secretary via the 3GPP_TSG_RAN_WG2 email exploder as available for download from the 3GPP FTP server on September 21, 2012, as shown in Appendix F. At about that time, this email exploder had around 975 subscribers, as can be seen by the Internet Archive at <https://web.archive.org/web/20120708064431/http://list.etsi.org:80/>.

101. 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 mac protocol standard” provides the TS number “36.321” as one of the top results, as can be seen in the screenshot below:



102. Following the provided search result link “Specification # 36.321 – 3GPP” leads to a 3GPP web page offering under the tab “Versions” download links to all versions of TS 36.321, including version 10.6.0, as shown by the screenshot below:

portal.3gpp.org

Specification # 36.321

3GPP Portal

General Versions Responsibility Related

Specification #: 36.321

Release 10(Spec is UCC for this Release) **Latest Remark:** (2015-01-22) .

Meetings	Version	Upload date	Comment
RAN#62	10.10.0	2014-01-07	
RAN#60	10.9.0	2013-07-03	
RAN#59	10.8.0	2013-03-18	
RAN#58	10.7.0	2013-01-03	
RAN#57	10.6.0	2012-09-21	
RAN#55	10.5.0	2012-03-16	
RAN#54	10.4.0	2011-12-21	
RAN#53	10.3.0	2011-10-03	
RAN#52	10.2.0	2011-06-24	
RAN#51	10.1.0	2011-04-06	
RAN#50	10.0.0	2010-12-21	

Release 9(Spec is UCC for this Release) **Latest Remark:**

Meetings	Version	Upload date	Comment
RAN#55	9.6.0	2012-03-16	
RAN#54	9.5.0	2011-12-21	
RAN#53	9.4.0	2011-10-03	
RAN#48	9.3.0	2010-06-18	

Exit

103. 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 36.321, including version 10.6.0, for download.

104. The above search was performed at the time of writing this report. According to my personal experience, similar searches done in September 2012 or around that timeframe would have similarly provided the path to download version 10.6.0 of TS 36.321.

105. By September 2012, in addition to a possible internet search, any interested person would have been able to locate TS 36.321 V10.6.0 via the 3GPP website in a number of ways. As one example, the 3GPP home page provided a link to specifications as can be seen below¹⁷:

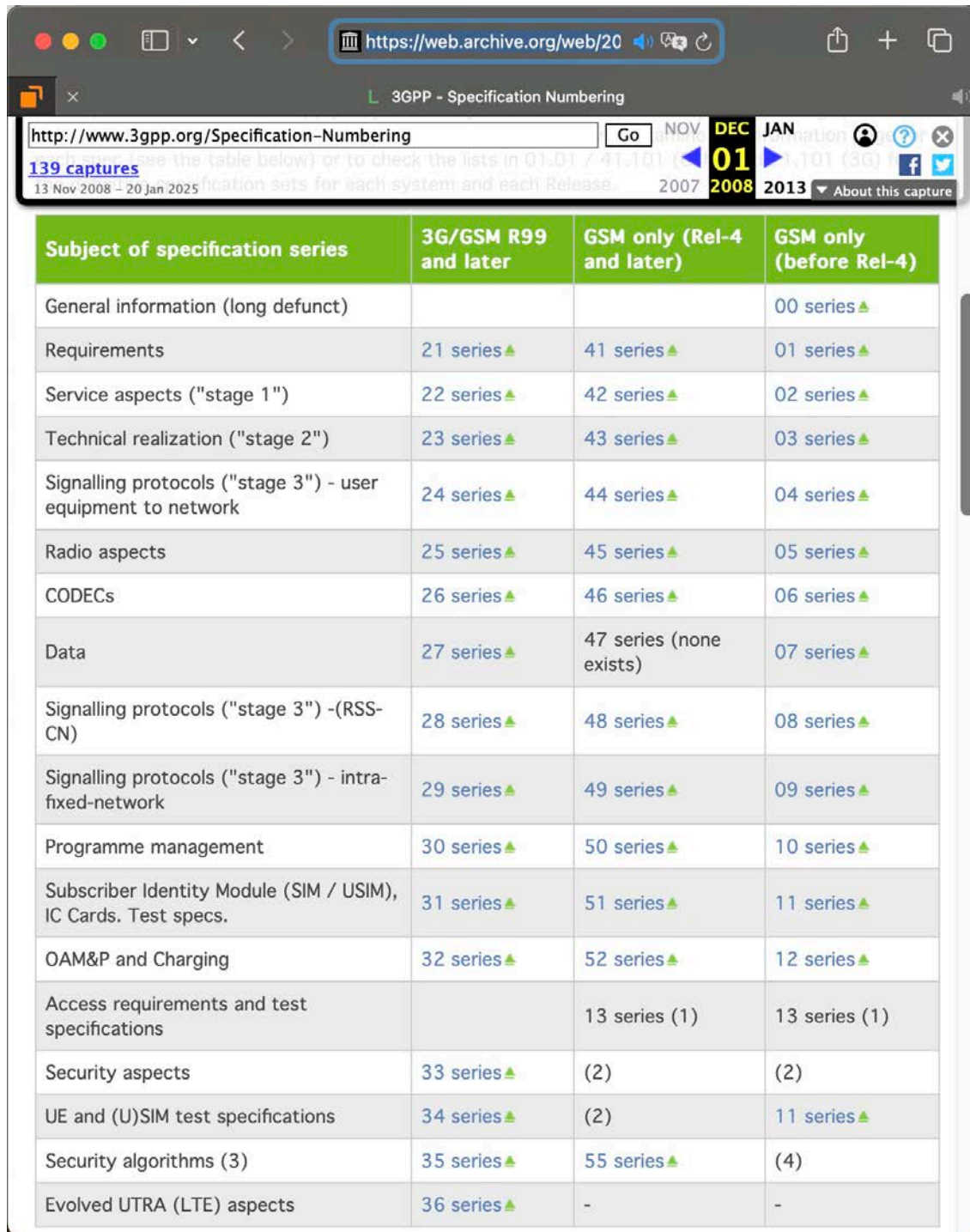
¹⁷ <https://web.archive.org/web/20110211204835/http://3gpp.org/>; the 3GPP home page from 2011 is shown here because the Internet Archive has not recorded the 2012 home page. The 3GPP home page always had a link to access the specifications.



106. 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 above¹⁸, as shown below:¹⁹

¹⁸ 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.

¹⁹ <https://web.archive.org/web/20081201021150/http://www.3gpp.org:80/Specification-Numbering>

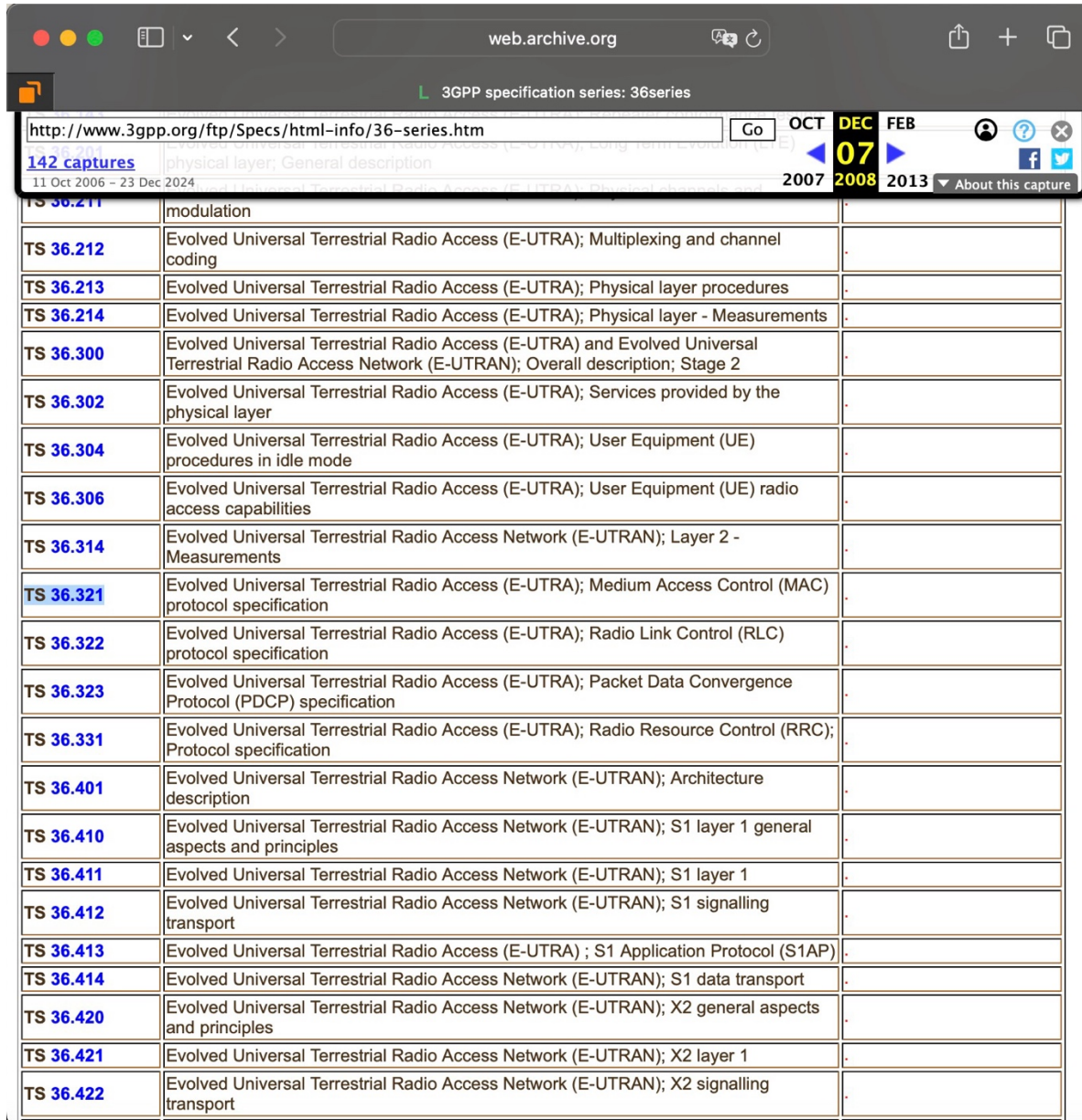


Subject of specification series	3G/GSM R99 and later	GSM only (Rel-4 and later)	GSM only (before Rel-4)
General information (long defunct)			00 series ▲
Requirements	21 series ▲	41 series ▲	01 series ▲
Service aspects ("stage 1")	22 series ▲	42 series ▲	02 series ▲
Technical realization ("stage 2")	23 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 ▲	-	-

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

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specifications. Following the “36 series” link led to a website²⁰ listing all the 36-series specifications as can be seen below:

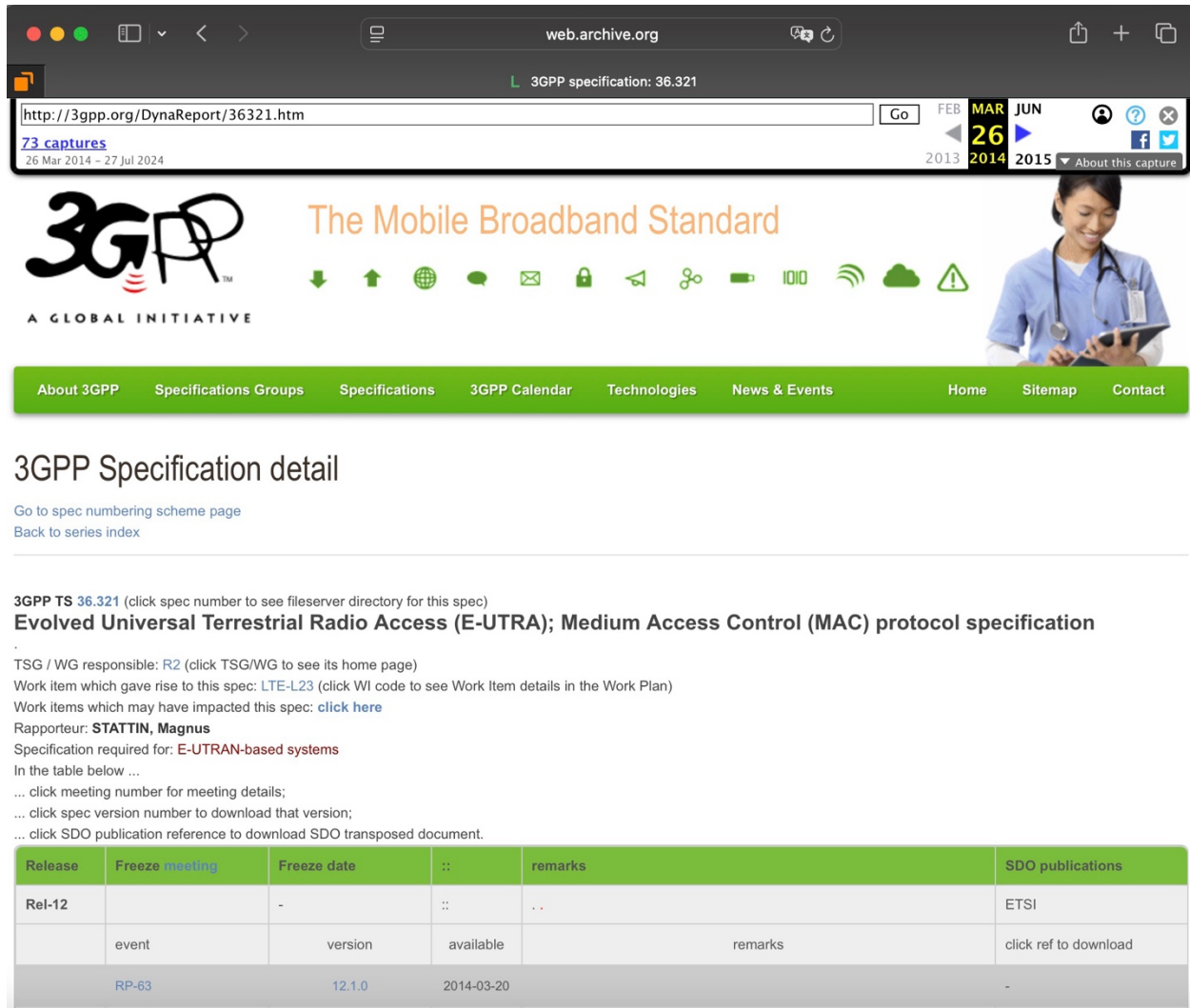


TS 36.211	modulation	.
TS 36.212	Evolved Universal Terrestrial Radio Access (E-UTRA); Multiplexing and channel coding	.
TS 36.213	Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures	.
TS 36.214	Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer - Measurements	.
TS 36.300	Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2	.
TS 36.302	Evolved Universal Terrestrial Radio Access (E-UTRA); Services provided by the physical layer	.
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	.

²⁰ <https://web.archive.org/web/20081207063329/http://www.3gpp.org/ftp/Specs/html-info/36-series.htm>

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108. A search by the subject matter “medium access control” or “MAC” would have revealed that TS 36.321 is the relevant specification, and clicking on this TS number would have opened the following website²¹ from where it was possible to download all available versions of TS 36.321 including version 10.6.0:



The screenshot shows a web browser window with the address bar displaying <http://3gpp.org/DynaReport/36321.htm>. The page title is "3GPP specification: 36.321". The main content area features the 3GPP logo, the text "The Mobile Broadband Standard", and a navigation bar with links: "About 3GPP", "Specifications Groups", "Specifications", "3GPP Calendar", "Technologies", "News & Events", "Home", "Sitemap", and "Contact". Below the navigation bar, the page title "3GPP Specification detail" is followed by links "Go to spec numbering scheme page" and "Back to series index". The main content area displays the title "3GPP TS 36.321 (click spec number to see files server directory for this spec)" and "Evolved Universal Terrestrial Radio Access (E-UTRA); Medium Access Control (MAC) protocol specification". It also lists the TSG / WG responsible as R2, the work item which gave rise to this spec as LTE-L23, and the rapporteur as STATTIN, Magnus. A table below shows the release history of the specification.

Release	Freeze meeting	Freeze date	::	remarks	SDO publications
Rel-12		-	::	..	ETSI
	event	version	available	remarks	click ref to download
RP-63		12.1.0	2014-03-20		-

²¹ <https://web.archive.org/web/20140326141852/http://3gpp.org/DynaReport/36321.htm>

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Rel-11	SP-57	2012-09-12	::	..	ETSI
	event	version	available	remarks	click ref to download
	RP-63	11.5.0	2014-03-20		-
	RP-62	11.4.0	2014-01-07		RTS/TSGR-0236321vb40
	RP-60	11.3.0	2013-07-03		RTS/TSGR-0236321vb30
	RP-59	11.2.0	2013-03-18		RTS/TSGR-0236321vb20
	RP-58	11.1.0	2013-01-03		RTS/TSGR-0236321vb10
	RP-57	11.0.0	2012-09-24		RTS/TSGR-0236321vb00
Rel-10	SP-51	2011-03-23	::	..	ETSI
	event	version	available	remarks	click ref to download
	RP-62	10.10.0	2014-01-07		RTS/TSGR-0236321vaa0
	RP-60	10.9.0	2013-07-03		RTS/TSGR-0236321va90
	RP-59	10.8.0	2013-03-18		RTS/TSGR-0236321va80
	RP-58	10.7.0	2013-01-03		RTS/TSGR-0236321va70
	RP-57	10.6.0	2012-09-21		RTS/TSGR-0236321va60
	RP-55	10.5.0	2012-03-16		RTS/TSGR-0236321va50
	RP-54	10.4.0	2011-12-21		RTS/TSGR-0236321va40
	RP-53	10.3.0	2011-10-03		RTS/TSGR-0236321va30
	RP-52	10.2.0	2011-06-24		RTS/TSGR-0236321va20
	RP-51	10.1.0	2011-04-06		RTS/TSGR-0236321va10

109. The above example illustrates that in 2012 it was straightforward for anyone interested without prior knowledge of the TS number to discover that TS 36.321 related to radio aspects of the LTE standard, specifically medium access control, and that it was easy to find and to download the document. The above example was one of several possible paths to locate TS 36.321 V10.6.0 in 2012.

110. 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 September 21, 2012, at the latest.

5. TS 36.331 V10.6.0

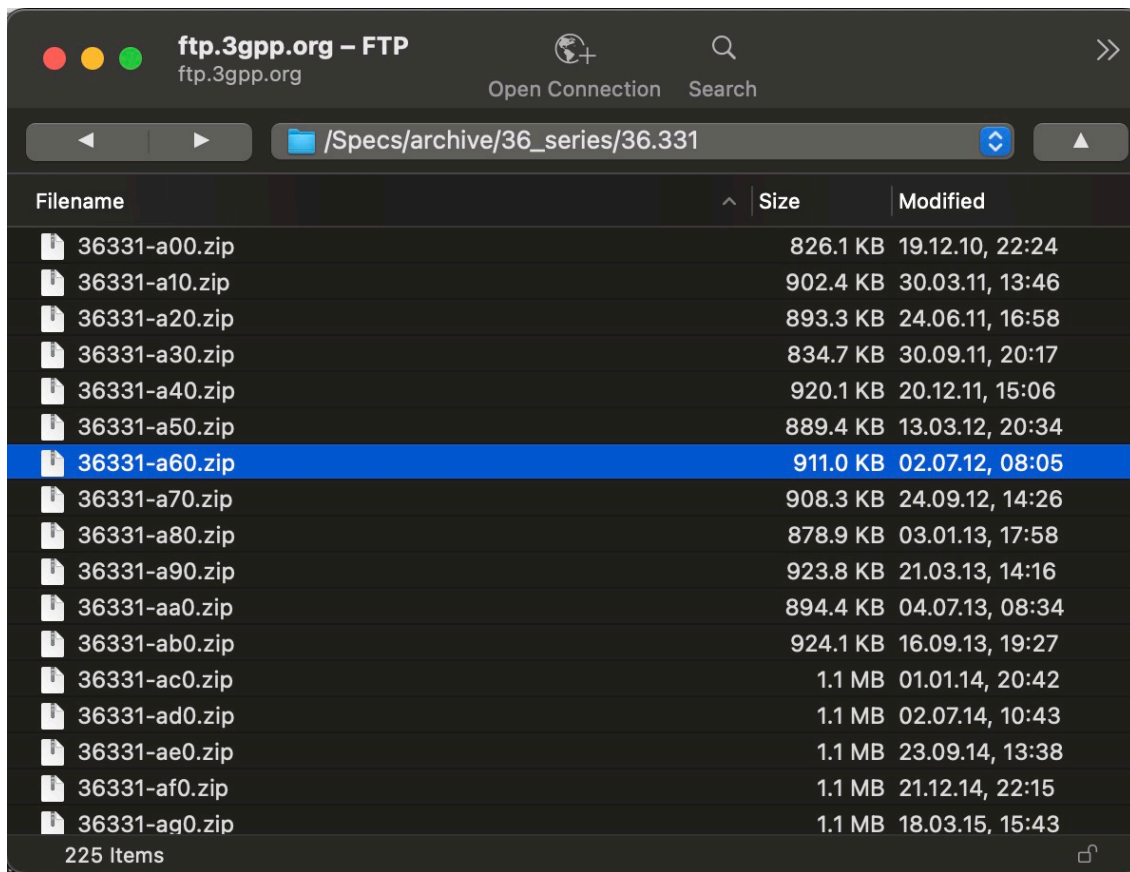
111. Based on my personal knowledge and my review of 3GPP's business records, I recognize Ex. 1010 as a true and correct copy of version 10.6.0 of technical specification 3GPP TS 36.331 ("3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification (Release 10)"), which shows on its cover page "2012-06" as the year (2012) and month (June) during which this document was released by 3GPP.

112. The document was published and freely available on 3GPP's ftp server by July 2, 2012. This is confirmed by the date stamp shown on the historic 3GPP ftp server for the corresponding downloadable file ("36331-a60.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:



Filename	Size	Modified
36331-a00.zip	826.1 KB	19.12.10, 22:24
36331-a10.zip	902.4 KB	30.03.11, 13:46
36331-a20.zip	893.3 KB	24.06.11, 16:58
36331-a30.zip	834.7 KB	30.09.11, 20:17
36331-a40.zip	920.1 KB	20.12.11, 15:06
36331-a50.zip	889.4 KB	13.03.12, 20:34
36331-a60.zip	911.0 KB	02.07.12, 08:05
36331-a70.zip	908.3 KB	24.09.12, 14:26
36331-a80.zip	878.9 KB	03.01.13, 17:58
36331-a90.zip	923.8 KB	21.03.13, 14:16
36331-aa0.zip	894.4 KB	04.07.13, 08:34
36331-ab0.zip	924.1 KB	16.09.13, 19:27
36331-ac0.zip	1.1 MB	01.01.14, 20:42
36331-ad0.zip	1.1 MB	02.07.14, 10:43
36331-ae0.zip	1.1 MB	23.09.14, 13:38
36331-af0.zip	1.1 MB	21.12.14, 22:15
36331-ag0.zip	1.1 MB	18.03.15, 15:43

225 Items

113. In addition, metadata information for the downloaded and extracted specification file states a last Modified date of “1. July 2012”, as shown in the screenshot below:

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Page 1

3GPP TS 36.331 V10.6.0 (2012-06)

Technical Specification

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)



The present document has been developed within the 3rd Generation Partnership Project (3GPPTM) and may be further elaborated for the purposes of 3GPP. The present document has not been subject to any approval process by the 3GPP Organizational Partners and shall not be implemented. This Specification is provided for future development work within 3GPP only. The Organizational Partners accept no liability for any use of this Specification. Specifications and reports for implementation of the 3GPPTM system should be obtained via the 3GPP Organizational Partners' Publications Office.

3GPP TS 36.331 V10.6.0 (2012-06)
12
Release 10

Keywords
UMTS, radio

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1 Scope 14
2 References 14

36331-a60.doc

5,6 MB

Information [Show Less](#)

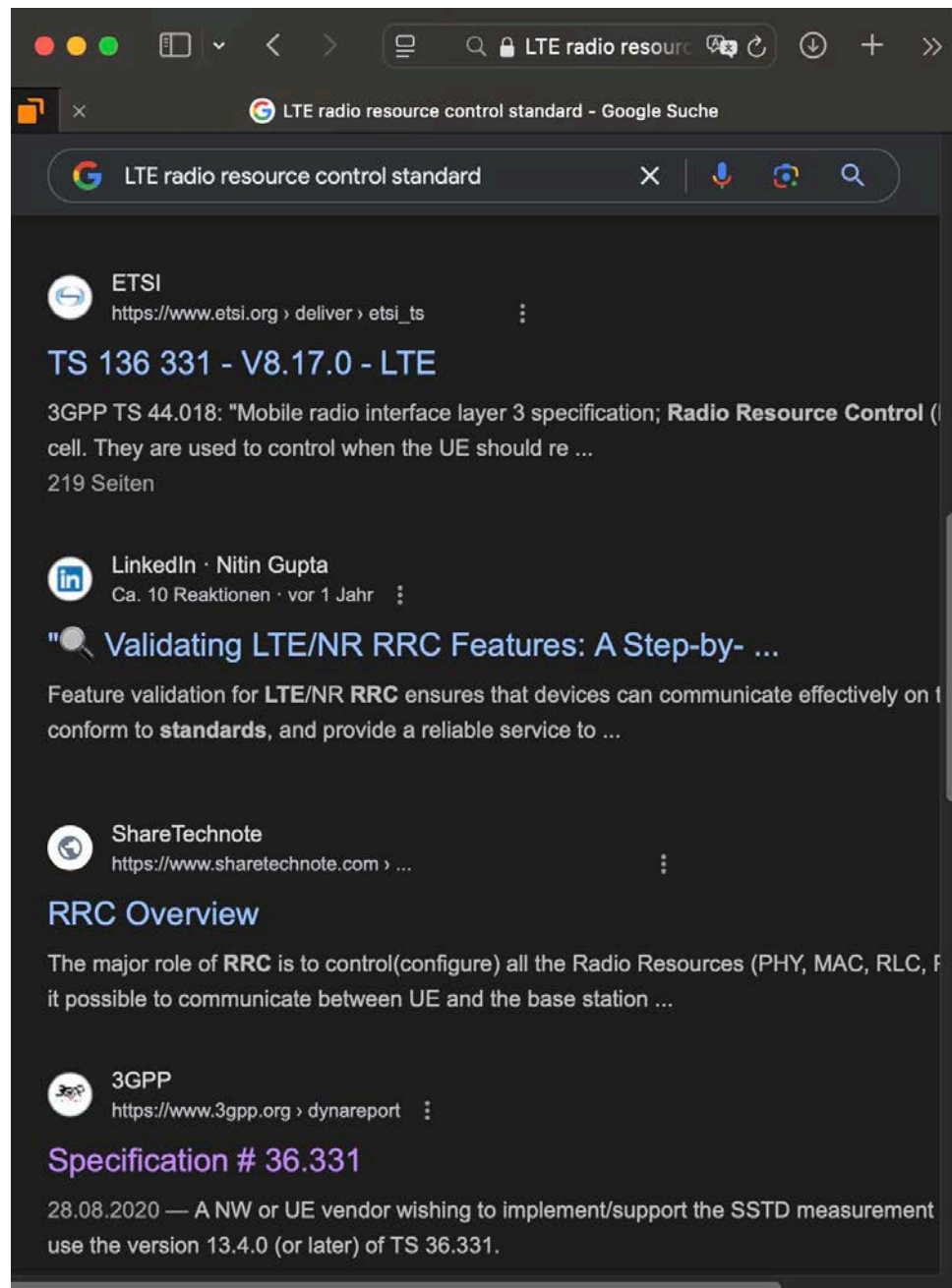
Created Sunday, 1. July 2012 at 18:14

Modified Sunday, 1. July 2012 at 18:14

114. This last modified date is well aligned with the July 2, 2012, upload date of the document, and the standard business practice among 3GPP participants to upload submissions shortly after completing them.

115. Furthermore, the document was announced by the RAN WG 2 secretary via the 3GPP_TSG_RAN_WG2 email exploder as available for download from the 3GPP FTP server on July 3, 2012, as shown in Appendix G. At about that time, this email exploder had around 975 subscribers, as can be seen by the Internet Archive at <https://web.archive.org/web/20120708064431/http://list.etsi.org:80/>.

116. 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:



117. 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 10.6.0, as shown by the screenshot below:

The screenshot shows the 3GPP Portal interface for Specification # 36.331. The 'Versions' tab is selected, displaying a table of historical versions. The table has four columns: Meetings, Version, Upload date, and Comment. The 'Version' column contains links to the respective version pages. The version 10.6.0 is highlighted with a red box, indicating it is the version of interest.

Meetings	Version	Upload date	Comment
RAN#80	10.22.0	2018-07-08	
RAN#77	10.21.0	2017-09-25	
RAN#74	10.20.0	2016-12-30	
RAN#70	10.19.0	2016-01-04	
RAN#69	10.18.0	2015-09-25	
RAN#68	10.17.0	2015-07-08	
RAN#67	10.16.0	2015-03-23	
RAN#66	10.15.0	2015-01-05	
RAN#65	10.14.0	2014-09-23	
RAN#64	10.13.0	2014-07-03	
RAN#62	10.12.0	2014-01-07	
RAN#61	10.11.0	2013-09-19	
RAN#60	10.10.0	2013-07-04	
RAN#59	10.9.0	2013-03-22	
RAN#58	10.8.0	2013-01-07	
RAN#57	10.7.0	2012-09-26	
RAN#56	10.6.0	2012-07-03	
RAN#55	10.5.0	2012-03-14	
RAN#54	10.4.0	2011-12-22	

118. 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 10.6.0, for download.

119. The above search was performed at the time of writing this report. According to my personal experience, in July 2012 or around that timeframe it would have been similarly straightforward to locate a path to download version 10.6.0 of TS 36.331.

120. By July 2012, in addition to a possible internet search, any interested person would have been able to locate TS 36.331 V10.6.0 via the 3GPP website in a number of ways. As one example, the 3GPP home page provided a link to specifications as can be seen below²²:

²² <https://web.archive.org/web/20110211204835/http://3gpp.org/>; the 3GPP home page from 2011 is shown here because the Internet Archive has not recorded the 2012 home page. The 3GPP home page always had a link to specifications.

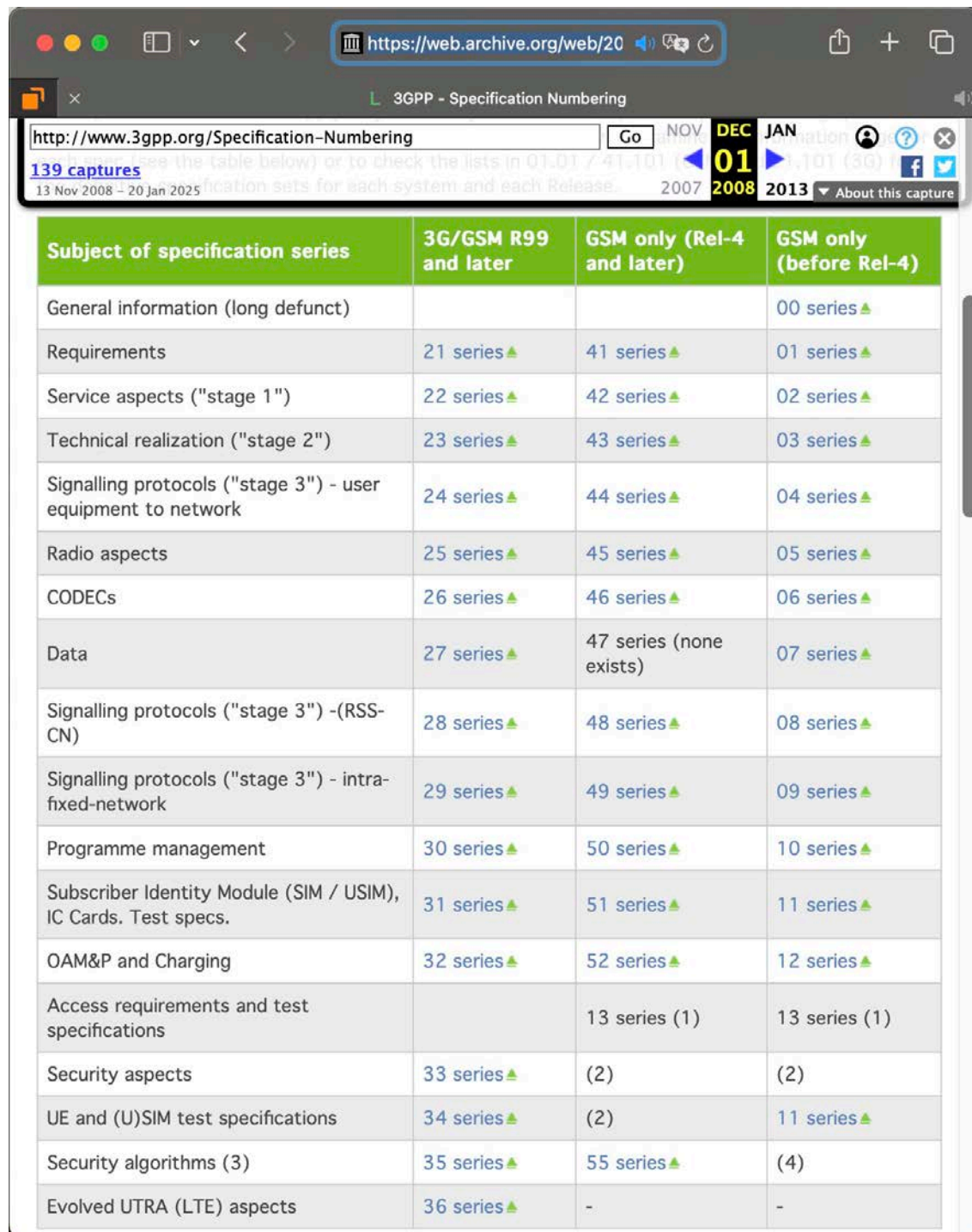


121. For example, the subjects of the individual specification series for the GSM (2G), 3G and LTE (4G) standards were explained on 3GPP's website by clicking on the "Specifications Numbering" link from the "Specifications" menu on the 3GPP home page identified above²³, as shown below:²⁴

²³ 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.

²⁴ <https://web.archive.org/web/20081201021150/http://www.3gpp.org:80/Specification-Numbering>

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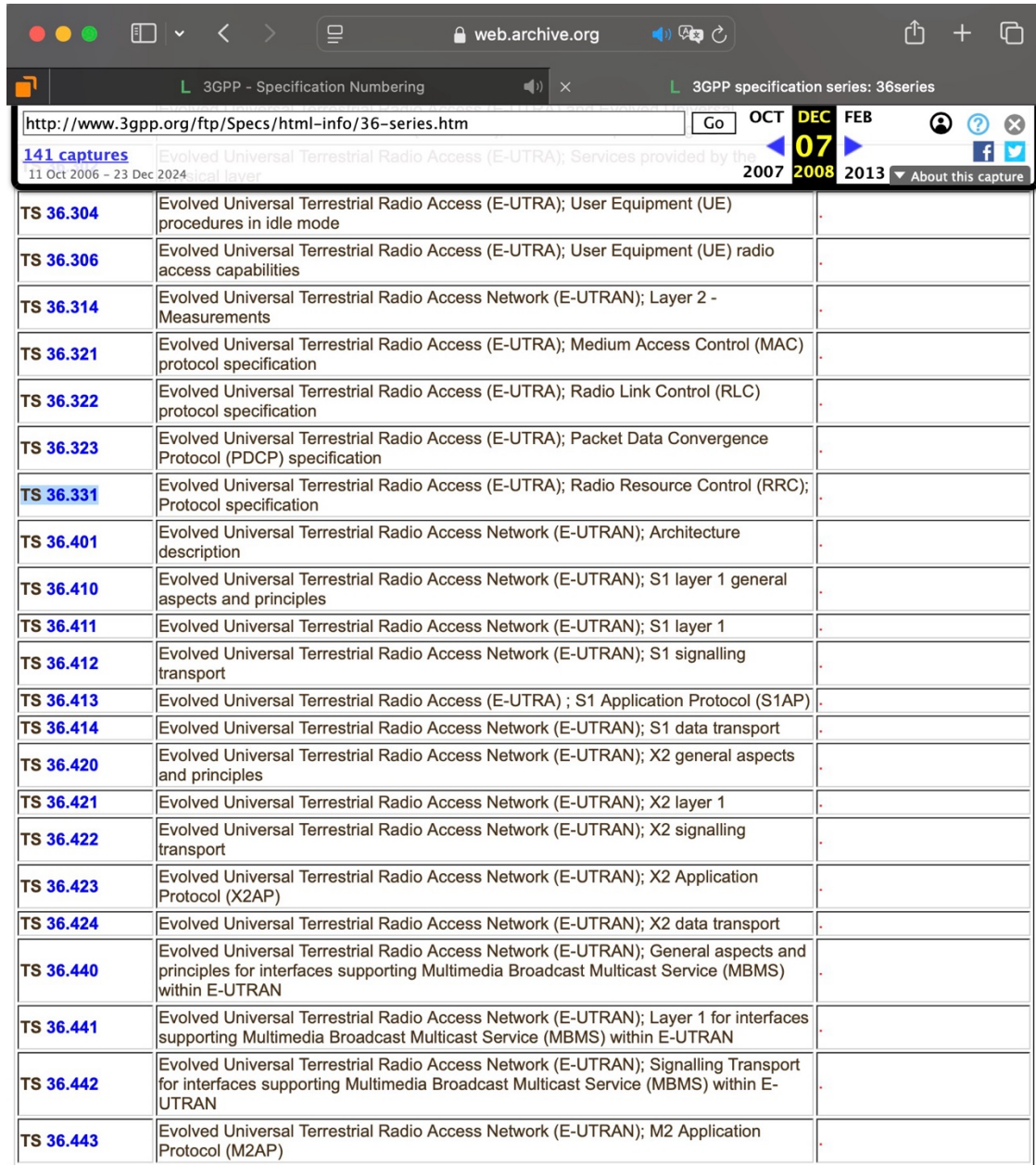


Subject of specification series	3G/GSM R99 and later	GSM only (Rel-4 and later)	GSM only (before Rel-4)
General information (long defunct)			00 series ▲
Requirements	21 series ▲	41 series ▲	01 series ▲
Service aspects ("stage 1")	22 series ▲	42 series ▲	02 series ▲
Technical realization ("stage 2")	23 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 ▲	-	-

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

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specifications. Following the “36 series” link led to a website²⁵ listing all the 36-series specifications as can be seen below:

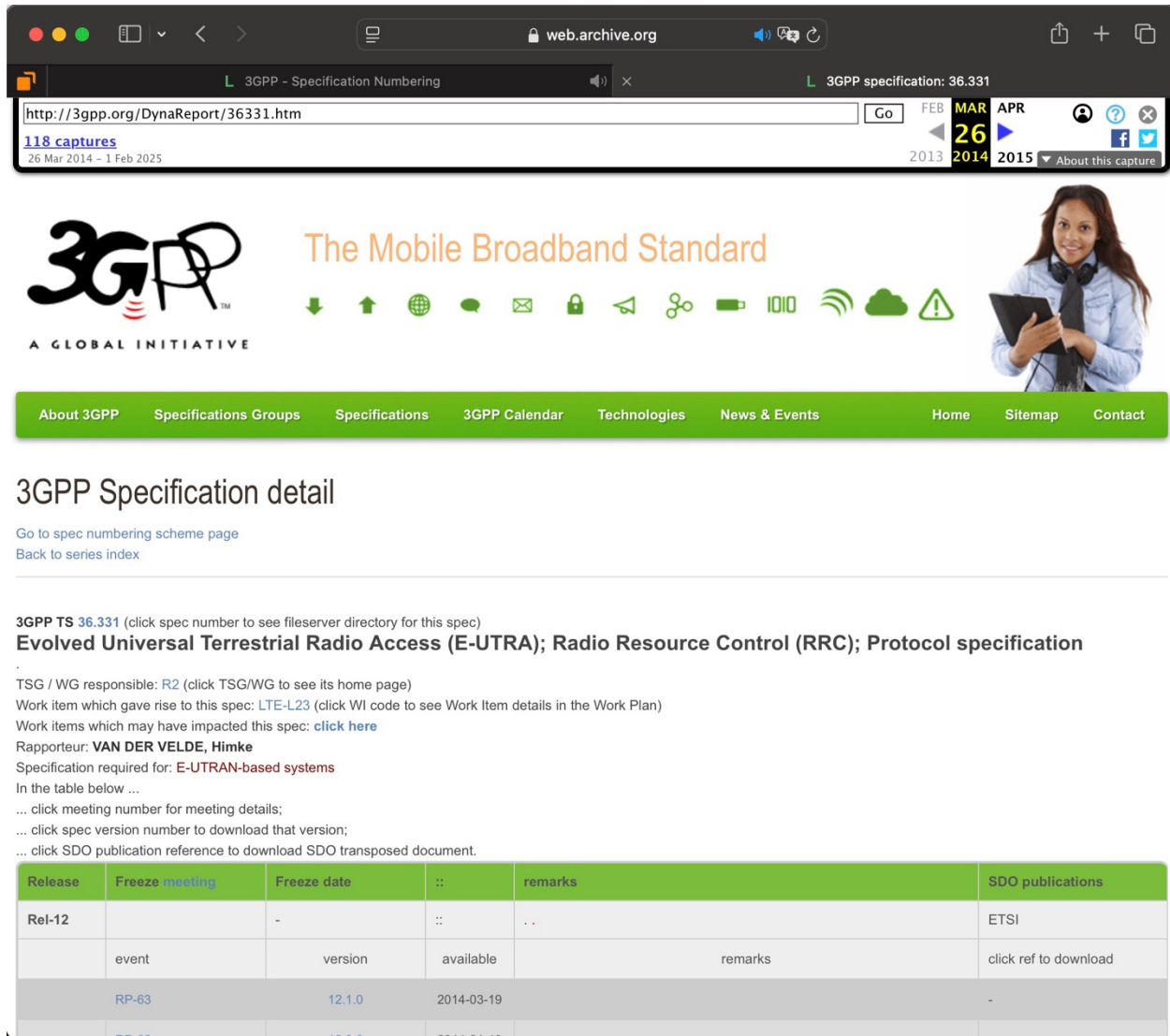


TS	Specification	Version
TS 36.304	Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) procedures in idle mode	*
TS 36.306	Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio access capabilities	*
TS 36.314	Evolved Universal Terrestrial Radio Access Network (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)	*

²⁵ <https://web.archive.org/web/20081207063329/http://www.3gpp.org/ftp/Specs/html-info/36-series.htm>

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123. 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 website²⁶ from where it was possible to download all available versions of TS 36.331 including version 10.6.0:



The screenshot shows a web browser window with the URL <http://3gpp.org/DynaReport/36331.htm>. The page title is "3GPP specification: 36.331". The page content includes the 3GPP logo, the text "The Mobile Broadband Standard", and a navigation bar with links: "About 3GPP", "Specifications Groups", "Specifications", "3GPP Calendar", "Technologies", "News & Events", "Home", "Sitemap", and "Contact". Below the navigation bar, the page title "3GPP Specification detail" is followed by links "Go to spec numbering scheme page" and "Back to series index". The main content area displays "3GPP TS 36.331 (click spec number to see files server directory for this spec)" and "Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification". It also lists the TSG / WG responsible (R2), the work item which gave rise to this spec (LTE-L23), and the rapporteur (VAN DER VELDE, Himke). A table below provides details about the specification releases.

Release	Freeze meeting	Freeze date	::	remarks	SDO publications
Rel-12		-	::	..	ETSI
	event	version	available	remarks	click ref to download
RP-63		12.1.0	2014-03-19		-
RP-63		12.1.0	2014-03-19		-

²⁶ <https://web.archive.org/web/20140326134320/http://3gpp.org/DynaReport/36331.htm>

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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

124. The above example illustrates that in 2012 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 and to download the document. The above example was one of several possible paths to locate TS 36.331 V10.6.0 in 2012.

125. 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 July 2, 2012, at the latest.

V. AVAILABILITY FOR CROSS-EXAMINATION

126. 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

127. 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

128. 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.

Declaration of Friedhelm Rodermund

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

Dated: May 15, 2025

A handwritten signature in black ink, appearing to read 'F. Rodermund', written above a horizontal line.

Friedhelm Rodermund

Appendix A

CURRICULUM VITAE

I. PERSONAL DATA

Name: **Friedhelm RODERMUND**

Mailing address: Am Steiner Graben 18
56077 Koblenz, Germany

Phone: +49 172 2606489

Email: fred@iotecc.com

II. PROFESSIONAL EXPERIENCE

Summary

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

Recognized standards expert who was actively involved in leading roles in the development of key standards for mobile telephony/data and service enablers 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 telecommunications 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
 - o Consulting services around telecommunications and IoT patents in particular related to 3GPP, ETSI and OMA standards
 - o State of the art/prior art research services related to patent filing e.g. for 5G and 6G
 - o Prior art research, essentiality assessment, patent infringement analysis related to litigations and validity actions
 - o Advising on IP strategy
 - o Advising on Standards Development Organisations (SDO) e.g. ETSI and 3GPP working processes and IPR policy
 - o Conducting seminar on Standards Essential Patents (SEPs) for the Internet of Things at the Technical University of Ilmenau, Germany
 - o 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

- o IoT standards development and introduction of new IoT services

CURRICULUM VITAE

- 01/2011 – 10/2014** **Vodafone Germany / Vodafone Group R&D** **Düsseldorf, Germany**
- Senior Standards Strategist
- o Representing Vodafone in various standardisation bodies
 - o Creating technical standards for the Internet of Things
 - o Work item lead, technical editor and key contributor of Open Mobile Alliance (OMA) “Lightweight M2M (LwM2M)” – the new standard for the Internet of Things
 - o Advising and supporting various IoT/M2M projects related to e.g. smart metering
 - o Advising on the introduction of new IoT/M2M technologies and services
 - o Leading Proof of Concepts of emerging technologies
 - o Involved in innovation projects
 - o 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)
- o Responsible for Vodafone’s Device Management standardisation
 - o 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
 - o Editor of several specifications, rapporteur of various work items
 - o Support of projects for the introduction of device management
 - o Delegate to 3GPP SA1 with responsibility 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
- o Responsible for Mobile Broadcast standardisation across different broadcast systems/standards bodies and across all Vodafone local operations
 - o Responsible for Mobile Broadcast standardisation strategy development and implementation
 - o Delegation Lead for the Open Mobile Alliance (OMA) BCAST working group
 - o Initiated and managed the BCAST device profile development in the BMCO Forum
 - o Leading the “Service Protection” (pay-TV) stream of the German DVB-H Consortium
 - o Filed several patents
 - o 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
- o Verification of the MMS operator interworking framework
 - o Supporting the definition and specification of the MMS functional evolution
 - o 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”

CURRICULUM VITAE

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” responsible 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

CURRICULUM VITAE

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

CURRICULUM VITAE

- 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

CURRICULUM VITAE

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

CURRICULUM VITAE

- 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

CURRICULUM VITAE

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

CURRICULUM VITAE

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 Partes 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 |
| | <u>Graduate of Electrical Engineering with a focus on telecommunications technologies (Dipl.-Ing. TH)</u> | |
| 10/1992 – 04/1993 | University of Technology Trondheim | Trondheim, Norway |
| | <u>Diploma Thesis "Design of a dual processor computer for digital signal processing in power electronics"</u> | |

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

Declaration of Friedhelm Rodermund

Appendix	Description
A	Curriculum Vitae of Friedhelm Rodermund
B	List of Appendices
C	Report of the 26th TSG-RAN WG2 meeting held in Sophia Antipolis, France, 7 - 11 January 2002
D	LISTSERV - 3GPP_TSG_RAN_WG2 email from January 4, 2002, distributing R2-020088
E	LISTSERV - 3GPP_TSG_RAN_WG2 email from December 22, 2011, announcing upload of TS 36.300 V10.6.0
F	LISTSERV - 3GPP_TSG_RAN_WG2 email from September 21, 2012, announcing upload of TS 36.321 V10.6.0
G	LISTSERV - 3GPP_TSG_RAN_WG2 email from July 3, 2012, announcing upload of TS 36.331 V10.6.0

Appendix C

TSG-RAN WG2 meeting #27
Orlando, FL, USA, 18 - 23 February 2002

R2-020157

Title: Approved Report of the 26th TSG-RAN WG2 meeting
(Sophia Antipolis, France, 7 - 11 January 2002)
Document for: Information
Source: 3GPP support team

Hans van der Veen
ETSI Mobile Competence Centre
F-06921 Sophia Antipolis Cedex
Tel: +33 4 92 94 42 61
email: Hans.vanderVeen@etsi.fr

18 February 2001.

1 Opening of the meeting

Denis Fauconnier (Chairman) opened the meeting and welcomed the delegates to Sophia Antipolis. He reminded the delegates that this meeting would focus on Rel-5 issues.

1.1 Call for IPR

Denis Fauconnier (Chairman) reminded the delegates of their obligations with respect to IPRs.

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

2 Approval of the agenda

R2-020001 Proposed agenda (Chairman)

Denis Fauconnier (Chairman) proposed the agenda for the meeting.

Decision: The agenda was approved.

3 Results of the previous meeting

3.1 Minutes of the previous meeting

R2-020002 Draft report of WG2 meeting #25 Makuhari, Japan, 26 - 30 November 2001 (Secretary)

Hans van der Veen (Secretary) presented the draft minutes.

Decision: The report was approved. The approved report (updated with future meetings) would be available in R2-020003.

R2-020003 Approved report of WG2 meeting #25 Makuhari, Japan, 26 - 30 November 2001 (Secretary)

This was the approved report of the TSG-RAN WG2 #25 meeting.

3.2 Permanent documents

No review was needed since the permanent documents had been approved/endorsed by TSG-RAN.

R2-020004 TS 25.301 v3.9.0 Release '99 (Secretary)

R2-020005 TS 25.302 v3.11.0 Release '99 (Secretary)

R2-020006 TS 25.303 v3.10.0 Release '99 (Secretary)

R2-020007 TS 25.304 v3.9.0 Release '99 (Secretary)

R2-020008 TS 25.305 v3.7.0 Release '99 (Secretary)

R2-020009 TS 25.306 v3.4.0 Release '99 (Secretary)

R2-020010 TS 25.307 v3.1.0 Release '99 (Secretary)

R2-020011 TS 25.321 v3.10.0 Release '99 (Secretary)

R2-020012 TS 25.322 v3.9.0 Release '99 (Secretary)

R2-020013 TS 25.323 v3.7.0 Release '99 (Secretary)

R2-020014 TS 25.324 v3.4.0 Release '99 (Secretary)

R2-020015 TS 25.331 v3.9.0 Release '99 (Secretary)

R2-020016 TR 25.921 v3.6.0 Release '99 (Secretary)

R2-020017 TR 25.922 v3.6.0 Release '99 (Secretary)

R2-020018 TR 25.924 v1.0.0 Release ? (Secretary)

R2-020019 TR 25.925 v3.4.0 Release '99 (Secretary)

R2-020020 TS 34.109 v3.4.0 Release '99 (Secretary)

R2-020021 TS 25.301 v4.2.0 Release 4 (Secretary)

R2-020022 TS 25.302 v4.3.0 Release 4 (Secretary)

R2-020023 TS 25.303 v4.3.0 Release 4 (Secretary)

R2-020024 TS 25.304 v4.3.0 Release 4 (Secretary)

R2-020025 TS 25.305 v4.2.0 Release 4 (Secretary)

R2-020026 TS 25.306 v4.3.0 Release 4 (Secretary)

R2-020027 TS 25.307 v4.1.0 Release 4 (Secretary)

R2-020028 TS 25.321 v4.3.0 Release 4 (Secretary)

R2-020029 TS 25.322 v4.3.0 Release 4 (Secretary)

R2-020030 TS 25.323 v4.3.0 Release 4 (Secretary)

R2-020031 TS 25.324 v4.0.0 Release 4 (Secretary)

R2-020032 TS 25.331 v4.3.0 Release 4 (Secretary)

NOTE: The CRs for this specification had not yet been implemented due to lack of available time.
The TS would be made available as soon as possible after the WG2#26 meeting

R2-020033 TR 25.834 v4.1.0 Release 4 (Secretary)

R2-020034 TR 25.835 v1.0.0 Release 4 (Secretary)

R2-020035 TR 25.843 v4.1.0 Release 4 (Secretary)

R2-020036 TR 25.844 v4.1.0 Release 4 (Secretary)

R2-020037 TR 25.847 v4.0.0 Release 4 (Secretary)

R2-020038 TR 25.921 v4.3.0 Release 4 (Secretary)

R2-020039 TR 25.922 v4.1.0 Release 4 (Secretary)

R2-020040 TR 25.950 v4.0.0 Release 4 (Secretary)

R2-020041 TS 34.109 v4.1.0 Release 4 (Secretary)

R2-020042 TS 25.305 v5.3.0 Release 5 (Secretary)

R2-020043 TS 25.308 v5.1.0 Release 5 (Secretary)

R2-020044 TR 25.855 v5.0.0 Release 5 (Secretary)

R2-020045 TR 25.859 v1.0.1 Release 5 (Secretary)

4 Results of activities since previous meeting

There was no input for this agenda item.

5 Reports from other groups

5.1 Results from TSG-RAN and TSG-SA

R2-020060 Draft report of the 14th TSG-RAN meeting (Kyoto, Japan, 11-14 December 2001) (TSG-RAN Secretary)

This document was replaced with R2-020117.

R2-020117 First revised draft report of the 14th TSG-RAN meeting (Kyoto, Japan, 11-14 December 2001) (TSG-RAN Secretary)

This document was for information.

R2-020061 Short summary of TSG SA#14 for RAN Aspects (TSG-RAN Chairman)

This document was for information.

R2-020062 Approved CR 1177r3 (R'99) and CR 1178r1 (Rel-4) to 25.331 (TSG-RAN)

This CR was approved instead of CR 1177r1 (and an intermediate revision CR 1177r2 in TSG-RAN) and CR 1178 that were agreed in Makuhari.

R2-020063 Approved CR 1185r4 (R'99) and CR 1186r1 (Rel-4) to 25.331 (TSG-RAN)

This CR was approved instead of CR 1185r3 and CR 1186 that were agreed in Makuhari.

R2-020064 Principles for UE testing and related indication from UE (TSG-RAN)

This document had been presented in TSG-RAN and the principle had been approved by TSG-RAN. An Ad Hoc meeting was planned for 5 - 7 February 2002 in Sophia Antipolis to address the topics of this document, plus the clean-up.

6 Corrections on Release '99

6.1 Incoming LSs on Release '99

Liaisons on Rel-4 are captured under Agenda Item 8.1, liaisons on Rel-5 under Agenda Item 9.1.

6.1.1 TSG-RAN WG1

There was no input for this agenda item.

6.1.2 TSG-RAN WG3

There was no input for this agenda item.

6.1.3 TSG-RAN WG4

There was no input for this agenda item.

6.1.4 TSG-SA and TSG-SA WGs

There was no input for this agenda item.

6.1.5 TSG-CN and TSG-CN WGs

There was no input for this agenda item.

6.1.6 TSG-T and TSG-T WGs

There was no input for this agenda item.

6.1.7 TSG-GERAN and TSG-GERAN WGs

R2-020059 (GP-012843, to TSG-RAN WG2) LS on Number of UTRAN frequencies monitored by an MS (TSG-GERAN)

This LS would be presented at WG2#27 in Orlando.

6.1.8 ITU-R/ITU-T

There was no input for this agenda item.

6.2 General decisions

General

There was no input for this agenda item.

6.3 Proposed changes on 25.301

CRs to 25.301

There was no input for this agenda item.

6.4 Proposed changes on 25.302

CRs to 25.302

There was no input for this agenda item.

6.5 Proposed changes on 25.303

CRs to 25.303

There was no input for this agenda item.

6.6 Proposed changes on 25.304

CRs to 25.304

There was no input for this agenda item.

6.7 Proposed changes on 25.305

CRs to 25.305

There was no input for this agenda item.

6.8 Proposed changes on 25.306

CRs to 25.306

There was no input for this agenda item.

6.9 Proposed changes on 25.307

CRs to 25.307

There was no input for this agenda item.

6.10 Proposed changes on 25.321

CRs to 25.321

There was no input for this agenda item.

6.11 Proposed changes on 25.322

CRs to 25.322

There was no input for this agenda item.

6.12 Proposed changes on 25.323

CRs to 25.323

There was no input for this agenda item.

6.13 Proposed changes on 25.324

CRs to 25.324

There was no input for this agenda item.

6.14 Proposed changes on 25.331

CRs to 25.331

There was no input for this agenda item.

6.15 Proposed changes on 25.921

CRs to 25.921

There was no input for this agenda item.

6.16 Proposed changes on 25.922

CRs to 25.922

There was no input for this agenda item.

6.17 Proposed changes on 25.925

CRs to 25.925

There was no input for this agenda item.

6.18 Proposed changes on 34.109

CRs to 34.109

There was no input for this agenda item.

7 Release-independent features

7.1 25.307 Requirements on UEs supporting a Release Independent Frequency band

There was no input for this agenda item.

8 Corrections on Release 4

8.1 Incoming LSs on Release 4

Liaisons on R'99 are captured under Agenda Item 6.1, liaisons on Rel-5 under Agenda Item 9.1.

8.1.1 TSG-RAN WG1

There was no input for this agenda item.

8.1.2 TSG-RAN WG3

There was no input for this agenda item.

8.1.3 TSG-RAN WG4

There was no input for this agenda item.

8.1.4 TSG-SA and TSG-SA WGs

There was no input for this agenda item.

8.1.5 TSG-CN and TSG-CN WGs

There was no input for this agenda item.

8.1.6 TSG-T and TSG-T WGs

There was no input for this agenda item.

8.1.7 TSG-GERAN and TSG-GERAN WGs

There was no input for this agenda item.

8.2 General decisions

There was no input for this agenda item.

8.3 Proposed changes on 25.301

CRs to 25.301

There was no input for this agenda item.

8.4 Proposed changes on 25.302

CRs to 25.302

There was no input for this agenda item.

8.5 Proposed changes on 25.303

CRs to 25.303

There was no input for this agenda item.

8.6 Proposed changes on 25.304

CRs to 25.304

There was no input for this agenda item.

8.7 Proposed changes on 25.305

CRs to 25.305

There was no input for this agenda item.

8.8 Proposed changes on 25.306

CRs to 25.306

There was no input for this agenda item.

8.9 Proposed changes on 25.307

CRs to 25.307

There was no input for this agenda item.

8.10 Proposed changes on 25.321

CRs to 25.321

There was no input for this agenda item.

8.11 Proposed changes on 25.322

CRs to 25.322

There was no input for this agenda item.

8.12 Proposed changes on 25.323

CRs to 25.323

There was no input for this agenda item.

8.13 Proposed changes on 25.324

CRs to 25.324

There was no input for this agenda item.

8.14 Proposed changes on 25.331

CRs to 25.331

There was no input for this agenda item.

8.15 Proposed changes on 25.921

CRs to 25.921

There was no input for this agenda item.

8.16 Proposed changes on 25.922

CRs to 25.922

There was no input for this agenda item.

8.17 Proposed changes on 34.109

CRs to 34.109

There was no input for this agenda item.

8.18 Technical Reports on Release 4 Work Items

There was no input for this agenda item.

9 Release 5 and beyond features

R2-020069 Work plan (MCC)

This document was withdrawn. A revised work plan would be provided for the WG2#27 meeting.

9.1 Incoming LSs on Release 5

Liaisons on R'99 are captured under Agenda Item 6.1, liaisons on Rel-4 under Agenda Item 8.1.

9.1.1 TSG-RAN WG1

R2-020046 (R1-011298, to TSG-RAN WG2) LS on ACK/NACK signalling for HSDPA (TSG-RAN WG1)

Christoph Herrmann (Philips) presented this LS.

Discussion: There was one discussion document on this topic (R2-020122).

Decision: The LS was noted. The power offset needed to be signalled. A proposal for the granularity was needed (probably in the order of 1 dB would be sufficient) for the draft changes to RRC.

R2-020047 (R1-011306, copy TSG-RAN WG2) Response to LS (R3-012693) on RL timing adjustment mechanisms (TSG-RAN WG1)

Juha Mikola (Nokia) presented this LS.

Discussion: If this WI was finalised for March, some changes to RRC were needed. WG2 had sent a response to R3-012693 (in R2-012390) to ask for more clarification, without response so far.

Decision: The LS was noted.

R2-020048 (R1-011337, copy TSG-RAN WG2) LS on USTS TR (TSG-RAN WG1)

Denis Fauconnier (Nortel Networks) presented this LS.

Discussion: In TSG-RAN no WI had been created.

Decision: The LS was noted.

R2-020049 (R1-011341, to TSG-RAN WG2) LS on Improvement of inter-frequency and inter-system measurement for 1.28 Mcps TDD (TSG-RAN WG1)

R2-020119 Introduction of TR 25.xxx on Improvement of Inter-frequency and inter-system measurement (TSG-RAN WG1)

Joerg Schniedenharn (Siemens) presented this LS. Kook-Heui Lee (Samsung) presented the TR.

Discussion: There was a contribution (R2-020077) on this topic, see agenda item 9.5.1. However, a TR should have been attached to this LS but was not and was therefore made available separately as R2-020119. After the presentation, the topic was further discussed based on R2-020077.

Decision: The LS was noted.

R2-020050 (R1-011350, copy TSG-RAN WG2) LS on TFCI power control in hard split mode (TSG-RAN WG1)

Tania Le Goff (Nortel Networks) presented this LS.

Discussion: There was nothing to do for WG2.

Decision: The LS was noted.

9.1.2 TSG-RAN WG3

R2-020051 (R3-013037, copy TSG-RAN WG2) Response to LS (NP-010540) on WID: AMR-WB Speech Service - Core Network Aspects (TSG-RAN WG3)

Juha Mikola (Nokia) presented this LS.

Discussion: There was nothing to do for WG2.

Decision: The LS was noted.

R2-020052 (R3-013067, to TSG-RAN WG2) Response to LS (S2) on Update of Iu-Flex status (TSG-RAN WG3)

Joakim Bergström (Ericsson) presented this LS.

Discussion: The "NRI" was apparently equivalent to "CN domain". TSG-SA WG2 had responded to this LS in R2-020110. Using the TMSI, it could still be that the correct routing would work, but this needed to be checked. This was confirmed after checking.

Decision: The LS was noted.

R2-020107 (R3-013485, copy TSG-RAN WG2) Response to LS (S1-011236) on Retransmission and Acknowledgement in MBMS (TSG-RAN WG3)

Juha Mikola (Nokia) presented this LS.

Discussion: This LS was WG3's response to the LS in R2-020054.

Decision: The LS was noted.

R2-020108 (R3-013567, copy TSG-RAN WG2) Response to LS (S2-013076) on Unequal Error Protection for PS conversational multimedia services (TSG-RAN WG3)

Tania Le Goff (Nortel Networks) presented this LS.

Discussion: WG3 had a preference for the second solution.

Decision: The LS was noted.

R2-020109 (R3-013688, copy TSG-RAN WG2) Response to LS (R1-011350) on TFCI power control in hard split mode (TSG-RAN WG3)

Tania Le Goff (Nortel Networks) presented this LS.

Discussion: There was nothing to do for WG2.

Decision: The LS was noted.

9.1.3 TSG-RAN WG4

R2-020053 (R4-011614, to TSG-RAN WG2) Response to LS (R1-010987) on AOA requirements for UE Positioning Enhancements for 1.28 Mcps TDD (TSG-RAN WG4)

Discussion: The LS had been captured by the draft TR.

Decision: The LS was noted.

9.1.4 TSG-SA and TSG-SA WGs

R2-020054 (S1-011236, to TSG-RAN WG2) LS on Retransmission and acknowledgement in MBMS (TSG-SA WG1)

Juha Mikola (Nokia) presented this LS.

Discussion: There was a response from WG3 in R2-020107.

Decision: The LS was noted. **Inputs were requested to answer TSG-SA WG1's question.**

R2-020055 (S1-011310, copy TSG-RAN WG2) Response to LS (GP-011913) on Requirements on Multimedia Broadcast/Multicast Service (TSG-SA WG1)

Juha Mikola (Nokia) presented this LS.

Discussion: This LS was related to the one in R2-020054.

Decision: The LS was noted.

R2-020056 (S2-013076, to TSG-RAN WG2) LS on Unequal Error Protection for PS conversational multimedia services (TSG-SA WG2)

Tania Le Goff (Nortel Networks) presented this LS.

Discussion: The response by WG3 was available in R2-020108. TSG-SA WG2 had provided a follow-up of the LS in R2-020112.

Decision: The LS was noted.

R2-020057 (S2-013488, to TSG-RAN WG2) Response to LS (R2-012398) on Cell ID in SIP messages (TSG-SA WG2)

Alan Law (Vodafone Group) presented this LS.

Discussion: It was somewhat strange that it seemed to be requested to add an access-network-specific piece of data (Cell ID) to be used by the SIP server. It would perhaps be better to use Location services, or provide a location estimate that might be based on Cell ID, but at least kept it transparent for the SIP server. The LS led to three questions: Is the Service area ID provided to the UE? If so, in which release? And, how to provide it to the UE? In answer to the first question it should be on request, not to every UE (the Cell ID could be very big and it would not be efficient to include in every message). The answer to the second question could not yet be answered (it did not seem to be necessary to finish it by March, as there was no requirement according to the attached TSG-SA WG1 LS). The answer to the third question needed some more thought.

Decision: The LS was noted. Alan Law (Vodafone Group) would be rapporteur for an e-mail discussion on provisioning of Cell ID for IMS

R2-020110 (S2-013495, copy TSG-RAN WG2) Response to LS (R3-013067) on Update of Iu-Flex status (TSG-SA WG2)

Decision: The LS was noted. See discussion on R2-020052/R3-013067.

R2-020111 (S2-013580, to TSG-RAN WG2) Response to LS (R2-012401, R3-013036, N1-011321) on Multiple RAB Activation Issue (TSG-SA WG2)

Denis Fauconnier (Chairman) presented this LS.

Discussion: After some discussion, no clear benefits were seen from WG2's point of view.

Decision: The LS was noted. Joakim Bergström (Ericsson) would draft a response to TSG-SA WG2 in R2-020121.

R2-020112 (S2-013581, to TSG-RAN WG2) LS [follow-up on S2-013076] on Unequal Error Protection for PS conversational multimedia services (TSG-SA WG2)

Tania Le Goff (Nortel Networks) presented this LS.

Discussion: Apparently TSG-SA WG2 had not seen the TSG-RAN WG3 response yet. In summary, TSG-SA WG2 wants to apply UEP, sticking to current RANAP principles, but not within the Rel-5 timeframe. There did not appear to be a conflict with ROHC as it was specified currently.

Decision: The LS was noted. Tania Le Goff (Nortel Networks) would draft a response to TSG-SA WG2, copy TSG-RAN WG3 to inform them that UEP would be a topic for a later release than Rel-5.

R2-020113 (S2-013592, to TSG-RAN WG2) LS on "Last known location" via SGSN for a UE with an Iu interface connection but which does not respond to paging from the RNC (TSG-SA WG2)

Alan Law (Vodafone Group) presented this LS.

Discussion: The Stage 2 needed to be updated with "age". The discussion needed to be continued, but this would be done on the basis of document R2-020106 (agenda item 9.6).

Decision: The LS was noted.

R2-020114 (S2-013597, to TSG-RAN WG2) Response to LS (G2) on External Network-Assisted Cell Change (TSG-SA WG2)

Alan Law (Vodafone Group) presented this LS.

Discussion: There was already a task for WG2 to work on this (from TSG-GERAN).

Decision: The LS was noted.

9.1.5 TSG-CN and TSG-CN WGs

R2-020115 (N3-010610, copy TSG-RAN WG2) LS on Mapping of SDP parameters in UMTS QoS parameter (TSG-CN WG3)

Denis Fauconnier (Chairman) presented this LS.

Discussion: There was nothing to do for WG2.

Decision: The LS was noted.

9.1.6 TSG-T and TSG-T WGs

R2-020058 (T1-010552, to TSG-RAN WG2) LS on Advice on proposed RABs (PS Domain) to be included in Rel-5 or TS 34.108 to support conversational class traffic (TSG-T WG1)

Denis Fauconnier (Chairman) presented this LS.

Discussion: TSG-RAN had already responded to TSG-T WG1 that this had been forgotten in the past, and would be done by TSG-RAN (WGs) for everything (not only for the proposal in this LS). The process would be that input on this for TS 34.108 would be first treated in TSG-RAN WG1 and WG2, and after agreement in these groups sent to TSG-T WG1 for agreement. From the next meeting onward, WG2 always had to take into account TS 34.108. The actual proposal in the LS was a mixture of existing header compression and new proposals. The latter should first be discussed for the core specifications in WG2, the former should be raised as CR to 34.108 for the proper release.

Decision: The LS was noted.

R2-020116 (T1-010552, to TSG-RAN WG2) LS on Advice on proposed RABs (PS Domain) to be included in Rel-5 of TS 34.108 to support conversational class traffic (TSG-T WG1)

This document was the same as R2-020058 and was withdrawn.

9.1.7 TSG-GERAN and TSG-GERAN WGs

There was no input for this agenda item.

9.2 Approved Work Items under WG2 responsibility

R2-020065 Work Item sheets - Latest situation (TSG-RAN Secretary)

R2-020066 Historic Work Item sheets (TSG-RAN Secretary)

These documents contained the latest status of the Work Items (R2-020065) and the finished WIs (R2-020066) and were for information.

The approved Work Items (not finished or deleted) at the end of TSG-RAN #14 were:

2. Base station classification
3. FDD Base station classification
4. TDD Base station classification
11. Terminal power saving features
14. RRM optimizations for Iur and Iub
15. Radio access bearer support enhancement
16. Improvement of inter-frequency and inter-system measurements
17. Improved usage of downlink resource in FDD for CCTrCHs of dedicated type
18. IP Transport in UTRAN
20. Evolution of the transport in the UTRAN
21. Radio Interface Improvement Feature
22. RAN Improvement Feature
23. UE Positioning
35. UE positioning enhancements
36. RAN Technical Small Enhancements and Improvements
40. RAN work for Intra Domain Connection of RAN Nodes to Multiple CN Nodes
43. High Speed Downlink Packet Access (HSDPA)
44. High Speed Downlink Packet Access (HSDPA) - *Physical Layer*
45. High Speed Downlink Packet Access (HSDPA) - *layer 2 and 3 aspects*
46. High Speed Downlink Packet Access (HSDPA) - *Iub/Iur Protocol Aspects*
47. High Speed Downlink Packet Access (HSDPA) - *RF Radio Transmission/ Reception, System Performance Requirements and Conformance Testing*
48. Multiple Input Multiple Output antennas (MIMO)
51. Enhancement on the DSCH hard split mode
52. NodeB Synchronisation for 1.28 Mcps TDD
53. RL Timing Adjustment
54. Separation of resource reservation and radio link activation
55. Re-arrangement of Iub Transport Bearers (originally Traffic Termination Point Swapping)
56. Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 positioning methods
57. UE positioning enhancements for 1.28 Mcps TDD
58. Base Station Classification for 1.28 Mcps TDD
59. Iur Common Transport Channel Efficiency Optimisation
60. Iur Neighbouring cell reporting Efficiency Optimisation
61. Beamforming enhancements (originally Beamforming)
63. Improvement of RRM across RNS and RNS/BSS
64. Support of Site Selection Diversity Transmission in UTRAN
65. Enhancement of Broadcast and Introduction of Multicast Capabilities in RAN

TSG-RAN WG2 is leading WG for the following (Rel-5 and beyond) WIs:

- Radio access bearer support enhancement
- Hybrid ARQ II/III [stopped at TSG-RAN #14 because the work is part of HSDPA]
- Improved usage of downlink resource in FDD for CCTrCHs of dedicated type
- High Speed Downlink Packet Access (HSDPA)
- High Speed Downlink Packet Access (HSDPA) - *layer 2 and 3 aspects*
- UE positioning enhancements
- UE positioning enhancements for 1.28 Mcps TDD
- Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning [finished at TSG-RAN #13]
- Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 positioning methods
- Terminal power saving
- Enhancement of Broadcast and Introduction of Multicast Capabilities in RAN

9.2.1 High Speed Downlink Packet Access (HSDPA)

R2-020138 Multiplexing in HSDPA (Siemens)

Joerg Schniedenharn (Siemens) presented this document.

Decision: The document was noted. See decision on R2-020141

R2-020140 Various changes to 25.308 [Rel-5] (Nortel Networks)

Denis Fauconnier (Nortel Networks) presented this document.

Discussion: This document contained a proposal for the model to cover the topic of multiplexing that proved unclear in the discussion of R2-020086 and R2-020137 (MAC CR and comments). The options proposed for the MAC-hs PDU were discussed. Again extensive discussion took place on the usage of "MAC-d flow" versus "logical channel" and the usage of priority classes. Based on the discussion, the options were rewritten and to:

- One MAC-hs PDU to contain only MAC-PDUs with the same size, and:
 - (option 1) from the same logical channel;
 - (option 2) from multiple logical channels within the same MAC-d flow;
 - (option 3) from multiple logical channels in one or several MAC-d flows.

After further discussion, this was again changed to (see decision).

It was agreed that the concept of HS-SCCH set was needed.

Decision: The document was noted. Multiplexing chain inside MAC-hs needed to be completed:

- One MAC-hs PDU to contain only MAC-d PDUs with the same priority, and from the same MAC-d flow.
- Different MAC-d PDU sizes can be supported in a given MAC-hs PDU. Two formats for the MAC-hs header may be needed and decided upon by UTRAN for each HS-DSCH, one with multiple size, one with same size for the concatenated MAC-d PDUs. Details FFS.

Johan Torsner (Ericsson) would draft a figure with the model based on this decision. This was made available in R2-020143. An update of R2-020140 was also needed and would be provided in RP-020141.

R2-020141 Various changes to 25.308 [Rel-5] (Nortel Networks)

Denis Fauconnier (Nortel Networks) presented this document.

Discussion: Based on the discussion on R2-020145, the statement "Two formats for the MAC-hs header ... Details FFS." was removed. "Serving HS-HCCH set" should read "Serving HS-SCCH set". In the definition of HS-SCCH set, the "have no intersection or overlap" should read "have overlap or no intersection" to avoid ambiguity. A clarifying sentence needed to be added to the UE architecture description along the lines of "The mapping from reordering queue to C/T MUX is configured by RRC". In the 'new' 6.1.2, after "... cannot be" it should read "...cannot be simultaneous in one UE". In 5.2.2.1, the sentence "The number of channelisation codes..." should read "The HS-PDSCH channelisation codes...". The decision, in the same subclause, on which of the square bracket choices (a list of sets or one set) to choose would be taken at WG2#27 in co-ordination with WG1 and WG3.

Decision: The document was noted. The changes (with the revisions above) were agreed. Richard Burbidge (Motorola) would update 25.308 with these changes in R2-020146. After the end of this WG2 meeting, he would also include the results of the WG1 held in parallel with WG2 during this WG2 meeting in a further update.

R2-020143 MAC PDU format (Ericsson)

This document was updated by Qualcomm in R2-020145 and therefore this document was withdrawn.

R2-020145 Update to MAC PDU format (Qualcomm)

Johan Torsner (Ericsson) and Hector Vayanos (Qualcomm) presented this document.

Discussion: Alternative four was the "full flexibility" alternative. It was explained that alternative four only added overhead if the extra flexibility was used, otherwise it was identical to alternative two. If multiplexing was used, this was not completely true. It might be possible to configure alternative four in a

way that reduced to the same overhead as alternative two. Alternative two looked to be OK, and alternative four might be OK too.

Decision: The document was noted. It was agreed to support multiple PDU size and alternative two supports this functionality. However, alternative four also proposed to multiplex different priority queues in one PDU. Contributions were invited for WG2#27 whether a good encoding of the MAC-hs header would be possible for alternative four.

R2-020079 Reordering buffer management (LG Electronics Inc.)

Woon-Young Yeo (LG Electronics Inc.) presented this document.

Decision: The document was noted. It was decided "not to allow no multiplexing" because it was possible to achieve the same gains by using different MAC-d flows.

R2-020099 Signalling of HSDPA UE capabilities (Siemens)

Joerg Schniedenharn (Siemens) presented this document.

Discussion: The proposed principle of signalling the class with only the allowed parameters within that class seemed agreeable.

Decision: The document was noted. The principle was agreed from the WG2 point of view. The detailed description of the UE capabilities needed to be discussed with WG1 at the WG2#27 meeting in Orlando.

R2-020101 Physical Channel Models for HSDPA (Siemens)

Joerg Schniedenharn (Siemens) presented this document.

Discussion: The proposal for the uplink model was agreed. On the downlink model, some errors were spotted in the proposal. These would be corrected.

Decision: The document was noted. The (revised) models were agreed and would be incorporated in an update of 25.308 and in the draft CR to 25.302.

R2-020146 Draft revision of 25.308 (Motorola)

Richard Burbidge (Motorola) presented this document.

Discussion: This version was intended to be given to WG3 for reference during its upcoming meeting.

Decision: The CR was noted. The CR reflected the current status in WG2 after WG2#26. It did not contain the status in WG1 yet. Motorola (Rapporteur) would provide the document to WG3.

9.2.2 High Speed Downlink Packet Access (HSDPA) - layer 2 and 3 aspects

Draft CRs and related documents

R2-020104 Proposed draft CR to 25.301 [Rel-5] on HSDPA (Lucent Technologies)

Gordon Young (Lucent Technologies) presented this CR.

Discussion: The configuration "A" and "B" had been renamed in the previous meeting and should be updated. Alignment with MAC was also necessary. It was not clear what was meant by "higher layer MAC entity" (5.3.1). Actually the whole text here was also in the MAC protocol, so it would be preferable to shorten it in this document. There was not one reording entity per priority class, but per "MAC(-d) flow" (good terminology to be defined). This would be clarified. It was also not clear what was meant by "sequentially" (5.1). The HS-DSCH was not really "shared" (the codes were shared, and WG1 had already been misled a few times by this statement). On 5.6.9.2 the second paragraph could be removed (and possibly the third paragraph). Where it stated "support of HSDPA" it should say "support for HS-DSCH".

Decision: An update of the CR was needed, see R2-020134.

R2-020134 Proposed draft CR to 25.301 [Rel-5] on HSDPA (Lucent Technologies)

Gordon Young (Lucent Technologies) presented this CR.

Discussion: The MAC-hs entity was not only used for the delivery of high-speed services.

Decision: The CR was noted. The CR seemed to reflect the current status in WG2. Comments could be sent to Gordon Young (Lucent Technologies), [who would provide an update on the e-mail reflector](#).

R2-020098 Proposed draft CR to 25.302 [Rel-5] on HSDPA (Siemens)

Joerg Schniedenharn (Siemens) presented this CR.

Discussion: In some areas it was now stated "what not to do", but not "what to do" (error handling). It was better to add the "what to do" part. Several shared control channels could be configured in the UE, but only one was to be decoded at one time. However, WG1 was still working on this. In 6.2, HI indicated HS-SICH in the case of TDD. It was noted that redundancy version was now part of the transport format. This had been discussed on the reflector and it was asked if this had really been the outcome of that discussion (it could be seen as HARQ signalling, primitive between two layers). For layer 1 to select one versus another one, it should be part of the transport format. It was agreed to be part of the transport format. In Annex A the redundancy version and modulation were missing from the table. In 7.1.7, second bullet, the "not applicable for HS-DSCH" applied only to one of the two changing, not to the "both" case. In 7.1.13, the new data indicator should also be identified. Further on the use of the term "semi-static", this implied that it should be signalled, but this was not the intention. There had, however, been a lot of comments on the use of the word "static" (people felt it was better to stick to the R'99 terminology). In 10.3.5.23 the time slot and burst type should be indicated for TDD. Finally, there was an editorial comment.

Decision: An update of the CR was needed, see R2-020135.

R2-020135 Proposed draft CR to 25.302 [Rel-5] on HSDPA (Siemens)

Comments on this CR should be sent to Joerg Schniedenharn (Siemens), [who would provide an update on the mailing list](#).

R2-020090 Proposed draft CR to 25.306 [Rel-5] on HSDPA UE capabilities (Nokia)

Juha Mikola (Nokia) presented this CR.

Discussion: It was asked how the values in Table 5.2.2.2 could be (significantly) lower than the current values. These values might not be realistic. This required some study. In answer to a question, it was explained that the reference configurations were supposed to be used by TSG-T (this was written in 5.2). A general capability "UE supports HS-DSCH" was useful for this document and would be added, even though it might be more optimised in RRC. It was commented that what the UE supported if it did not support HS-DSCH did not really need to be specified.

Decision: An update of the CR was needed, see R2-020136.

R2-020136 Proposed draft CR to 25.306 [Rel-5] on HSDPA UE capabilities (Nokia)

Juha Mikola (Nokia) presented this CR.

Decision: The CR was noted. The CR seemed to reflect the current status in WG2. Comments could be sent to Juha Mikola (Nokia), [who would provide an update on the e-mail reflector](#).

R2-020086 Proposed draft CR to 25.321 [Rel-5] on HSDPA (Ericsson)

Johan Torsner (Ericsson) presented this CR.

Discussion: In the figure of the MAC-hs in UTRAN, the HARQ entity was per UE. However, this was in line with the practice followed, everything was per UE context. There had been a few more comments on the reflector, but there had been no time to include all of them, see R2-020137.

Decision: An update of the CR was needed, taking into account the comments from R2-020137 as discussed. The update (based on R2-020137) would be in R2-020139.

R2-020137 Comments on Proposed draft CR to 25.321 [Rel-5] on HSDPA (Nortel Networks)

Denis Fauconnier (Nortel Networks) presented this document.

Discussion: There was a long discussion on these comments. It was stated that these comments were trying to keep the model as close as possible to R'99, just naming something that had so far not been named. Some changes were agreed.

Decision: The document was noted. The document would form the basis for R2-020139.

R2-020139 Proposed draft CR to 25.321 [Rel-5] on HSDPA (Ericsson)

Johan Torsner (Ericsson) presented this CR.

Discussion: It needed to be stated as a note to alternative two that there was more to look at (based on the discussion on alternative four). "Priority" would be renamed to "Re-ordering queue Id".

Decision: The CR was noted. The CR needed to be further updated to reflect the current status in WG2. Any further comments could be sent to Johan Torsner (Ericsson) via the e-mail reflector, who would provide an update on the e-mail reflector.

R2-020125 RRC Downlink Signalling Parameter for HSDPA (Motorola)

Richard Burbidge (Motorola) presented this document.

Discussion: This document provided some explanations for the draft changes proposed for RRC in R2-020126. It was asked if the MAC PDU size itself or an identifier of that size would be signalled. The latter was intended. On the IR per connection (bullet 4) mentioned, this was a possibly necessary change in the future, depending on decisions in WG1. So far nothing was reflected on that in R2-020126. It was commented (bullet 3) that UE-specific CRC was probably not sufficient to replace UE-Id entirely, but there were different solutions. On bullet 1, it was clarified that the three parameters would be signalled separately, i.e. code allocation, modulation and transport block set size were independently signalled.

Decision: The document was noted.

R2-020126 Draft changes to RRC to support HSDPA (Motorola)

Richard Burbidge (Motorola) presented this document.

Discussion: The document was not yet in CR format. A few comments would be taken into account in a new version. The decisions taken in this meeting would also be included.

Decision: The document was noted. An update was needed for the WG2#27 meeting in Orlando.

R2-020085 Updates of RRC procedures for support of HS-DSCH (Ericsson)

Johan Torsner (Ericsson) presented this document.

Discussion: This document contained some issues that were not yet covered by the draft changes to RRC in R2-020126. Several comments were made.

Decision: The document was noted. The document (taking into account the comments) would be integrated into the draft changes to RRC.

Mobility

R2-020088 Mobility examples when the UE has an HS-PDSCH assignment (Ericsson)

Joakim Bergström (Ericsson) presented this document.

Discussion: The intention was for this to be captured in 25.308 in section 3 (adding the missing 'serving'), as there was some NBAP information that would be less appropriate for 25.303.

Decision: The document was noted. The contents were agreed and would be merged with those in R2-020100 and put into 25.308.

R2-020100 HSDPA Mobility Procedures (Siemens)

Norbert Kroth (Siemens) presented this document.

Discussion: The proposal was very similar to the one in R2-020088.

Decision: The document was noted. The contents were agreed and would be merged with those in R2-020088 and put into 25.308.

Scheduling

R2-020078 Scheduling function in MAC-hs (LG Electronics Inc.)

Woon-Young Yeo (LG Electronics Inc.) presented this document.

R2-020084 QoS aspect for HSDPA Scheduling (Panasonic)

Eiko Seidel (Panasonic) presented this document.

Discussion [on R2-020078 and R2-020084]: The streaming service was part of the objectives and should be part of HSDPA. It was commented that most of it was already there, although not everything might have been written down in 25.308. Also, it was commented that there were delay constraints. Delay information was needed in Node B. It was agreed to have one delay attribute per priority queue (but it was clarified that the different priority queues could have the same delay attribute) and control plane was sufficient to signal it. The next problem was: how does RNC know what is the available bitrate? It was agreed that this needed to be provided by Node B via flow control (or perhaps NBAP measurements, for WG3 to decide).

Decision: The documents were noted. The two agreements (delay attribute per priority queue and provision of available bitrate to RNC by Node B) would be captured in an update of 25.308.

Other protocol topics

R2-020092 HSDPA UE capability: L2 buffer size (Nokia)

Juha Mikola (Nokia) presented this document.

Discussion: There were four decisions needed: (1) What number of retransmissions should be provisioned before the window is stalled - is one sufficient? This seemed acceptable; (2) Is a round-trip delay of 150 ms a reasonable assumption for continuous operation? There was some doubt on this, so 300 ms was agreed (knowing this was overprovisioned); (3) Is the definition of the reference classes a sensible one? In the proposal, 1.2M was continuous, the other three were discontinuous. They were reflecting current thinking in WG1 (linked to the "maximum number of HS-DSCH codes received": 5/3, 5, 10, 15). The need for the restrictions proposed was questioned, or why there was mentioning of 'kbytes' where memory was now generally expressed in Mbytes. It was explained that the classes were intended for testing and for marketing (to show the benefits of HSDPA). It was agreed that there was no need to take a decision on the values now, but for the time being the values would be 50, 100, 200 and 300 as working assumption; (4) What is the number of AM RLC entities that can operate at the maximum bitrate? It was clarified that the class refers to the sum of the AM RLC entities using HSDPA but was not available to each of them separately.

Decision: The document was noted. The CR to 25.306 needed to be updated with the above decisions.

R2-020123 UM SN space limitation (Qualcomm)

Hector Vayanos (Qualcomm) presented this document.

Discussion: It was commented that the solution (2) seemed extreme, as the current procedure worked with limitations. It was responded that the contribution was based on the belief that the current procedure did not work in case of handovers. Also in solution (4), "disallow" was very strong. Another solution was to do nothing and leave freedom to use it (with care, as always). An interesting statement was that the UM sequence number space was seen as too small. This concern was not shared by other companies.

Decision: The document was noted. The proposals were not agreed.

R2-020124 Handover vs. cell selection (Qualcomm)

Hector Vayanos (Qualcomm) presented this document.

Discussion: The only difference between this proposal and (intra-Node B) FCS as discussed in WG1 seemed to be that it was forcibly slowed down (switch every five TTIs rather than every TTI, which was

understood to require high bandwidth). The solutions seemed to address only the issue of how to get information to Node B. It was asked how the change of serving HS-DSCH cell was indicated to the UE. It was explained that the UE decided (ordered, not just 'indicated') which serving HS-DSCH cell it wanted. A standard question in cases like this was always, how does the UE know it is better to go to another cell. Radio conditions might be better, but the other cell might be completely congested for instance. The UE needed to be told for instance how many codes the next cell had, and be provided other 'intelligence' to allow it to decide. It was commented that, since this was really a form of FCS, it should be part of the SI on FCS, which was not within the scope of Rel-5.

Decision: The document was noted.

R2-020122 Control channel error probability target (Qualcomm)

Hector Vayanos (Qualcomm) presented this document.

Discussion: The aim was to make WG2's requirement for WG1 a little less 'vague'. It was hoped this would lead to simulations being done in WG1. There was doubt that better reference distributions could be found, and whether it would really help WG1. Since WG1 was meeting in parallel with WG2, and the CRs needed to be drafted already for the next (last) WG meetings to finish in time for the Rel-5 deadline, time was very short to influence any work in WG1. It was also stated that there had been no requirement from WG2 to do this in one slot, and that this was considered quite short. Maybe WG1 could consider using two slots instead. It was agreed that this proposal was for WG1 to discuss.

Decision: The document was noted. Hector Vayanos (Qualcomm) would draft an LS to WG1 to say that WG2 had discussed this document and that it was up to WG1 to study the proposal, in R2-020144.

R2-020091 Compact signalling of multi-code allocation for HSDPA (Nokia)

Juha Mikola (Nokia) presented this document.

Decision: The document was noted. The proposal was agreed.

HARQ stall avoidance

R2-020087 HARQ stall avoidance (Ericsson)

Johan Torsner (Ericsson) presented this document.

Discussion: The focus of the presentation was on the windows-based mechanism as the rest of the proposal had been discussed (and decided upon) before. It was stated that a good rule needed to take into account the modular nature of the sequence numbers. Perhaps it was possible to avoid the problem by having the timer longer than the TSN 'rollover time', i.e. by having an 8-bit TSN (equivalent to a 512 ms timer, which is longer than the expected time a sequence number is in the buffer). It was explained that there could be an infinite number of sequence numbers with value x in the buffer, and that a rule was needed for the receiver to decide where in the 'infinite' buffer this particular x needed to be stored (actually, 'reordering entity management' could be a better name than 'stall avoidance'). The use of the word 'window' was confusing also.

Decision: The document was noted. See decision on R2-020147.

R2-020082 Window based mechanism for HARQ stall avoidance (ASUSTeK Computer Inc.)

This document was covered by the discussion on R2-020087 and therefore did not need to be presented.

R2-020132 Pointer approach for HARQ stall avoidance (Philips)

Christoph Herrmann (Philips) presented this document.

Discussion: This document consisted of two different parts. On the one hand it contained a proposal similar to that in R2-020087, and on the other hand a proposal in the direction of R2-020080 and the existing agreements on the timer-based mechanism.

Decision: The document was noted. See decision on R2-020080.

R2-020105 Stall Avoidance with In-Band Signalling (Lucent Technologies)

Gordon Young (Lucent Technologies) presented this document.

Discussion: The document was based on the belief that window-based mechanisms posed important drawbacks. It was commented that the proposal impacted every PDU sent and was most suited to one particular, rather rare, case. The timer-based mechanism was supposed to be available anyway. In answer, it was stated that the Ericsson and ASUSTeK proposals solved the same problem also, but the proponent considered the proposal in this document to be robust, in-band and less complex than those proposals. It was commented that at least some of the rules proposed in the Ericsson proposal seemed necessary in any case. It was agreed that the proposals attempted to solve the same problem. However, on the necessity of the rules, it was agreed that they were really checking correct UTRAN implementation, as it was network responsibility to manage the buffer properly. It had been decided in the past that such checking was not really desirable. Something was needed to avoid a crash, but not necessarily those rules. From UE point of view, both proposals seemed equally simple. For the complexity of the scheduler, there did not seem to be much difference either. The Lucent proposal seemed to be always quicker, at the cost of more overhead. The overhead was in-band, and therefore cost less. It was felt that if the Lucent proposal was adopted, there would still be some rules needed, but it was not a big problem, more details. So the decision was if WG2 wanted in-band signalling or not. Support for both approaches was fairly even.

Decision: The document was noted. See decision on R2-020147.

R2-020147 Comparison of stall avoidance schemes (Lucent Technologies)

Gordon Young (Lucent Technologies) presented this document.

Discussion: The proposal was to use the rules from the Ericsson proposal with in-band signalling for an ASN field. It was commented that after consideration, the proposal seemed to be overengineering. However, it could not really be said that the situation where it was useful was rare before networks were up and running. Also, it seemed possible to reduce the overhead of the in-band solution by providing a delta rather than a full TSN. No agreement could be reached.

Decision: The document was noted. The minimum needed for Rel-5 was a timer-based mechanism. There was no agreement on whether the 'window-based' mechanism or in-band signalling were needed. An e-mail discussion ("Stall avoidance schemes") would be held with Gordon Young (Lucent Technologies) as rapporteur.

R2-020080 Timer based Stall Avoidance mechanism (LG Electronics Inc.)

SeungJune Yi (LG Electronics Inc.) presented this document.

Decision: The document was noted. Johan Torsner (Ericsson) would update the draft CR to 25.321 based on the proposal in this document and trying to list the differences with R2-020132 from Philips. This would be sent on the reflector for commenting.

R2-020081 Timer based mechanism for HARQ stall avoidance (ASUSTeK Computer Inc.)

Sam Jiang (ASUSTeK Computer Inc.) presented this document.

Discussion: The concept was fundamentally different between R2-020080 and R2-020132 in that it was based on using more than one timer.

Decision: The document was noted.

9.2.3 Radio access bearer support enhancement

R2-020070 PDCP - Header Compression for IMS Voice calls (Hutchison 3G)

Mony Kochupillai (Hutchison 3G) presented this document.

Discussion: The proposal was to add a new profile to ROHC. For this 0 byte header compression there were several proposals in IETF. It was stated that using 0 byte header compression would achieve a similar efficiency as using Unequal Error Protection. However, one did not exclude the other: it was also possible to use both, achieving even better efficiency. Three years ago, the gain of UEP had been studied and found to be in the order of 0.1-0.4 dB. A comment on the PDCP header was not correct and that issue

needed to be revisited. It was commented that some work was needed in WG2 to verify this new proposal, and that it was a bit late for Rel-5. A presentation of the status in ROHC was needed.

Decision: The document was noted. Ericsson would investigate UEP and the status in ROHC, but not within the context of Rel-5.

R2-020093 TR 25.860 v0.1.0 (Nokia)

Juha Mikola (Nokia) presented this TR.

Discussion: There was a small comment. WG3 should also be informed of the impacts.

Decision: With the comment taken into account, the contents of the TR were agreed. The update would be provided in R2-020128. Juha Mikola (Nokia) would draft an LS to WG3 in R2-020129.

R2-020128 TR 25.860 v0.2.0 (Nokia)

Decision: The contents of the TR were agreed. It would be attached to R2-020129.

R2-020094 Proposed draft CR to 25.303 [Rel-5] on RFC3095 context relocation (Nokia)

Juha Mikola (Nokia) presented this CR.

Discussion: There were modes without ACK (U-mode) and it was asked how the UE was aware in such cases. It was answered that in Rel-4, UE would always send full headers as default, unless told via signalling not to. The description of what happened in the UE needed to be added to the CR.

Decision: The CR was noted. An update was needed for WG2#27 in Orlando.

R2-020095 Proposed draft CR to 25.306 [Rel-5] on RFC3095 context relocation (Nokia)

Juha Mikola (Nokia) presented this CR.

Decision: The CR was noted.

R2-020096 Proposed draft CR to 25.323 [Rel-5] on RFC3095 context relocation (Nokia)

Juha Mikola (Nokia) presented this CR.

Discussion: It was commented that so far, it was possible to use off-the-shelf ROHC, but with the proposed changes, this was no longer the case as a new primitive, unknown to the ROHC group, would be used. Alternatively, the ROHC group could be asked to take this primitive into account. Preference for this latter option was expressed. This would be investigated. It was also commented that there were a number of "UTRAN shall" statements that should be "UTRAN should".

Decision: The CR was noted. An update was needed for WG2#27 in Orlando. Nokia would investigate if it was possible to 'officialise' the proposed usage of ROHC to preserve the black box idea.

9.2.4 UE positioning enhancements

There was no input for this agenda item.

9.2.5 UE positioning enhancements for 1.28 Mcps TDD

R2-020072 TR 25.859 v1.1.0 (CWTS)

DaRun Wang (CWTS) presented this TR.

Discussion: The accuracy classes were apparently the same as confidence information and should have the same name. It was commented that (in Angle of Arrival) instead of "BS" the term "UTRAN access point" should be used. TSG-SA WG5 needed to be added to the groups that had actions to do (it needed to be checked that the antenna direction was provided by O&M and Node B). WG3 also needed to comment on this TR.

Decision: With these changes, the contents of the TR were agreed. An update of the TR would be provided in RP-020130. Darun Wang (CWTS) would draft an LS to WG3 in R2-020131.

R2-020130 TR 25.859 v1.2.0 (CWTS)

Decision: The contents of the TR were agreed. It would be attached to R2-020131.

R2-020103 Proposed draft CR to 25.302 [Rel-5] on Introduction of AOA measurement for UE positioning enhancement for 1.28Mcps TDD (CWTS)

This document was replaced with R2-020120.

R2-020120 Proposed draft CR to 25.302 [Rel-5] on Introduction of AOA measurement for UE positioning enhancement for 1.28Mcps TDD (CWTS)

Darun Wang (CWTS) presented this CR.

Discussion: The same comments as made on R2-020073 were valid. Only UTRAN was affected, not the UE, so the cover sheet needed to be updated. Reason for change was introduction of AOA measurement, not alignment with WG1.

Decision: The CR was noted. An update was needed for WG2#27 in Orlando.

R2-020073 Proposed draft CR to 25.305 [Rel-5] on Introduction of UE positioning enhancement for 1.28 Mcps TDD (CWTS)

Darun Wang (CWTS) presented this CR.

Discussion: The CR should be a correction for Rel-4 (the only missing feature for 1.28 Mcps TDD in Rel-4 was IPDLs) and had no relation to the WI under discussion. Therefore, a separate CR was needed to introduce changes to Rel-5. The statement "both TDD and FDD will be supported in Release '99" should be changed (the release did not need to be mentioned). There was no need for isolated impact analysis.

Decision: The CR was noted. A separate CR was needed for Rel-5 to introduce UE positioning and the one provided here needed to be adapted to apply to Rel-4.

R2-020074 Proposed draft CR to 25.331 [Rel-5] on Introduction of UE positioning enhancement for 1.28 Mcps TDD (CWTS)

Darun Wang (CWTS) presented this CR.

Discussion: In Rel-4, it needed to be stated that the IPDL parameters needed to be rejected by the UE for 1.28 Mcps TDD.

Decision: The CR was noted. A CR was also needed for Rel-4 to cover the additional statement.

9.2.6 Open interface between the SMLC and the SRNC within the UTRAN to support A-GPS Positioning

R2-020102 Provision of timing information from the UE to the SMLC for improvement of A-GPS assistance data (Vodafone Group)

Alan Law (Vodafone Group) presented this document.

Discussion: It was explained that the information could be used even if there was no OTDOA capability. Some more time was needed to understand it.

Decision: The document was noted. The issue of the open interface would be revisited in WG2#27.

9.2.7 Open interface between the SMLC and the SRNC within the UTRAN to support Rel-4 positioning methods

R2-020097 TR 25.861 v0.1.0 (Nokia)

Juha Mikola (Nokia) presented this TR.

Discussion: It was commented that it was necessary to have at least a feeling for what the interface would look like that would result if a 'full-blown' SAS was adopted (to see that not more was lost than gained).

For example, currently Iupc was relatively simple. The TR needed to discuss a proper functional split. It was commented that the WI sheet currently only had impacts on 25.401 and 25.305. It was explained that the intention had been to modify 25.453 (PCAP) also, within the Rel-5 timeframe. It was considered that this might be difficult considering the time left available.

Decision: The TR was noted. It was decided that at least the O&M needed to be handled, to continue working on this WI through the WG2#27 meeting in Orlando, and come with a set of recommendations that could then be applied for the next release.

9.2.8 Enhancement of Broadcast and Introduction of Multicast Capabilities in RAN

R2-020071 Discussion of the objective of the MBMS WI (Siemens)

Michael Eckert (Siemens) presented this document.

Discussion: From the amount of work needed, it was obvious that it was not possible to finish this for Rel-5. The document was a good overview of the issues involved, but input on the issues was now needed. It seemed a good idea to separate the broadcast and multicast issues.

Decision: The document was noted. It was proposed to separate the Work Item into two WIs (from TSG-RAN point of view), as broadcast seemed a direct extension of R'99 SMS CB support (via Iubc interface) and most questions on architecture and service requirements were on multicast. This decision might be revisited at WG2#27. Michael Eckert (Siemens) would draft an LS to WG3 and TSG-SA WG1 to invite them to WG2#27 in Florida in R2-020133.

9.2.9 Terminal power saving

There was no input for this agenda item.

9.2.10 Improved usage of downlink resource in FDD for CCTrCHs of dedicated type

There was no input for this agenda item.

9.3 Approved study items under WG2 responsibility

R2-020067 Study Item sheets - Latest situation (TSG-RAN Secretary)

R2-020068 Historic Study Item sheets (TSG-RAN Secretary)

These documents contained the latest status of the Study Items (R2-020067) and the finished SIs (R2-020068) and were for information.

The approved Study Items (not finished or deleted) at the end of TSG-RAN #14 were:

1. Radio link performance enhancements
6. Fast Cell Selection (FCS) for HS-DSCH
8. Mitigating the Effect of CPICH Interference at the UE
10. Feasibility Study on UTRA Wideband Distribution Subsystems (WDS)
11. SRNS Relocation Procedure Enhancement
12. Introduction of direct transport bearers between SRNC and Node-B
13. Feasibility Study considering the viable deployment of UTRA in additional and diverse spectrum arrangements
14. Improvement of inter-frequency and inter-system measurement for 1.28 Mcps TDD

TSG-RAN WG2 is leading WG for the following Rel-5 and beyond Study Items:

- Feasibility Study for Improved Common DL Channel for Cell-FACH State [stopped at TSG-RAN #14]

9.4 Approved Work Items under other WG responsibility

9.4.1 Enhancement on the DSCH hard split mode

R2-020083 TFCI power control in the DSCH hard split mode (LG Electronics Inc.)

This document was replaced by R2-020142.

R2-020142 TFCI power control in the DSCH hard split mode (LG Electronics Inc.)

Eun-Jung Kim (LG Electronics Inc.) presented this document.

Discussion: The scheme had been discussed in WG1 and WG3. No WG2 problems were foreseen. Work could therefore proceed in WG1 and WG3.

Decision: The document was noted.

R2-020075 Withdrawn CR 024r1 to 25.306 [Rel-5] on UE capability for flexible hard split mode (Samsung)

Kook-Heui Lee (Samsung) presented this CR.

Discussion: The text description of the parameters should also be updated, not only the tables. After some discussion, it was found that this was a mandatory feature and those had so far not been included in TS 25.306. New text in WG1 specifications and RRC was felt sufficient.

Decision: The CR was withdrawn because no CR to 25.306 was necessary.

R2-020076 Proposed CR 1129r1 to 25.331 [Rel-5] on Support of flexible hard split mode (Samsung)

Kook-Heui Lee (Samsung) presented this CR.

Discussion: There was no need for an isolated impact statement. The CR needed to be updated as soon as 25.331 v4.3.0 was available. There was a discussion on whether there should be a separate column indicating this was for Rel-5. For this small change it was felt not to be necessary. You should look at the pile of all CRs (WG1, WG2, ...) when implementing a new feature, or at the Rel-5 specification only.

Decision: The CR was noted. The changes seemed agreeable, but an update was necessary based on 25.331 v4.3.0 for WG2#27 in Orlando.

9.4.2 Technical Enhancements and Improvements

There was no input for this agenda item.

9.5 Approved Study Items under other WG responsibility

9.5.1 Improvement of inter-frequency and inter-system measurement for 1.28 Mcps TDD

R2-020077 Improvement of Inter-RAT measurement for 1.28Mcps TDD (Samsung)

Kook-Heui Lee (Samsung) presented this document.

Discussion: It was explained that an SI consisted of two parts: to show feasibility and to show "significant incremental gain". WG2 could look at the feasibility, but WG4 should look at the "significant incremental gain". Solution 2 mixed functionality and this was considered problematic. Several other comments were made.

Decision: The document was noted. The WG2 signalling aspect was independent of the WG4 study. A new proposal could be made for WG2#27, taking into account the comments.

9.6 Other features

R2-020089 Network Assisted Cell Change from UTRAN to GERAN (Vodafone Group)

Alan Law (Vodafone Group) presented this document.

Discussion: There had been some investigation in GERAN that it was only needed for UTRAN to GERAN, not the other way round. There were a large number of small changes to be made, but the proponent still wanted to try and put this into Rel-5. Doubt was expressed on the feasibility of this. A compromise could be to have it on the radio part of CELL_DCH, but leave the network part for later (which would allow to have it in terminals quickly).

Decision: The document was noted.

R2-020106 Problem with SGSN location reporting behaviour with and without an Iu 'connection' to the UE (Vodafone Group)

Alan Law (Vodafone Group) presented this document.

Discussion: In 8.1.1, the only thing needed was "The last known position was X, and this was Y minutes ago". No reference to the method was necessary. Something in the order of 1 minute was felt to be good. Since the change was on Iu, it did not much matter for which release the change was proposed.

Decision: The document was noted. It was agreed in principle that when the UE could not be contacted, the RNC would say something along the lines of "The last known position is X, and this was Y minutes ago".

10 Liaison and output to other groups

10.1 TSG-RAN plenary

There were no LSs to this group.

10.2 TSG-RAN WG1

R2-020144 Draft LS (to TSG-RAN WG1) on Control channel error rate (Qualcomm)

Hector Vayanos (Qualcomm) presented this LS.

Discussion: The word HSDPA would be added to the title.

Decision: The LS was approved. The final version would be in R2-020148.

R2-020148 LS (to TSG-RAN WG1) on HSDPA Control channel error rate (TSG-RAN WG2)

Decision: The LS was approved.

10.3 TSG-RAN WG3

R2-020118 Draft response (to TSG-RAN WG3; copy TSG-RAN WG4) to LS (R3-012692) on SFN-SFN and Tutan-gps drift rate granularity and range (Qualcomm)

Francesco Grilli (Qualcomm) presented this LS.

Decision: The LS was approved. The final version would be in R2-020149.

R2-020149 Response (to TSG-RAN WG3; copy TSG-RAN WG4) to LS (R3-012692) on SFN-SFN and Tutan-gps drift rate granularity and range (TSG-RAN WG2)

Decision: The LS was approved.

R2-020129 Draft LS (to TSG-RAN WG3) on RFC3095 context relocation (Nokia)

Juha Mikola (Nokia) presented this LS.

Decision: The LS was approved. The final version would be in R2-020150.

R2-020150 LS (to TSG-RAN WG3) on RFC3095 context relocation (TSG-RAN WG2)

Decision: The LS was approved.

R2-020131 Draft LS (to TSG-RAN WG3; copy TSG-SA WG5) on UE positioning enhancements for 1.28 Mcps TDD (CWTS)

DaRun Wang (CWTS) presented this LS.

Decision: The LS was approved. The final version would be in R2-020151.

R2-020151 LS (to TSG-RAN WG3; copy TSG-SA WG5) on UE positioning enhancements for 1.28 Mcps TDD (TSG-RAN WG2)

Decision: The LS was approved.

R2-020152 LS (to TSG-SA WG1, TSG-SA WG2 and TSG-RAN WG3) on Discussion of the objective of the RAN WI on MBMS (TSG-RAN WG2) (see 10.5.2)

R2-020153 Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-CN WG1) to LS (S2-013580) on Multiple RAB Activation Issue (TSG-RAN WG2) (see 10.5.3)

R2-020154 Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-GERAN) to LS (S2-013076 and S2-013581) on Unequal Error Protection for PS conversational multimedia services (TSG-RAN WG2) (see 10.5.3)

10.4 TSG-RAN WG4

R2-020149 Response (to TSG-RAN WG3; copy TSG-RAN WG4) to LS (R3-012692) on SFN-SFN and Tutan-gps drift rate granularity and range (TSG-RAN WG2) (see 10.3)

10.5 TSG-SA and TSG-SA WGs

10.5.1 TSG-SA

There were no LSs to this group.

10.5.2 TSG-SA WG1

R2-020133 Draft LS (to TSG-SA WG1, TSG-SA WG2 and TSG-RAN WG3) on Discussion of the objective of the RAN WI on MBMS (Siemens)

Michael Eckert (Siemens) presented this LS.

Discussion: The sentence "decided to split the WI" was changed to "proposed to split...".

Decision: The LS was approved. The final version would be in R2-020152.

R2-020152 LS (to TSG-SA WG1, TSG-SA WG2 and TSG-RAN WG3) on Discussion of the objective of the RAN WI on MBMS (TSG-RAN WG2)

Decision: The LS was approved.

10.5.3 TSG-SA WG2

R2-020121 Draft response (to TSG-SA WG2; copy TSG-RAN WG3) to LS (S2-013580) on Multiple RAB Activation Issue (Ericsson)

Joakim Bergström (Ericsson) presented this LS.

Discussion: TSG-CN WG1 would be added in copy.

Decision: The LS was approved. The final version would be in R2-020153.

R2-020153 Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-CN WG1) to LS (S2-013580) on Multiple RAB Activation Issue (TSG-RAN WG2)

Decision: The LS was approved.

R2-020127 Draft response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-GERAN) to LS (S2-013076 and S2-013581) on Unequal Error Protection for PS conversational multimedia services (Nortel Networks)

Tania Le Goff (Nortel Networks) presented this LS.

Decision: The LS was approved. The final version would be in R2-020154.

R2-020154 Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-GERAN) to LS (S2-013076 and S2-013581) on Unequal Error Protection for PS conversational multimedia services (TSG-RAN WG2)

Decision: The LS was approved.

R2-020152 LS (to TSG-SA WG1, TSG-SA WG2 and TSG-RAN WG3) on Discussion of the objective of the RAN WI on MBMS (TSG-RAN WG2) (see 10.5.2)

10.5.4 TSG-SA WG3

There were no LSs to this group.

10.5.5 TSG-SA WG4

There were no LSs to this group.

10.5.6 TSG-SA WG5

R2-020151 LS (to TSG-RAN WG3; copy TSG-SA WG5) on UE positioning enhancements for 1.28 Mcps TDD (TSG-RAN WG2) (see 10.3)

10.6 TSG-CN and TSG-CN WGs

10.6.1 TSG-CN plenary

There were no LSs to this group.

10.6.2 TSG-CN WG1

R2-020153 Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-CN WG1) to LS (S2-013580) on Multiple RAB Activation Issue (TSG-RAN WG2) (see 10.5.3)

10.6.3 TSG-CN WG2

There were no LSs to this group.

10.6.4 TSG-CN WG3

There were no LSs to this group.

10.6.5 TSG-CN WG4

There were no LSs to this group.

10.6.6 TSG-CN WG5

There were no LSs to this group.

10.7 TSG-T and TSG-T WGs

10.7.1 TSG-T plenary

There were no LSs to this group.

10.7.2 TSG-T WG1

There were no LSs to this group.

10.7.3 TSG-T WG2

There were no LSs to this group.

10.7.4 TSG-T WG3

There were no LSs to this group.

10.8 TSG-GERAN and TSG-GERAN WGs

10.8.1 TSG-GERAN plenary

R2-020154 Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-GERAN) to LS (S2-013076 and S2-013581) on Unequal Error Protection for PS conversational multimedia services (TSG-RAN WG2) (see 10.5.3)

10.8.2 TSG-GERAN WG1

There were no LSs to this group.

10.8.3 TSG-GERAN WG2

There were no LSs to this group.

10.8.4 TSG-GERAN WG3

There were no LSs to this group.

10.8.5 TSG-GERAN WG4

There were no LSs to this group.

11 Any other business

Hiroshi Komatsu (J-Phone) announced that J-Phone had the pleasure to invite WG2 and WG3 to Kobe, Japan, for the meeting in April, explaining this was a very good season to be in Japan.

12 Closing of the meeting

Denis Fauconnier (Chairman) thanked the delegates for attending the meeting and ETSI for hosting.

The CRs on HSDPA would be cleaned up by the rapporteurs. Comments should be provided on the e-mail reflector before WG2#27. It was up to the rapporteurs to flag areas where no agreement could be reached as FFS. The CRs resulting from the e-mail discussion would be 'endorsed' at the beginning of WG2#27 and after that those changes would no longer be debatable. Only additional changes would then be discussed during WG2#27.

CRs for WG2#27 were requested to be circulated as soon as possible. The deadline for provision of R'99 and Rel-4 CRs was Tuesday night 12 February midnight Pacific time. For Rel-5 the deadline for CRs was Thursday night 14 February midnight Pacific time.

Approved E-mail discussions:

Topic

Spare values in ASN.1 (from WG2#25 meeting)

Stall avoidance schemes

Provisioning of Cell ID for IMS

Rapporteur

Himke van der Velde (Ericsson)

Gordon Young (Lucent Technologies)

Alan Law (Vodafone Group)

Annex A: List of delegates (attendees)

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TSG-RAN R2-020157 - Approved Report of 26th TSG-RAN WG2 meeting (Sophia Antipolis, France, 7 - 11 January 2002)

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Annex B: List of documents

Doc.No	Title	Source	Ag.It.	Revised by
R2-020001	Proposed agenda	Chairman	2	
R2-020002	Draft report of WG2 meeting #25 Makuhari, Japan, 26 - 30 November 2001	Secretary	3.1	
R2-020003	Approved report of WG2 meeting #25 Makuhari, Japan, 26 - 30 November 2001	Secretary	3.1	
R2-020004	TS 25.301 v3.9.0 Release '99	Secretary	3.2	
R2-020005	TS 25.302 v3.11.0 Release '99	Secretary	3.2	
R2-020006	TS 25.303 v3.10.0 Release '99	Secretary	3.2	
R2-020007	TS 25.304 v3.9.0 Release '99	Secretary	3.2	
R2-020008	TS 25.305 v3.7.0 Release '99	Secretary	3.2	
R2-020009	TS 25.306 v3.4.0 Release '99	Secretary	3.2	
R2-020010	TS 25.307 v3.1.0 Release '99	Secretary	3.2	
R2-020011	TS 25.321 v3.10.0 Release '99	Secretary	3.2	
R2-020012	TS 25.322 v3.9.0 Release '99	Secretary	3.2	
R2-020013	TS 25.323 v3.7.0 Release '99	Secretary	3.2	
R2-020014	TS 25.324 v3.4.0 Release '99	Secretary	3.2	
R2-020015	TS 25.331 v3.9.0 Release '99	Secretary	3.2	
R2-020016	TR 25.921 v3.6.0 Release '99	Secretary	3.2	
R2-020017	TR 25.922 v3.6.0 Release '99	Secretary	3.2	
R2-020018	TR 25.924 v1.0.0 Release ?	Secretary	3.2	
R2-020019	TR 25.925 v3.4.0 Release '99	Secretary	3.2	
R2-020020	TS 34.109 v3.4.0 Release '99	Secretary	3.2	
R2-020021	TS 25.301 v4.2.0 Release 4	Secretary	3.2	
R2-020022	TS 25.302 v4.3.0 Release 4	Secretary	3.2	
R2-020023	TS 25.303 v4.3.0 Release 4	Secretary	3.2	
R2-020024	TS 25.304 v4.3.0 Release 4	Secretary	3.2	
R2-020025	TS 25.305 v4.2.0 Release 4	Secretary	3.2	
R2-020026	TS 25.306 v4.3.0 Release 4	Secretary	3.2	
R2-020027	TS 25.307 v4.1.0 Release 4	Secretary	3.2	
R2-020028	TS 25.321 v4.3.0 Release 4	Secretary	3.2	
R2-020029	TS 25.322 v4.3.0 Release 4	Secretary	3.2	
R2-020030	TS 25.323 v4.3.0 Release 4	Secretary	3.2	
R2-020031	TS 25.324 v4.0.0 Release 4	Secretary	3.2	
R2-020032	TS 25.331 v4.3.0 Release 4	Secretary	3.2	
R2-020033	TR 25.834 v4.1.0 Release 4	Secretary	3.2	
R2-020034	TR 25.835 v1.0.0 Release 4	Secretary	3.2	
R2-020035	TR 25.843 v4.1.0 Release 4	Secretary	3.2	
R2-020036	TR 25.844 v4.1.0 Release 4	Secretary	3.2	
R2-020037	TR 25.847 v4.0.0 Release 4	Secretary	3.2	
R2-020038	TR 25.921 v4.3.0 Release 4	Secretary	3.2	
R2-020039	TR 25.922 v4.1.0 Release 4	Secretary	3.2	
R2-020040	TR 25.950 v4.0.0 Release 4	Secretary	3.2	
R2-020041	TS 34.109 v4.1.0 Release 4	Secretary	3.2	
R2-020042	TS 25.305 v5.3.0 Release 5	Secretary	3.2	
R2-020043	TS 25.308 v5.1.0 Release 5	Secretary	3.2	
R2-020044	TR 25.855 v5.0.0 Release 5	Secretary	3.2	
R2-020045	TR 25.859 v1.0.1 Release 5	Secretary	3.2	
R2-020046	(R1-011298, to TSG-RAN WG2) LS on ACK/NACK signalling for HSDPA	TSG-RAN WG1	9.1	

Doc.No	Title	Source	Ag.It.	Revised by
R2-020047	(R1-011306, copy TSG-RAN WG2) Response to LS (R3-012693) on RL timing adjustment mechanisms	TSG-RAN WG1	9.1	
R2-020048	(R1-011337, copy TSG-RAN WG2) LS on USTS TR	TSG-RAN WG1	9.1	
R2-020049	(R1-011341, to TSG-RAN WG2) LS on Improvement of inter-frequency and inter-system measurement for 1.28 Mcps TDD	TSG-RAN WG1	9.1	
R2-020050	(R1-011350, copy TSG-RAN WG2) LS on TFCI power control in hard split mode	TSG-RAN WG1	9.1	
R2-020051	(R3-013037, copy TSG-RAN WG2) Response to LS (NP-010540) on WID: AMR-WB Speech Service - Core Network Aspects	TSG-RAN WG3	9.1	
R2-020052	(R3-013067, to TSG-RAN WG2) Response to LS (S2) on Update of lu-Flex status	TSG-RAN WG3	9.1	
R2-020053	(R4-011614, to TSG-RAN WG2) Response to LS (R1-010987) on AOA requirements for UE Positioning Enhancements for 1.28 Mcps TDD	TSG-RAN WG4	9.1	
R2-020054	(S1-011236, to TSG-RAN WG2) LS on Retransmission and acknowledgement in MBMS	TSG-SA WG1	9.1	
R2-020055	(S1-011310, copy TSG-RAN WG2) Response to LS (GP-011913) on Requirements on Multimedia Broadcast/Multicast Service	TSG-SA WG1	9.1	
R2-020056	(S2-013076, to TSG-RAN WG2) LS on Unequal Error Protection for PS conversational multimedia services	TSG-SA WG2	9.1	
R2-020057	(S2-013488, to TSG-RAN WG2) Response to LS (R2-012398) on Cell ID in SIP messages	TSG-SA WG2	9.1	
R2-020058	(T1-010552, to TSG-RAN WG2) LS on Advice on proposed RABs (PS Domain) to be included in Rel-5 or TS 34.108 to support conversational class traffic	TSG-T WG1	9.1	
R2-020059	(GP-012843, to TSG-RAN WG2) LS on Number of UTRAN frequencies monitored by an MS	TSG-GERAN	6.1	
R2-020060	Draft report of the 14th TSG-RAN meeting (Kyoto, Japan, 11-14 December 2001)	TSG-RAN Secretary	5.1	R2-020117
R2-020061	Short summary of TSG SA#14 for RAN Aspects	TSG-RAN Chairman	5.1	
R2-020062	Approved CR 1177r3 (R'99) and CR 1178r1 (Rel-4) to 25.331	TSG-RAN	5.1	
R2-020063	Approved CR 1185r4 (R'99) and CR 1186r1 (Rel-4) to 25.331	TSG-RAN	5.1	
R2-020064	Principles for UE testing and related indication from UE	TSG-RAN	5.1	
R2-020065	Work Item sheets - Latest situation	TSG-RAN Secretary	9	
R2-020066	Historic Work Item sheets	TSG-RAN Secretary	9	
R2-020067	Study Item sheets - Latest situation	TSG-RAN Secretary	9	
R2-020068	Historic Study Item sheets	TSG-RAN Secretary	9	
R2-020069	Work plan	MCC	9	withdrawn
R2-020070	PDCCP - Header Compression for IMS Voice calls	Hutchison 3G	9.2.3	
R2-020071	Discussion of the objective of the MBMS WI	Siemens	9.2.8	
R2-020072	TR 25.859 v1.1.0	CWTS	9.2.5	R2-020130
R2-020073	Proposed draft CR to 25.305 [Rel-5] on Introduction of UE positioning enhancement for 1.28 Mcps TDD	CWTS	9.2.5	
R2-020074	Proposed draft CR to 25.331 [Rel-5] on Introduction of UE positioning enhancement for 1.28 Mcps TDD	CWTS	9.2.5	
R2-020075	Proposed CR 024r1 to 25.306 [Rel-5] on UE capability for flexible hard split mode	Samsung	9.4.1	
R2-020076	Proposed CR 1129r1 to 25.331 [Rel-5] on Support of flexible hard split mode	Samsung	9.4.1	
R2-020077	Improvement of Inter-RAT measurement for 1.28Mcps TDD	Samsung	9.4.2	
R2-020078	Scheduling function in MAC-hs	LG Electronics Inc.	9.2.2	
R2-020079	Reordering buffer management	LG Electronics Inc.	9.2.1	
R2-020080	Timer based Stall Avoidance mechanism	LG Electronics Inc.	9.2.2	
R2-020081	Timer based mechanism for HARQ stall avoidance	ASUSTeK Computer Inc.	9.2.2	
R2-020082	Window based mechanism for HARQ stall avoidance	ASUSTeK Computer Inc.	9.2.2	

Doc.No	Title	Source	Ag.It.	Revised by
R2-020083	TFCI power control in the DSCH hard split mode	LG Electronics Inc.	9.4.1	R2-020142
R2-020084	QoS aspect for HSDPA Scheduling	Panasonic	9.2.2	
R2-020085	Updates of RRC procedures for support of HS-DSCH	Ericsson	9.2.2	
R2-020086	Proposed draft CR to 25.321 [Rel-5] on HSDPA	Ericsson	9.2.2	R2-020139
R2-020087	HARQ stall avoidance	Ericsson	9.2.2	
R2-020088	Mobility examples when the UE has an HS-PDSCH assignment	Ericsson	9.2.2	
R2-020089	Network Assisted Cell Change from UTRAN to GERAN	Vodafone Group	9.6	
R2-020090	Proposed draft CR to 25.306 [Rel-5] on HSDPA UE capabilities	Nokia	9.2.2	R2-020136
R2-020091	Compact signalling of multi-code allocation for HSDPA	Nokia	9.2.2	
R2-020092	HSDPA UE capability: L2 buffer size	Nokia	9.2.2	
R2-020093	TR 25.860 v0.1.0	Nokia	9.2.3	R2-020128
R2-020094	Proposed draft CR to 25.303 [Rel-5] on RFC3095 context relocation	Nokia	9.2.3	
R2-020095	Proposed draft CR to 25.306 [Rel-5] on RFC3095 context relocation	Nokia	9.2.3	
R2-020096	Proposed draft CR to 25.323 [Rel-5] on RFC3095 context relocation	Nokia	9.2.3	
R2-020097	TR 25.861 v0.1.0	Nokia	9.2.7	
R2-020098	Proposed draft CR to 25.302 [Rel-5] on HSDPA	Siemens	9.2.2	R2-020135
R2-020099	Signalling of HSDPA UE capabilities	Siemens	9.2.1	
R2-020100	HSDPA Mobility Procedures	Siemens	9.2.2	
R2-020101	Physical Channel Models for HSDPA	Siemens	9.2.1	
R2-020102	Provision of timing information from the UE to the SMLC for improvement of A-GPS assistance data	Vodafone Group	9.2.6	
R2-020103	Proposed draft CR to 25.302 [Rel-5] on Introduction of AOA measurement for UE positioning enhancement for 1.28Mcps TDD	CWTS	9.2.5	R2-020120
R2-020104	Proposed draft CR to 25.301 [Rel-5] on HSDPA	Lucent Technologies	9.2.2	R2-020134
R2-020105	Stall Avoidance with In-Band Signalling	Lucent Technologies	9.2.2	
R2-020106	Problem with SGSN location reporting behaviour with and without an lu 'connection' to the UE	Vodafone Group	9.6	
R2-020107	(R3-013485, copy TSG-RAN WG2) Response to LS (S1-011236) on Retransmission and Acknowledgement in MBMS	TSG-RAN WG3	9.1	
R2-020108	(R3-013567, copy TSG-RAN WG2) Response to LS (S2-013076) on Unequal Error Protection for PS conversational multimedia services	TSG-RAN WG3	9.1	
R2-020109	(R3-013688, copy TSG-RAN WG2) Response to LS (R1-011350) on TFCI power control in hard split mode	TSG-RAN WG3	9.1	
R2-020110	(S2-013495, copy TSG-RAN WG2) Response to LS (R3-013067) on Update of lu-Flex status	TSG-SA WG2	9.1	
R2-020111	(S2-013580, to TSG-RAN WG2) Response to LS (R2-012401, R3-013036, N1-011321) on Multiple RAB Activation Issue	TSG-SA WG2	9.1	
R2-020112	(S2-013581, to TSG-RAN WG2) LS [follow-up on S2-013076] on Unequal Error Protection for PS conversational multimedia services	TSG-SA WG2	9.1	
R2-020113	(S2-013592, to TSG-RAN WG2) LS on "Last known location" via SGSN for a UE with an lu interface connection but which does not respond to paging from the RNC	TSG-SA WG2	9.1	
R2-020114	(S2-013597, to TSG-RAN WG2) Response to LS (G2) on External Network-Assisted Cell Change	TSG-SA WG2	9.1	
R2-020115	(N3-010610, copy TSG-RAN WG2) LS on Mapping of SDP parameters in UMTS QoS parameter	TSG-CN WG3	9.1	
R2-020116	(T1-010552, to TSG-RAN WG2) LS on Proposed RABs (PS Domain) to be included in Rel-5 of TS 34.108 to support conversational class traffic	TSG-T WG1	9.1	withdrawn
R2-020117	First revised draft report of the 14th TSG-RAN meeting (Kyoto, Japan, 11-14 December 2001)	TSG-RAN Secretary	5.1	
R2-020118	Draft response (to TSG-RAN WG3; copy TSG-RAN WG4) to LS (R3-012692) on SFN-SFN and Tutan-gps drift rate granularity and range	Qualcomm	10	R2-020149

Doc.No	Title	Source	Ag.It.	Revised by
R2-020119	Introduction of TR 25.xxx on Improvement of Inter-frequency and inter-system measurement	TSG-RAN WG1	9.1	
R2-020120	Proposed draft CR to 25.302 [Rel-5] on Introduction of AOA measurement for UE positioning enhancement for 1.28Mcps TDD	CWTS	9.2.5	
R2-020121	Draft response (to TSG-SA WG2; copy TSG-RAN WG3) to LS (S2-013580) on Multiple RAB Activation Issue	Ericsson	10	R2-020153
R2-020122	Control channel error probability target	Qualcomm	9.2.2	
R2-020123	UM SN space limitation	Qualcomm	9.2.2	
R2-020124	Handover vs. cell selection	Qualcomm	9.2.2	
R2-020125	RRC Downlink Signalling Parameter for HSDPA	Motorola	9.2.2	
R2-020126	Draft changes to RRC to support HSDPA	Motorola	9.2.2	
R2-020127	Draft response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-GERAN) to LS (S2-013076 and S2-013581) on Unequal Error Protection for PS conversational multimedia services	Nortel Networks	10	R2-020154
R2-020128	TR 25.860 v0.2.0	Nokia	9.2.3	
R2-020129	Draft LS (to TSG-RAN WG3) on RFC3095 context relocation	Nokia	9.2.3	R2-020150
R2-020130	TR 25.859 v1.1.0	CWTS	9.2.5	
R2-020131	Draft LS (to TSG-RAN WG3; copy TSG-SA WG5) on UE positioning enhancements for 1.28 Mcps TDD	CWTS	9.2.5	R2-020151
R2-020132	Pointer approach for HARQ stall avoidance	Philips	9.2.2	
R2-020133	Draft LS (to TSG-SA WG1, TSG-SA WG2 and TSG-RAN WG3) on Discussion of the objective of the RAN WI on MBMS	Siemens	10	R2-020152
R2-020134	Proposed draft CR to 25.301 [Rel-5] on HSDPA	Lucent Technologies	9.2.2	
R2-020135	Proposed draft CR to 25.302 [Rel-5] on HSDPA	Siemens	9.2.2	
R2-020136	Proposed draft CR to 25.306 [Rel-5] on HSDPA UE capabilities	Nokia	9.2.2	
R2-020137	Comments on Proposed draft CR to 25.321 [Rel-5] on HSDPA	Ericsson	9.2.2	
R2-020138	Multiplexing in HSDPA	Siemens	9.2.1	
R2-020139	Proposed draft CR to 25.321 [Rel-5] on HSDPA	Ericsson	9.2.2	
R2-020140	Various changes to 25.308 [Rel-5]	Nortel Networks	9.2.1	R2-020141
R2-020141	Various changes to 25.308 [Rel-5]	Nortel Networks	9.2.1	
R2-020142	TFICI power control in the DSCH hard split mode	LG Electronics Inc.	9.4.1	
R2-020143	MAC PDU format	Ericsson	9.2.1	withdrawn
R2-020144	Draft LS (to TSG-RAN WG1) on Control channel error rate	Qualcomm	10	R2-020148
R2-020145	Update to MAC PDU format	Qualcomm	9.2.1	
R2-020146	Draft revision of 25.308	Motorola	9.2.1	
R2-020147	Comparison of stall avoidance schemes	Lucent Technologies	9.2.2	
R2-020148	LS (to TSG-RAN WG1) on HSDPA Control channel error rate	TSG-RAN WG2	10	
R2-020149	Response (to TSG-RAN WG3; copy TSG-RAN WG4) to LS (R3-012692) on SFN-SFN and Tutan-gps drift rate granularity and range	TSG-RAN WG2	10	
R2-020150	LS (to TSG-RAN WG3) on RFC3095 context relocation	TSG-RAN WG2	10	
R2-020151	LS (to TSG-RAN WG3; copy TSG-SA WG5) on UE positioning enhancements for 1.28 Mcps TDD	TSG-RAN WG2	10	
R2-020152	LS (to TSG-SA WG1, TSG-SA WG2 and TSG-RAN WG3) on Discussion of the objective of the RAN WI on MBMS	TSG-RAN WG2	10	
R2-020153	Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-CN WG1) to LS (S2-013580) on Multiple RAB Activation Issue	TSG-RAN WG2	10	
R2-020154	Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-GERAN) to LS (S2-013076 and S2-013581) on Unequal Error Protection for PS conversational multimedia services	TSG-RAN WG2	10	

Annex C: Status table of agreed CRs

The WG2 meeting did not formally agree any CRs.

Annex D: Table of outgoing LSs to 3GPP groups

NUMBER	TITLE	R1	R3	R4	S1	S2	S5	N1	GP
R2-020148	LS (to TSG-RAN WG1) on HSDPA Control channel error rate	to							
R2-020149	Response (to TSG-RAN WG3; copy TSG-RAN WG4) to LS (R3-012692) on SFN-SFN and Tutan-gps drift rate granularity and range		to	cc					
R2-020150	LS (to TSG-RAN WG3) on RFC3095 context relocation		to						
R2-020151	LS (to TSG-RAN WG3; copy TSG-SA WG5) on UE positioning enhancements for 1.28 Mcps TDD		to				cc		
R2-020152	LS (to TSG-SA WG1, TSG-SA WG2 and TSG-RAN WG3) on Discussion of the objective of the RAN WI on MBMS		to		to	to			
R2-020153	Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-CN WG1) to LS (S2-013580) on Multiple RAB Activation Issue		cc			to		cc	
R2-020154	Response (to TSG-SA WG2; copy TSG-RAN WG3 and TSG-GERAN) to LS (S2-013076 and S2-013581) on Unequal Error Protection for PS conversational multimedia services		cc			to			cc

Annex E: Meeting schedule

Future WG2 and RAN plenary meetings: (underlined: changes/additions)

Year	Meeting	Dates	Location	Country	Host
2002	RAN #15	05 - 08 March	Jeju-do	Korea	TTA companies
	WG2 #28	08 - 12 April	Kobe	Japan	J-Phone
	WG2 #29	13 - 17 May	tbd	Korea	Samsung Electronics
	RAN #16	04 - 07 June	Marco Island, FL	USA	Motorola
	WG2 #30	24 - 28 June	tbd	Italy	Omnitel
	3GPP2 _{HSDPA}	28 June	tbd	Italy (tbc)	tbc
	WG2 #31	19 - 23 August	<u>tbd</u>	<u>Sweden</u>	<u>Ericsson</u>
	RAN #17	03 - 06 September	Biarritz	France	Alcatel
	WG2 #32	23 - 27 September	Xi'an	China	CATT
	WG2 #33	11 - 15 November	Sophia Antipolis	France	ETSI
2003	RAN #18	03 - 06 December	New Orleans, LA	USA	NA Friends of 3GPP
	RAN #19	11 - 14 March	Jersey	Channel Islands	UK Friends of 3GPP
	RAN #20	10 - 13 June	tbd	Finland	Nokia
	RAN #21	16 - 19 September			
	RAN #22	09 - 12 December			

Appendix D

-  Subscriber Options 
-  LISTSERV Archives
-  Search Archives
-  Subscriptions
-  Preferences
-  Change Password
-  Log Out

 3GPP_TSG_RAN_WG2 Archives
January 2002

 New in LISTSERV 17.0 

3GPP_TSG_RAN_WG2@LIST.ETSI.ORG 

Options: [Use Proportional Font](#)
[Show Text Part by Default](#)
[Show All Mail Headers](#)

Message: [[<< First](#)] [[< Prev](#)] [[Next >](#)] [[Last >>](#)]

Topic: [[<< First](#)] [[< Prev](#)] [[Next >](#)] [[Last >>](#)]

Author: [[<< First](#)] [[< Prev](#)] [[Next >](#)] [[Last >>](#)]

Subject: [Ericsson contributions to RAN2#26](#)

From: Joakim Bergström (ERA) <joakim.bergstrom@ERA.ERICSSON.SE>

Reply To: Joakim Bergström (ERA) <joakim.bergstrom@ERA.ERICSSON.SE>

Date: Fri, 4 Jan 2002 16:29:31 +0100

Content-Type: multipart/mixed

Parts/Attachments: [text/plain](#) (418 bytes) , [R2-020086.zip](#) (293 kB) , [R2-020085.zip](#) (37 kB) , [R2-020087.zip](#) (84 kB) , [R2-020088.zip](#) (67 kB)




Hi all,
Please find the following papers from Ericsson to be discussed at the RAN2 meeting next week.

R2-020085 Updates of RRC procedures for support of HS-DSCH
R2-020086 HSDPA draft CR on 25.321
R2-020087 HARQ stall avoidance
R2-020088 Mobility examples when the UE has an HS-PDSCH assignment

Regards,
Joakim Bergstrom
Ericsson

<<R2-020086.zip>> <<R2-020085.zip>> <<R2-020087.zip>> <<R2-020088.zip>>

ATOM

RSSI

RSS2

LIST.ETSI.ORG

IPR2025-00756, OnePlus Ex. 1004
Page 138 of 165 

Appendix E

LISTSERV

Subscriber Options

LISTSERV Archives

Search Archives

Subscriptions

Preferences

Change Password

Log Out

3GPP_TSG_RAN_WG2 Archives

December 2011, Week 3

New in LISERVER 17.0

3GPP_TSG_RAN_WG2@LIST.ETSI.ORG

Options:

Use Proportional Font

Show Text Part by Default

Show All Mail Headers

Message:

<< First < Prev [Next >] [Last >>]

Topic:

<< First < Prev [Next >] [Last >>]

Author:

<< First < Prev [Next >] [Last >>]

Subject:

CR implementation status after RAN #54 (5)

From:

Joern Krause <Joern.Krause@ETSI.ORG>

Reply To:

Joern Krause <Joern.Krause@ETSI.ORG>

Date:

Thu, 22 Dec 2011 00:24:28 +0100

Content-Type:

multipart/alternative

Parts/Attachments:

text/plain (14 kB) , text/html (373 kB)

Dear all,

I have uploaded some more final specs.

Furthermore,

25.308 v8.11.1 and v9.6.1 (to correct that fig. 5.2.2.2-3 is exceeding page borders)

36.302 v8.2.1 and v9.3.1 (to add the missing headline "1 Scope" again)

were uploaded in the final specs folder as announced before.

BR

Joern

Overview of RAN2 CR implementation after RAN #54 (Berlin): Status: 21.12.2011

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	2	2	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

IPR2025-00756, OnePlus Ex. 1004

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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	1	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	2	0	6	2	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.321	0	0	0	0	1	1	2	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	5	11	33	4	53	18	18		
total	1	1	1	5	11	19	59	18	115	41		

*1: Mark Curran (mark.curran@ericsson.com) standing in for Paulson Angelo Vijay Silveris for the review after RAN #54

*2: Mikael Wittberg (mikael.wittberg@ericsson.com) standing in for Magnus Stattin for review after RAN #54

*3: Nicola Puddle (nicola.puddle@alcatel-lucent.com) standing in for Seau Sian Lim for review after RAN #54

in addition 25.308 v8.11.1 & 25.308 v9.6.1 and 36.302 v8.2.1 & 36.302 v9.3.1

purple: spec not yet available

blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)

yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_final_specs_after_RAN_54/)

as soon as rapporteur's ok is available:

red: official spec available (see ftp://ftp.3gpp.org/Specs/2011-12)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]

Sent: 20 December 2011 15:57

To: 3GPP_TSG_RAN_WG2

Subject: CR implementation status after RAN #54 (4)

Dear all,

I have uploaded some final specs and also some updated drafts:

- 25.319 REL-10:

- Fig. 7.3.8-2a was set back to the original figure (as it was replaced by mistake, see email exchange with Hyung-Nam)

- 36.300 REL-10:

- . replaced by ; in section 22.4.2.2

- 36.300 REL-11:

- . replaced by ; in section 22.4.2.2

- 36.331 REL-8:

- Table B.1-1:

- some editorials for bits 16-18

- bit 19: 3rd bullet added acc. to CR0833; also "the" added in 3rd column

- 36.331 REL-9:
 - Table B.1-1:
 - some editorials for bits 15-17 and 19 (also "the" added)
- 36.331 REL-10:
 - removal of blank in table "MeasObjectEUTRA field descriptions"
 - Table B.1-1:
 - editorials for bits 15 and 19 ("the" added)

I am still missing the feedback of a number of rapporteurs and would like to ask them to review and reply as soon as possible.
Thanks.
BR

Joern

Overview of RAN2 CR implementation after RAN #54 (Berlin): Status: 20.12.2011

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		

*1: Mark Curran (mark.curran@ericsson.com) standing in for Paulson Angelo Vijay Silveris for the review after RAN #54

*2: Mikael Wittberg (mikael.wittberg@ericsson.com) standing in for Magnus Stattin for review after RAN #54

*3: Nicola Puddle (nicola.puddle@alcatel-lucent.com) standing in for Seau Sian Lim for review after RAN #54

purple: spec not yet available

blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)

yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_final_specs_after_RAN_54/) as soon as rapporteur's ok is available:

red: official spec available (see <ftp://ftp.3gpp.org/Specs/2011-12/>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 18 December 2011 05:28
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #54 (3)

Dear all,
[All specifications](#) with CRs after RAN #54 are [implemented](#).

Comments for the new 6 specs (25.306 REL-11, 25.319 REL-11, 25.331 REL-8/9/10/11) are appreciated [before Fri 23.12.2011 11am CET](#).

(In case of more detailed comments please take my version without revision marks and enter your corrections with new revision marks.
Make sure that you do not use automatic language changes.)

BR

Joern

Comments to the CR implementation:

- 25.331 REL-10 & REL-11:
 - table of section 13.7: **Simone & Paulson**
This section includes several long tables without table headlines.
Moreover on the first level the same information appears several times (e.g. DL-CommonInformationPredef) per table.
I have warned a former 25.331 rapporteur in the past that we need to do something here.
So this time **no excuses anymore**:
 1. table headlines for all tables of this section have to be provided acc. to drafting rules in a CR in the next quarter
 2. We also have to avoid the same information on the first level otherwise readers search forever.
If no text is possible to be added to distinguish them, then we need to split into different subtables with clear explanation in table headers. I am open to discuss how to solve this aspect.
- 25.331 REL-10:
 - CR4836 (Ericsson):
 - not based on the latest spec, sections appear in arbitrary order
 - "Downlink radio resources" appears 2 times in table in 10.2.16a and is therefore removed
 - CR4846 (NSN):
 - CR does not use 3GPP styles
- 25.331 REL-11:
 - CR4831 (Ericsson):
 - clashing with REL-10 CR4886 (see "UE-CapabilityContainer-IEs ::=")
 - CR4847 (Huawei):
 - clashing with CR4831 (Ericsson) in 10.2.39, 10.3.3.42, 10.3.3.42o and in ASN.1 for
" [UE-RadioAccessCapability-vbxyext](#) ", " [RL-AdditionInformationList-r11](#) ",
"ActiveSetUpdate ::= CHOICE {", and several other places
 - CR4848 (Huawei):
 - clashing with CR 4847 and CR4831 at several places,
esp. critical for "InterRATHandoverInfo-vbxyext-IEs ::="

Overview of RAN2 CR implementation after RAN #54 (Berlin): Status: 17.12.2011

[...]

** Mark Curran (mark.curran@ericsson.com) standing in for Paulson Angelo Vijay Silveris for the review after RAN #54

purple: spec not yet available
blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_final_specs_after_RAN_54/)
as soon as rapporteur's ok is available:
red: official spec available (see <ftp://ftp.3gpp.org/Specs/2011-12/>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 16 December 2011 00:20
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #54 (2)

Dear all,
I have uploaded a second set of draft specs (see blue fields in the table below) which are ready for review under:
ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/
6 of 41 specs are still pending: 25.306 REL-11, 25.319 REL-11, 25.331 REL-8/9/10/11.

Please comment to all so far available specs [before Thu 22.12.2011 CET](#).
Thanks.
BR
Joern

Some additional comments:
- 36.300 REL-10:
- CR0422 (ALU):
- CR is not based on latest spec (first change in CR is ignored)

Overview of RAN2 CR implementation after RAN #54 (Berlin): Status: 15.12.2011pm

[...]

** : Mark Curran (mark.curran@ericsson.com) standing in for Paulson Angelo Vijay Silveris for the review after RAN #54

purple: spec not yet available
blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_final_specs_after_RAN_54/)
as soon as rapporteur's ok is available:
red: official spec available (see <ftp://ftp.3gpp.org/Specs/2011-12/>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 15 December 2011 10:14
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #54 (1)

Dear all,
I have uploaded a first set of draft specs (see blue fields in the table below) which are ready for review under:
ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/
13 of 41 are still pending.

If you find any errors/discrepancies then please send me an email,
so that this can be corrected.
Thanks.
BR
Joern

Some additional comments:
- 25.308 in general:
I got a request to correct that fig. 5.2.2.2-3 is exceeding page borders.
So this will be corrected in REL-8*9*/10/11 versions (*: will need vx.x.1 versions).
- 36.302 in general:
I got a request to add the missing "1 Scope" headline again.
So this will be corrected in REL-8*9*/10 versions (*: will need vx.x.1 versions).
- 36.321 REL-8 & REL-9: Unclear why CR0514 & CR0521 (Panasonic) used a different text colour in the CR (ignored).

Overview of RAN2 CR implementation after RAN #54 (Berlin): Status: 15.12.2011

[...]

** : Mark Curran (mark.curran@ericsson.com) standing in for Paulson Angelo Vijay Silveris for the review after RAN #54

purple: spec not yet available
blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_final_specs_after_RAN_54/)
as soon as rapporteur's ok is available:
red: official spec available (see <ftp://ftp.3gpp.org/Specs/2011-12/>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 10 December 2011 20:14
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #54 (0)

Dear all,
RAN #54 has approved 115 RAN CRs as indicated in the table below.
A corresponding Excel list of all RAN2 CRs treated at RAN #54 is attached.

I have also uploaded all approved RAN2 CRs under
ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/
in one zip file.

I plan to provide a first set of implemented specs next week-end.
Corresponding rapporteurs (as listed below) but also everyone else, e.g. CR authors,
are then invited to review the CR implementation.
BR

Joern

Overview of RAN2 CR implementation after RAN #54 (Berlin):
[...]

**: Mark Curran (mark.curran@ericsson.com) standing in for Paulson Angelo Vijay Silveris for the review after RAN #54

purple: spec not yet available
blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_draft_specs_after_RAN_54/)
green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201112_final_specs_after_RAN_54/)
as soon as rapporteur's ok is available:
red: official spec available (see <ftp://ftp.3gpp.org/Specs/2011-12>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

ATOM RSS1 RSS2

LIST.ETSI.ORG



Appendix F

LISTSERV

Subscriber Options

LISTSERV Archives

Search Archives

Subscriptions

Preferences

Change Password

Log Out

3GPP_TSG_RAN_WG2 Archives

September 2012, Week 3

3GPP_TSG_RAN_WG2@LIST.ETSI.ORG

Options:

Use Proportional Font

Show Text Part by Default

Show All Mail Headers

Message:

[<< First] [< Prev] [Next >] [Last >>]

Topic:

[<< First] [< Prev] [Next >] [Last >>]

Author:

[<< First] [< Prev] [Next >] [Last >>]

Subject:

CR implementation status after RAN #57 (4)

From:

Joern Krause <Joern.Krause@ETSI.ORG>

Reply To:

Joern Krause <Joern.Krause@ETSI.ORG>

Date:

Fri, 21 Sep 2012 16:08:24 +0200

Content-Type:

multipart/alternative

Parts/Attachments:

text/plain (16 kB) , text/html (550 kB)

Dear all,

6 more updates and 4 more final specs are uploaded.

The remaining 5 not yet implemented specs should be ready by Monday.

Again the request to rapporteurs to review the implementation for their specs (as far as available) in order to be able to provide final versions. Thanks.

BR

Joern

updates were provided for:

- 25.321 REL-11:
- CR0765 (NSN): implementation error corrected: first change has to appear in 3.1.1 and not 3.1.2.1
- 25.306 REL-9:
- CR0376 (NSN): error of the CR is corrected: text from 4.14.x is moved to 4.14a
- 25.306 REL-10:
- CR0377 (NSN): error of the CR is corrected: text from 4.14.x is moved to 4.14a
- 25.306 REL-11:
- CR0378 (NSN): error of the CR is corrected: text from 4.14.x is moved to 4.14a
- 36.321 REL-11:
- CR0572 (Ericsson): implementation error corrected: missing s in "timeAlignmentTimers" added in 5.9.

Note: The s is not added in italics to follow the CR. Nevertheless, as setting in italics means that there is an IE with this name it looks quite strange since normally there should not be multiple IEs with the same name.

friedhelm.roderrund@iotecc.com

New in LISTSERV 17.0

IPR2025-00756, OnePlus Ex. 1004

Page 147 of 165

- 36.314 REL-11:
 - CR0027 (Huawei): correction of 2 implementation errors:
 "table 4.1.x.1-1" => "table 4.1.7.1-1"
 "table 4.1.x.2-1" => "table 4.1.7.2-1"
 and correction of one style and addition of 2 dots (all 3 errors from the CR)

final versions were uploaded for:
 25.321 REL-8/9/10, 36.305 REL-11

Overview of RAN2 CR implementation after RAN #57 (Chicago):

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	2	2	1	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com
25.304	0	0	0	0	0	1	1	3 (new)X	5	3	Brian Martin (Renesas)	brian.martin@renesasmobile.com
25.306	0	0	0	0	0	1	2	3	6	3	Anders Berggren (ST Ericsson)	anders.y.berggren@stericsson.com
25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	0	0	0	2	2	1	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.321	0	0	0	0	1	2	2	3	8	4	Jing He (NSN)	jing.1.he@nsn.com
25.322	0	0	0	0	0	0	0	1 (new)	1	1	Jose Luis Pradas (Ericsson)	jose.luis.pradas@ericsson.com
25.331	0	0	0	0	2	5X	7	19	33	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
36.300	0	0	0	0	0	0	0	14	14	1	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.302	0	0	0	0	0	0	0	1 (new)	1	1	Seau Sian Lim (Alcatel-Lucent)	seaulim@alcatel-lucent.com
36.304	0	0	0	0	0	0	0	2	2	1	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	1	1	4	6	3	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	1	2	3	6	3	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.314	0	0	0	0	0	0	0	1 (new)	1	1	Yi Guo (Huawei)	yi.guo@huawei.com
36.321	0	0	0	0	0	0	2	3 (new)	5	2	Magnus Stattin (Ericsson)	magnus.stattin@ericsson.com
36.323	0	0	0	0	0	0	0	1 (new)	1	1	Seung June Yi (LG)	seungjune.yi@lge.com
36.331	0	0	0	0	0	3	5	14	22	3	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	0	1	-	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
37.320	0	0	0	0	0	0	0	1	1	1	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
UTRA	0	0	0	0	3	9	12	35	59	18		
LTE	0	0	0	0	0	5	11	44	60	18		
total	0	0	0	0	3	14	23	79	119	36		

Also approved at RAN #57:

36.822 REL-11, 36.839 REL-11

Other REL-11 specs (upgraded from REL-10 without CRs):

25.301, 25.303, 25.305, 25.317, 25.323, 25.324, 25.346, 25.993, 34.109, 36.322, 36.355

purple: spec not yet available

blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_final_specs_after_RAN_57/)

as soon as rapporteur's ok is available

red: official spec available (see ftp://ftp.3gpp.org/Specs/2012-09)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks

just for 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 21 September 2012 03:30
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #57 (3)

Dear all,
Some further specifications are available for review:
25.304 REL-11, 25.306 REL-11, 25.321 REL-11, 25.331 REL-9
36.305 REL-11, 36.306 REL-11, 36.321 REL-11, 36.331 REL-9.

Please provide your review comments as soon as possible to all available specs.
Thanks.

comments to CR implementation:

- 25.306 REL-9:
 - CR0376 (NSN) introduced a new section "4.14.x [IMS Voice Parameters](#)" under section "Home Node B Inbound Mobility Related Parameters" and there are some doubts from the rapporteur that the IMS Voice Parameters are just introduced for "Home Node B Inbound Mobility". I must admit that I share this concern and what worries me even more is that after 6 months handling of these CRs we detect this problem now. [Woonhee](#)? Could you please clarify and come up with a proposal for a better suited section (if necessary)?
- 25.306 REL-10:
 - similar problem for CR0377 (NSN) as for 25.306 REL-9
- 25.306 REL-11:
 - similar problem for CR0378 (NSN) as for 25.306 REL-9
- 25.304 REL-11:
 - CR0337 (Renesas): section 5.2.6.1.2a: The following text was removed in the CR without rev marks and will remain in the spec: "the UE is required to perform measurements of inter-frequency and inter-RAT cells listed in system information according to"
- 36.331 REL-9:
 - CR1039 (Qualcomm): unknown formatting change in table B.1-1a is ignored
- 25.331 REL-9:
 - CR5089 (CATT) clashing with CR5126 (NSN) for
 - "CompressedModeMeasCapability-va40ext ::= SEQUENCE {" : Change ignored.
 - "DL-PhysChCapabilityFDD-va40ext ::= SEQUENCE {" : Change ignored.
 - "DL-PhysChCapabilityInfoTDD-128-va40ext ::= SEQUENCE {" : Change ignored
 - several others which are also ignored (is anyone reading the CRs before approval? ;o))
 - "UE-RadioAccessCapability-v9c0ext-IEs ::= SEQUENCE {" : please check how it was solved
 - "UE-RadioAccessCapability-va40ext-IEs ::= SEQUENCE {" : please check and solve
 - "UE-RadioAccessCapabBandFDD4 ::= SEQUENCE {" : please check and solve
 - "UE-RadioAccessCapabBandFDD4-va80ext ::= SEQUENCE {" : please check and solve
 - and other clashes ... (next time I will not implement such a CR!!!)

final versions were uploaded for:

25.319 REL-11, 25.331 REL-8,
36.304 REL-11, 36.305 REL-9/10, 36.321 REL-10, 36.323 REL-11, 36.355 REL-10/11,

BR

Joern

Overview of RAN2 CR implementation after RAN #57 (Chicago):

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	2	2	1	Brian Martin (Alcatel-Lucent)	brian.martin@alcatel-lucent.com
25.304	0	0	0	0	0	1	1	3	5	3	Brian Martin	brian.martin@renesasmobile.com

						-	-	(new)X			(Renesas)	
25.306	0	0	0	0	0	1	2	3	6	3	Anders Berggren (ST Ericsson)	anders.y.berggren@stericsson.com
25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	0	0	0	2	2	1	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.321	0	0	0	0	1	2	2	3	8	4	Jing He (NSN)	jing.1.he@nsn.com
25.322	0	0	0	0	0	0	0	1 (new)	1	1	Jose Luis Pradas (Ericsson)	jose.luis.pradas@ericsson.com
25.331	0	0	0	0	2	5	7	19	33	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
36.300	0	0	0	0	0	0	0	14	14	1	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.302	0	0	0	0	0	0	0	1 (new)	1	1	Seau Sian Lim (Alcatel-Lucent)	seaulim@alcatel-lucent.com
36.304	0	0	0	0	0	0	0	2	2	1	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	1	1	4	6	3	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	1	2	3	6	3	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.314	0	0	0	0	0	0	0	1 (new)	1	1	Yi Guo (Huawei)	yi.guo@huawei.com
36.321	0	0	0	0	0	0	2	3 (new)	5	2	Magnus Stattin (Ericsson)	magnus.stattin@ericsson.com
36.323	0	0	0	0	0	0	0	1 (new)	1	1	Seung June Yi (LG)	seungjune.yi@lge.com
36.331	0	0	0	0	0	3	5	14	22	3	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	0	1	-	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
37.320	0	0	0	0	0	0	0	1	1	1	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
UTRA	0	0	0	0	3	9	12	35	59	18		
LTE	0	0	0	0	0	5	11	44	60	18		
total	0	0	0	0	3	14	23	79	119	36		

Also approved at RAN #57:

Other REL-11 specs (upgraded from REL-10 without CRs):

36.822 REL-11, 36.839 REL-11
25.301, 25.303, 25.305, 25.317, 25.323, 25.324, 25.346, 25.993, 34.109, 36.322, 36.355

purple: spec not yet available

blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_final_specs_after_RAN_57/)
as soon as rapporteur's ok is available

red: official spec available (see ftp://ftp.3gpp.org/Specs/2012-09)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 19 September 2012 01:11
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #57 (2)

Dear all,
7 more draft specs are available for review

/ more draft specs are available for review:
 36.306 REL-9 & REL-10, 36.314 REL-11, 36.321 REL-10, 36.323 REL-11, 36.355 REL-10, 37.320 REL-11.

comments to CR implementation:

- 36.321 REL-10:

CR559r1 (ZTE): I would like to know where is the symbol "P-MPR_c" defined that you are using?

There is not even a symbol section in 36.321! (Magnus: Something to be considered for the rapporteur in the future).

Also [10] section 3.2 does not list it.

What is defined is "P-MPR Power Management Maximum Power Reduction".

(And a general comment: Superscripts and subscripts should better be avoided as it is difficult to search for them.)

- 37.320 REL11:

CR0046r1 (MediaTek): It is unclear whether "Annex C: Measurements" is informative or normative? Can you clarify please?

I assumed "informative" and I have included this in the spec.

final versions were uploaded for: (colour corrected below)

25.302 REL-11, 36.302 REL-11

provided update: (colour corrected below)

- 25.331 REL-8:

- CR5184 duplicated a sentence at the end in Annex E: "UEs that indicate support for H also indicate support for G."

This duplication was detected and is removed in the update

BR

Joern

Overview of RAN2 CR implementation after RAN #57 (Chicago): Status: 18.09.2012

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	2	2	1	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com
25.304	0	0	0	0	0	1	1	3 (new)	5	3	Brian Martin (Renesas)	brian.martin@renesasmobile.com
25.306	0	0	0	0	0	1	2	3	6	3	Anders Berggren (ST Ericsson)	anders.y.berggren@stericsson.com
25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	0	0	0	2	2	1	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.321	0	0	0	0	1	2	2	3	8	4	Jing He (NSN)	jing.1.he@nsn.com
25.322	0	0	0	0	0	0	0	1 (new)	1	1	Jose Luis Pradas (Ericsson)	jose.luis.pradas@ericsson.com
25.331	0	0	0	0	2	5	7	19	33	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
36.300	0	0	0	0	0	0	0	14	14	1	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.302	0	0	0	0	0	0	0	1 (new)	1	1	Seau Sian Lim (Alcatel-Lucent)	seaulim@alcatel-lucent.com
36.304	0	0	0	0	0	0	0	2	2	1	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	1	1	4	6	3	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	1	2	3	6	3	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.314	0	0	0	0	0	0	0	1 (new)	1	1	Yi Guo (Huawei)	yi.guo@huawei.com
36.321	0	0	0	0	0	0	2	3 (new)	5	2	Magnus Stattin (Ericsson)	magnus.stattin@ericsson.com
36.323	0	0	0	0	0	0	0	1 (new)	1	1	Seung June Yi (LG)	seungjune.yi@lge.com
36.331	0	0	0	0	0	3	5	14	22	3	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	0	1	-	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
37.320	0	0	0	0	0	0	0	1	1	1	Malgorzata Tomala	malgorzata.tomala@nsn.com

										(NSN)	
UTRA	0	0	0	0	3	9	12	35	59	18	
LTE	0	0	0	0	0	5	11	44	60	18	
total	0	0	0	0	3	14	23	79	119	36	

Also approved at RAN #57:

36.822 REL-11, 36.839 REL-11

Other REL-11 specs (upgraded from REL-10 without CRs):

25.301, 25.303, 25.305, 25.317, 25.323, 25.324, 25.346, 25.993, 34.109, 36.322, 36.355

purple: spec not yet available

blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_final_specs_after_RAN_57/)
as soon as rapporteur's ok is available

red: official spec available (see <ftp://ftp.3gpp.org/Specs/2012-09>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause
Sent: 18 September 2012 00:35
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #57 (1)

Dear all,

A first set of 16 draft specs is available for review under

ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/

I have also uploaded 12 spec versions for which there are no CRs:

ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_final_specs_after_RAN_57/

BR
Joern

Overview of RAN2 CR implementation after RAN #57 (Chicago):

<Table removed to reduce file size>

Also approved at RAN #57:

36.822 REL-11, 36.839 REL-11

Other REL-11 specs (upgraded from REL-10 without CRs):

25.301, 25.303, 25.305, 25.317, 25.323, 25.324, 25.346, 25.993, 34.109, 36.322, 36.355

purple: spec not yet available

blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_final_specs_after_RAN_57/)
as soon as rapporteur's ok is available

red: official spec available (see <ftp://ftp.3gpp.org/Specs/2012-09>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause
Sent: 17 September 2012 04:39
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #57 (0)

Dear all,
RAN #57 has approved 119 CRs to RAN2 specifications as indicated in the table below
(RAN2 submitted 106 agreed and 24 endorsed CRs and had 17 company contributions to RAN2 specs at RAN #57).
A corresponding Excel list of all RAN2 CRs treated at RAN #57 is attached.

I have also uploaded all approved RAN2 CRs under
ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201209_draft_specs_after_RAN_57/
in one zip file.

Availability of draft specs ready for review after CR implementation will be announced on the RAN2 reflector.

Corresponding rapporteurs (as listed below) but also everyone else, e.g. CR authors,
are then invited to review the CR implementation.
BR

Joern

Overview of RAN2 CRs of RAN #57 (Chicago): Status of approved CRs after RAN #57
119 approved CRs to 36 RAN2 specs + 13 further REL-11 specs

<Table removed to reduce file size>

green: 1-4; **yellow:** 5-9; **purple:** 10-20; **red:** >20

Also approved at RAN #57: 36.822 REL-11, 36.839 REL-11

Also to be provided REL-11 specs (upgraded from REL-10 without CRs):
25.301, 25.303, 25.305, 25.317, 25.323, 25.324, 25.346, 25.993, 34.109, 36.322, 36.355

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

ATOM RSS1 RSS2

LIST.ETSI.ORG



Appendix G

-  Subscriber Options
-  LISTSERV Archives
-  Search Archives
-  Subscriptions
-  Preferences
-  Change Password
-  Log Out



3GPP_TSG_RAN_WG2 Archives

July 2012, Week 1

 New in LISTSERV 17.0



3GPP_TSG_RAN_WG2@LIST.ETSI.ORG

Options: [Use Proportional Font](#)
[Show Text Part by Default](#)
[Show All Mail Headers](#)

Message: [[<< First](#)] [[< Prev](#)] [[Next >](#)] [[Last >>](#)]
Topic: [[<< First](#)] [[< Prev](#)] [[Next >](#)] [[Last >>](#)]
Author: [[<< First](#)] [[< Prev](#)] [[Next >](#)] [[Last >>](#)]

Subject: [CR implementation status after RAN #56 \(7\)](#)

From: Joern Krause <Joern.Krause@ETSI.ORG>

Reply To: Joern Krause <Joern.Krause@ETSI.ORG>

Date: Tue, 3 Jul 2012 17:41:07 +0200

Content-Type: multipart/alternative

Parts/Attachments: [text/plain](#) (25 kB) , [text/html](#) (800 kB)

Dear all,

25.331 REL-10 is now available in the final specs folder.

Also the last RAN2 spec 25.331 REL-11 is implemented (see comments below) and available for review. Comments by the end of this week would be appreciated.

Regarding 36.304: The rapporteur is out-of-office and noone of the rapporteur's company was able to replace him during the review phase that started on 23.06.12. I did not receive any comments to these 3 implementations apart from an ok from Aziz for the 36.304 REL-9/10/11. So thanks to Aziz for the review and I provided now the final versions.

BR

Joern

25.331 REL-11:

- CR5057 (Ericsson): I would prefer to avoid italics so any reason for "Nul^l" instead "Null"?"

TrCH INFORMATION, COMMON	Null
--------------------------	------

"

- CR5063 (Ericsson):

- I would recommend to avoid subscripts like "Thresh_{x, high2}". It is difficult to search for them and you can anyway not use subscripts in ASN.1. Furthermore, readability is reduced due to smaller letters.
- CR is not based on the latest spec version. See last change under "8.6.7.3c":
The following text "5> store the IEs "Thresh_{x, high2}" and "Thresh_{x, low2}" in that occurrence of the IE "Frequency List" if the IEs are present."
which is in the spec is not in the CR

- which is in the spec is not in the CR.
- under "SysInfoType5" ::= SEQUENCE {"
"Va80NonCriticalExtensions" replaced by "va80NonCriticalExtensions"
- spec text omitted in the CR without rev marks
- CR5044 (Renesas):
- under "UE-CapabilityContainer-IEs" ::= SEQUENCE {"
"Va80NonCriticalExtensions" replaced by "va80NonCriticalExtensions"
- change under "UE-RadioAccessCapabBandFDD4-va60ext" ::= SEQUENCE {"
is ignored (was already in the spec)
- under "RRCConnectionRequest-NonCriticalExts-va40-IEs" ::= SEQUENCE {"
"v9xyNonCriticalExtensions": should v9xy be changed?
- under "RRCConnectionRequest-v9xyext-IEs" ::= SEQUENCE {"
should v9xy be changed?
- CR4984 (Panasonic):
- language change in table 13.8.1 ignored
- CR4967 (Qualcomm): Why are there 2 section 8.5.56 in the CR?

Overview of RAN2 CR implementation after RAN #56 (Ljubljana):

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) *2	anders.y.berggren@stericsson.com
25.307	0	0	0	0	0	0	0	1 new	1	1	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com
25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	0	0	0	1	1	1	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.321	0	0	0	0	2	2	2	2	8	4	Jing He (NSN)	jing.1.he@nsn.com
25.331	0	0	0	0	2	2	15X	17X	45	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
25.367	0	0	0	0	0	0	0	1 new	1	1	Damanjit Singh (Qualcomm) *1	dsingh@qualcomm.com
36.300	0	0	0	0	0	0	5	17X	22	2	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.304	0	0	0	0	0	1	2	1 new	4	3	Jarkko Koskela (Nokia) *3	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	0	0	1 new	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	0	1	1 new	2	2	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.331	0	0	0	0	3X	6	10X	2 new	21	4	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	0	1	-	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
37.320	0	0	0	0	0	0	0	1 new	1	1	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
UTRA	0	0	0	0	6	11	20	26	63	15		
LTE	0	0	0	0	3	7	19	23	52	14		
total	0	0	0	0	9	18	39	49	115	29		

- purple: spec not yet available
- blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2/Specifications/201206_draft_specs_after_RAN_56/)
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- as soon as rapporteur's ok is available:
- red: official spec available (see ftp://ftp.3gpp.org/Specs/2012-06)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

- *1: Aziz Gholmieh (Qualcomm) standing in for 25.367 rapporteur
- *2: Martin van der Zee (ST-Ericsson) standing in for 25.306 rapporteur
- *3: reviewed by Aziz Gholmieh (Qualcomm) instead of the 36.304 rapporteur

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 02 July 2012 17:25
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #56 (6)

Dear all,
20 of 29 specs are officially available now under <ftp://ftp.3gpp.org/Specs/2012-06>

Also for 25.306 and 36.331 REL-10/11 I have uploaded the final versions now.

For 25.331 REL-10 I have received feedback from Mark and Brian and an update is therefore provided in the draft specs folder.
See further information below.

BR
Joern

update of 25.331 REL-10:

- "HandoverToUTRANCommand-LaterCriticalExtensions" IE part was moved to the correct place; see my comment below for CR4992
- "RRCConnectionRequest-v9xyext-IEs" IE part was moved to the correct place and v9xy => v9b0 was replaced; see my comment below for CR5027
- "RRCConnectionRequest-NonCriticalExts-va40-IEs": v9xy => v9b0; also related to CR5027
- CR5042:
 - "[Va80NonCriticalExtensions](#)" replaced by "[va80NonCriticalExtensions](#)" under "UE-CapabilityContainer-IEs ::= SEQUENCE {"
 - It was confirmed that "UE-RadioAccessCapability-va60ext" does not exist in 25.331 REL-10 but just in REL-11 (error in the CR but without impact on the update).
Note: But "UE-RadioAccessCapability-va60ext-IEs" exists in REL-10.
- CR5060:
 - had a "]" in the CR under "MultipleEUTRAFrequencyInfoList" that has to be removed otherwise ASN.1 does not compile
 - "Va80NonCriticalExtensions" was replaced by "[va80NonCriticalExtensions](#)" under "SysInfoType5 ::= SEQUENCE {"

Overview of RAN2 CR implementation after RAN #56 (Ljubljana):

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) *2	anders.y.berggren@stericsson.com
25.307	0	0	0	0	0	0	0	new	1	1	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com
25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com

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25.331	0	0	0	0	4	9	15X	17	45	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
25.367	0	0	0	0	0	0	0	1 new	1	1	Damanjit Singh (Qualcomm) *1	dsingh@qualcomm.com
36.300	0	0	0	0	0	0	5	17X	22	2	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.304	0	0	0	0	0	1	2	1 new	4	3	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	0	0	1 new	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	0	1	1 new	2	2	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.331	0	0	0	0	3X	6	10X	2 new	21	4	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	0	1	-	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
37.320	0	0	0	0	0	0	0	1 new	1	1	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
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LTE	0	0	0	0	3	7	19	23	52	14		
total	0	0	0	0	9	18	39	49	115	29		

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yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_draft_specs_after_RAN_56/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_final_specs_after_RAN_56/)

as soon as rapporteur's ok is available:

red: official spec available (see ftp://ftp.3gpp.org/Specs/2012-06)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

*1: Aziz Gholmieh (Qualcomm) standing in for 25.367 rapporteur

*2: Martin van der Zee (ST-Ericsson) standing in for 25.306 rapporteur

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 02 July 2012 00:24
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #56 (5)

Dear all,
I have uploaded update2 for 36.331 REL-10/REL-11
and an update for 25.367 REL-11.
Furthermore, some more final versions were uploaded.

And draft 25.331 REL-10 is available for review.

Furthermore, due to the holiday season I am struggling at the moment to contact the 25.306 and 36.304 rapporteurs or anyone else of these companies to stand in. For 25.306 I got an offer from Jose now to review the 25.306 version. Thanks for this. Other volunteers for 36.304 would be as well appreciated.

BR

Joern

P.S.: Congratulations to Spain. :o)

25.331 REL-10:

- CR5060 (Ericsson): Next time please indicate if your remove text.
- CR5027 (Vodafone):
 - CR has changes on changes
 - "[RRCConnectionRequest-v9xyext-IEs](#)" at the wrong location? xy to be replaced?
- CR5042 (Renesas):
 - not based on the latest specification
 - "UE-RadioAccessCapability-va60ext ::= SEQUENCE {
ue-RadioAccessCapabBandFDDList4 UE-RadioAccessCapabBandFDDList4-va60ext OPTIONAL
}"
 - " does not exist in the current 25.331 REL-10 !!!
- CR4992 (Ericsson): "HandoverToUTRANCommand-LaterCriticalExtensions ::= CHOICE {" part in right location?
- CR4983 (Panasonic): table 13.8.1: language change ignored

update of 25.367 REL-11: acc. to comment from Aziz

- The abbreviation NW is replaced by network
(as NW is defined in 21.905 I consider this rather to be an editorial change
improving readability).

update of 36.331 REL-10: acc. to Himke's comments

- CR0919 includes under "*UE-EUTRA-Capability* information element"
the text (which got lost in the CR implementation):

```
"  
UE-EUTRA-CapabilityAddXDD-Mode-v1050 ::= SEQUENCE {  
  phyLayerParameters-v1050      PhyLayerParameters-v1020      OPTIONAL,  
  featureGroupIndRel10-v1050      BIT STRING \(SIZE \(32\)\)      OPTIONAL,  
  interRAT-ParametersCDMA2000-v1050      IRAT-ParametersCDMA2000-1XRTT-v1020      OPTIONAL,  
  interRAT-ParametersUTRA-TDD-v1050      IRAT-ParametersUTRA-TDD-v1020      OPTIONAL,  
  ...  
}"
```

Due to the CR clash (CR0919 with CR0969) this is revised (1050=>1060) now to:

```
UE-EUTRA-CapabilityAddXDD-Mode-v1060 ::= SEQUENCE {  
  phyLayerParameters-v1060      PhyLayerParameters-v1020      OPTIONAL,  
  featureGroupIndRel10-v1060      BIT STRING \(SIZE \(32\)\)      OPTIONAL,  
  interRAT-ParametersCDMA2000-v1060      IRAT-ParametersCDMA2000-1XRTT-v1020      OPTIONAL,  
  interRAT-ParametersUTRA-TDD-v1060      IRAT-ParametersUTRA-TDD-v1020      OPTIONAL,  
  ...  
}"
```

- some more editorial changes:
- text highlighting removed for 1060 under "*UE-EUTRA-Capability* information element"
- 7 times "apples" replaced by "applies"

update of 36.331 REL11: acc. to Himke's comments

- same changes as for REL-10
- in addition:
under "*UE-EUTRA-Capability* information element":
["UE-EUTRA-Capability-v1060-IEs"](#) shifted directly after "*UE-EUTRA-Capability-v1020-IEs*"

Overview of RAN2 CR implementation after RAN #56 (Ljubljana):

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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 (Ericsson)	anders.y.berggren@stericsson.com
25.307	0	0	0	0	0	0	0	1 new	1	1	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com

IPR2025-00756, OnePlus Ex. 1004

25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	0	0	0	1	1	1	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.321	0	0	0	0	2	2	2	2	8	4	Jing He (NSN)	jing.1.he@nsn.com
25.331	0	0	0	0	4	9	15X	17	45	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
25.367	0	0	0	0	0	0	0	1 new	1	1	Damanjit Singh (Qualcomm) *1	dsingh@qualcomm.com
36.300	0	0	0	0	0	0	5	17X	22	2	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.304	0	0	0	0	0	1	2	1 new	4	3	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	0	0	1 new	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	0	1	1 new	2	2	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.331	0	0	0	0	3X	6	10X	2 new	21	4	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	0	1	-	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
37.320	0	0	0	0	0	0	0	1 new	1	1	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
UTRA	0	0	0	0	6	11	20	26	63	15		
LTE	0	0	0	0	3	7	19	23	52	14		
total	0	0	0	0	9	18	39	49	115	29		

purple: spec not yet available

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X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

*1: Aziz Golmieh (Qualcomm) standing in for 25.367 rapporteur

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]

Sent: 27 June 2012 03:25

To: 3GPP_TSG_RAN_WG2

Subject: CR implementation status after RAN #56 (4)

Dear all,

Based on some rapporteurs' review comments I have uploaded some updated draft specs (see comments below) as well as some more final specs.

BR

Joern

update of 25.321 REL-8:

- Unnecessary blank removed in 11.2.2A.

Note: This error existed already in previous spec version.

update of 25.321 REL-9:

- implementation error corrected: "and in CELL_FACH state for FDD and for DCCH/DTCH transmission." of CR0756 was added at the wrong place in 4.1.3.1.6

was added at the wrong place in 11.8.1.6

update of 25.321 REL-10:

- Unnecessary blank removed in 11.2.2A.

Note: This error existed already in previous spec version.

update of 25.321 REL-11:

- CR0762 implementation was missed in the previous version.

Also unnecessary blank removed in 11.2.2A.

Note: This error existed already in previous spec version.

update of 36.300 REL-11:

- style correction just before section 15.5

- style of last NOTE in 23.4.2 corrected to NO

update of 36.331 REL-8/9/10/11:

See separate email answer to Himke's email.

Note: Final 25.331 REL-8 was replaced to reduce opening delay (there were no changes to the text.)

Overview of RAN2 CR implementation after RAN #56 (Ljubljana):

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	0	0	0	0	0	0	0	1 new	1	1	Nicola Puddle (Alcatel-Lucent)	puddle@alcatel-lucent.com
25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com
25.319	0	0	0	0	0	0	0	1	1	1	Hyung-Nam Choi (Intel)	hyung-nam.choi@intel.com
25.321	0	0	0	0	2	2	2	2	8	4	Jing He (NSN)	jing.1.he@nsn.com
25.331	0	0	0	0	4	9	15	17	45	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
25.367	0	0	0	0	0	0	0	1 new	1	1	Damanjit Singh (Qualcomm)	dsingh@qualcomm.com
36.300	0	0	0	0	0	0	5	17X	22	2	Benoist Sebire (NSN)	benoist.sebire@nsn.com
36.304	0	0	0	0	0	1	2	1 new	4	3	Jarkko Koskela (Nokia)	jarkko.t.koskela@nokia.com
36.305	0	0	0	0	0	0	0	1 new	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	0	1	1 new	2	2	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.331	0	0	0	0	3X	6	10X	2 new	21	4	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
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37.320	0	0	0	0	0	0	0	1 new	1	1	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
UTRA	0	0	0	0	6	11	20	26	63	15		
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If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 26 June 2012 03:23
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #56 (3)

Dear all,
Based on some rapporteurs' review comments I have uploaded
some updated draft specs (see comments below) as well as some
final specs.
BR
Joern

updated 25.308 REL-11:
- CR0124 (Qualcomm): This CR got lost in the implementation (sorry) and it is added in the update.
Note: You better introduce new sections with place holders. In this case section 22 existed already.

updated 25.331 REL-9: following comments from Mark & Brian
- mistake in CR5026 (Vodafone):
- removal of "OPTIONAL" under "RRCConnectionRequest ::= SEQUENCE {"
to solve ASN.1 compilation
- replacement of "v9xyext" by "v9b0ext" multiple times

updated 36.305 REL-11: following comments from Masato & Terri
- CR0034r1 (TruePosition):
- section 4.3 paragraph above table 4.3-1: was not based on the latest spec text
and I forgot the implement the last change of this paragraph
- a revision mark in section 5 had to be removed

updated 36.306 REL-11: following comment from Ravi
- although the one CR that was implemented was implemented without rev marks
somehow a rev mark still existed in the draft version, this was accepted/removed
without creating an update with revision marks

Overview of RAN2 CR implementation after RAN #56 (Ljubljana):

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25.308	0	0	0	0	0	0	0	2	2	1	Ravi Kuchibhotla (Motorola Mobility)	Ravi.Kuchibhotla@motorola.com
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25.321	0	0	0	0	2	2	2	2	8	4	Jing He (NSN)	jing.1.he@nsn.com
25.331	0	0	0	0	4	9	15	17	45	4	Mark Curran (Ericsson) ASN.1: Brian Martin (Renesas)	mark.curran@ericsson.com brian.martin@renesasmobile.com
25.367	0	0	0	0	0	0	0	1 new	1	1	Damanjit Singh (Qualcomm)	dsingh@qualcomm.com
36.300	0	0	0	0	0	0	5	17X	22	2	Benjamin Seifert (NSN)	benjamin.seifert@nsn.com
36.304	0	0	0	0	0	0	0	0	0	0	Joern Krause	joern.krause@etsi.org

36.304	0	0	0	0	0	1	2	1 new	4	3	Jarkko Koskeia (Nokia)	jarkko.t.koskeia@nokia.com
36.305	0	0	0	0	0	0	0	1 new	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
36.306	0	0	0	0	0	0	1	1 new	2	2	Ravi Kuchibhotla (Motorola)	Ravi.Kuchibhotla@motorola.com
36.331	0	0	0	0	3X	6	10X	2 new	21	4	Himke van der Velde (Samsung)	himke.vandervelde@samsung.com
36.355	0	0	0	0	0	0	1	-	1	1	Masato Kitazoe (Qualcomm)	mkitazoe@qualcomm.com
37.320	0	0	0	0	0	0	0	1 new	1	1	Malgorzata Tomala (NSN)	malgorzata.tomala@nsn.com
UTRA	0	0	0	0	6	11	20	26	63	15		
LTE	0	0	0	0	3	7	19	23	52	14		
total	0	0	0	0	9	18	39	49	115	29		

purple: spec not yet available

blue: draft spec version available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_draft_specs_after_RAN_56/)

yellow: updated draft spec available for review (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_draft_specs_after_RAN_56/)

green: final "draft" spec version available (see ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_final_specs_after_RAN_56/)
as soon as rapporteur's ok is available:

red: official spec available (see <ftp://ftp.3gpp.org/Specs/2012-06/>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 24 June 2012 19:42
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #56 (2)

Dear all,

A second set of further 5 draft specifications is uploaded for review under:

ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_draft_specs_after_RAN_56/

Please provide your comments (if any) before Sat 30.06.2012 9am CEST. Thanks.

27 of 29 specs are implemented, so the only pending 2 specs so far: 25.331 REL-10 and REL-11.
BR

Joern

Some comments to the CR implementation:

36.331 REL-9:
- CR0977 (Ericsson): text before and after a change must be visible

36.331 REL-10:
- CR0970r1 (Ericsson): text before and after a change must be visible
- CR0919r1 (Samsung) clashing with CR0969 (Ericsson):
serious clash under "UE-EUTRA-Capability information element";
also wrong version number in CR0919r1 ?

36.331 REL-11:
- CR0934(Huawei): version number not updated?

Overview of RAN2 CR implementation after RAN #56 (Liublana):

[...]

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as soon as rapporteur's ok is available:

red: official spec available (see <ftp://ftp.3gpp.org/Specs/2012-06/>)

X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 23 June 2012 17:27
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #56 (1)

Dear all,

A first set of 22 (out of 29) draft specs is uploaded for review under:

ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_draft_specs_after_RAN_56/

Please provide your comments (if any) before Fri 29.06.2012 9am CEST. Thanks.

BR

Joern

Some comments to the CR implementation:

36.305 REL-11:

- CR0034 (TruePosition): Next time take care that your CR has no changes on changes (e.g. Note in 8.X.2.1)

36.306 REL-11:

- CR0093r1 (Samsung): reference [14] existed already from REL-10

36.300 REL-11:

- CR0439r3 (Huawei): you can not simply rename existing sections like 15.4 and reuse them for something else,
TS 36.300 is under CR control! Section 15.4 is kept and one paragraph remains in this section.
- CR0446r1 (CMCC): new references have to be added as [xx] or [yy] or [zz] and MCC will decide the final number
- CR0456 (Samsung): Figures have to be visible in normal and in print mode!

36.331 REL-8:

- CR0976 (Ericsson): CR is not based on the latest spec version 8.16.0;
text before and after a change must be visible

Overview of RAN2 CR implementation after RAN #56 (Ljubljana):

[...]

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as soon as rapporteur's ok is available:

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If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

From: Joern Krause [mailto:Joern.Krause@ETSI.ORG]
Sent: 17 June 2012 17:41
To: 3GPP_TSG_RAN_WG2
Subject: CR implementation status after RAN #56 (0)

Dear all,
RAN #56 has approved 115 CRs to RAN2 specifications as indicated in the table below
(RAN2 submitted 120 CRs and had 39 (!) company contributions to RAN2 specs at RAN #56).
A corresponding Excel list of all RAN2 CRs treated at RAN #56 is attached.

I have also uploaded all approved RAN2 CRs under
ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Specifications/201206_draft_specs_after_RAN_56/
in one zip file.

I plan to provide a first set of implemented specs during the week-end 23./24.06.2012.
Corresponding rapporteurs (as listed below) but also everyone else, e.g. CR authors,
are then invited to review the CR implementation.
BR

Joern

Overview of RAN2 CR implementation after RAN #56 (Ljubljana):
[...]

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as soon as rapporteur's ok is available:

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X: e.g. CR clashes or CRs not based on latest spec version => special attention for review needed

If just 1 or 2 CRs for a spec, then they will be implemented without revision marks. Others with revision marks.

Joern Krause, ETSI MCC
Joern.Krause@etsi.org

ATOM RSS1 RSS2