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Technical Report

3rd Generation Partnership Project;
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UMTS 30.531 WG3 Work Plan and Study Items
(Release 1999)

Keywords

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Contents

Foreword

This Technical Report (TR) has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document presents the workplan for TSG RAN WG3. It describes the work procedures of WG3. The document also contains a list of all specifications under responsibility of RAN WG3, and a list of all open issues remaining for R99 specifications. Also, the work intended for R00 is listed.

2 References

Void

3 Definitions, symbols and abbreviations

Void

4 General

4.1 Meeting intensity

The meeting intensity of WG3 must fulfil at least two requirements:

- Often enough to be able to produce the necessary specifications on time,
- Seldom enough to be enable ad-hoc groups and/or sub-working groups to work between the meetings.

To fulfil the above requirements the meeting intensity of WG3 will be roughly once every 6th week with a meeting duration of a complete week.

5 Work procedures

TSG RAN WG3 has the overall responsibility of the specifications listed in chapter 6. In order to achieve efficient progress, WG3 will have the following split between the WG3 plenary meeting and the sub-working groups.

5.1 Plenary meeting

1. In the plenary meeting discussions and contributions in order to produce the following overall specifications (see list of specifications in ch. 6) should be treated:
   - 25.401: UTRAN Overall Description;
   - 25.402: Synchronisation in UTRAN, stage 2;
   - L1 specifications referring to existing standards, i.e. 25.411, 25.421, 25.431;
   - The technical reports 25.831, 25.832, 25.931, and 30.531.- General protocol principles, that should be aligned between all interfaces.
2. The work that is performed in the different sub-working groups will be co-ordinated in the plenary meeting. Decisions taken in the sub-working groups should be reported to and formally approved by the WG3 Plenary. Decisions on detailed protocol issues can be taken in SWGs and considered WG-approved by default unless it is requested to discuss the issue in the plenary meeting. Architectural issues, protocol methodology issues or controversial issues should always be brought to WG plenary.

3. It is the forum where CRs to approved specifications and new specifications are formally WG-approved to be sent to TSG RAN for approval.

5.2 Sub-working groups (SWG)

1. TSG RAN WG3 contains two SWGs:

   Iu SWG:

   - The Iu SWG is responsible for the Iu specifications: 25.410, 25.412, 25.413, 25.414, 25.415 and 25.419.

   Iur&Iub SWG:

   - The Iub/Iur SWG is responsible for the specifications: 25.420, 25.422, 25.423, 25.424, 25.425, 25.426,25.427, 25.430, 25.432, 25.433, 25.434, 25.435, and 25.442.

2. TSG RAN WG3 can decide the creation of SWGs.

3. WG3 may create new or terminate existing SWGs and a rapporteur is appointed by WG3. The rapporteur is responsible for the reporting of the progress in the ad-hoc group to WG3.

4. A SWG has a clearly identified scope, with the identification of the expected results (e.g. draft specification, Change Request on a specification, Technical Report, or more simply an input paper).

5. The duration and handling of a SWG depends on the importance of the task to be carried out. A SWG may last e.g.

   - Only a few days, and be carried in evening or parallel sessions of WG3 (WG3 could for example stop one afternoon).

   - Only between two WG3 meetings, and be conducted either via e-mail or in ad-hoc meetings.

   - Several months in which case reporting will be made at each occurring WG3.

   - Until its task is completed.

6. The meetings and organisation of the SWG will have to be organised in a co-ordinated manner, with enough pre-meeting notice. The SWG rapporteur will manage this task. The SWG rapporteur also acts as chairman for SWG sessions.

7. In order to facilitate SWG work, and also a quick resolving of the key problems, it is encouraged that SWGs should focus on issues where the involved people is less than the WG3 meeting. Otherwise, the issue can be handled directly in WG3.

8. The SWGs provide full reports to the WG3 Plenary.

9. Decisions of SWGs have to be formally approved by the WG3 Plenary.

5.3 Meeting arrangements

WG3 meetings are normally one week long. The number of parallel sessions should be optimised to minimum that is needed for efficient progress. Also parallel sessions for groups that need very similar expertise should be avoided. Table 1~~Table 1~~ is an example of a meeting structure designed according to this principle:

Table 1: Example of WG3 meeting structure

Monday	Tuesday		Wednesday		Thursday	Friday
Opening Plenary	Iu	Iur&Iub	Iu	Iur&Iub	Plenary	Closing Plenary

It must be possible to allocate time for the opening and closing plenaries in a flexible manner.

Draft agenda for the next meeting should be agreed upon in the closing plenary.

Meeting schedule:

Meeting	Dates	Venue, host
WG3#8	25-29 October , 1999	Abiko, Japan, NEC
WG3 Messages and ASN.1 ad hocs	*22-24 November, 1999*	*Helsinki, Finland, Nokia*
WG3#9	6-10 December, 1999	Paris, France, FT and Alcatel
WG3#10	24 – 28 January, 2000	Gothenburg, Sweden, Ericsson
RRM ad-hoc	*8-10 February, 2000*	
WG3#11	28 February – 3 March, 2000	Sophia Antipolis, France, Mediathel
TSG RAN#7	*13 – 15 March, 2000*	
WG3#12	10 – 14 April, 2000	Korea, Samsung
WG3#13	22 – 26 May, 2000	Hawaii, US, T1P1
TSG RAN#8	*21-23 June, 2000*	
WG3#14	3 – 7 July, 2000	Helsinki, Finland, Nokia
WG3#15	21 – 25 August, 2000	Berlin, Germany, Siemens
TSG RAN#9	20 – 22 September, 2000	
IP UTRAN ad hoc #1	*27-29 September, 2000*	Swindon, UK, Motorola
WG3#16	16 – 20 October, 2000	Plan:Windsor, UK, Nortel, Motorola, BT, Vodafone
IP UTRAN ad hoc #2	*6-8 November, 2000*	Paris, France, Alcatel
WG3#17	20 – 24 November, 2000	Chicago, US, Motorola
TSG RAN#10	*6-8 December, 2000*	
WG3#18	15-19 January, 2001	LIDINGÖ, *Sweden, Ericsson*
WG3#19	26 Feb- 2 March, 2001	*Location unknown, Lucent*
TSG RAN#11	*14-16 March, 2001*	
WG3#20	17-20 April, 2001	*Location unknown, NEC*
WG3#21	21-25 May, 2001	*Korea, Samsung*
TSG RAN#12	*13-15 June, 2001*	
WG3#22	27 August - 1 September, 2001	
WG3#23	26-30 November, 2001	

5.4 Prioritisation of work

The following prioritisation order applies for year 2000:

1. Ensure corrections to the R99 specifications. Target: good quality unambiguous specifications.
2. Technical Reports for R99 (Delay budget report).
3. Work on agreed R00 work items.
4. Discussion on potential additional R00 work items

6 Release 99 Work

The work remaining for R99 is listed per TS / TR below. The current version of the document is indicated as well.

6.1 Radio network layer specifications, General

25.401 UTRAN Overall Description, v3.4.0
Rapporteur: Jean-Marie Calmel, Nortel

Open issues: None

Solved issues:

- List of functions may still need some update and review.
- Performance requirements missing (delay budget still open). *Note: Chapter removed from 25.401.*

25.402 Synchronisation in UTRAN, stage 2, v3.3.0
Rapporteur: Thomas Ulrich, Siemens
Open issues: None

6.2 Radio network layer specifications, Iu

25.410 UTRAN Iu Interface: General Aspects and Principles, v3.2.0
Rapporteur: Richard Townend, BT
Open issues: None

25.413 UTRAN Iu interface RANAP signalling, v3.3.0
Rapporteur: Jyrki Jussila, Nokia

Open issues: None

Solved issues:
- Message syntax clarification (add new type of Abstract Syntax error in 10.3)
- Handling of not supported procedure codes, criticality set to "reject": error indication or failure message?
- Handling of not–supported non-core functionality (procedure text + cause values)
- Potential problem: Limitations on RANAP message size when using MAP/TCAP as bearer over the E-interface in the CN.

25.415 UTRAN Iu interface user plane protocols, v3.4.0
Rapporteur: Martin Israelsson, Ericsson
Open issues: None

25.419 UTRAN Iu interface: Service Area Broadcast Protocol SABP, v3.2.0
Rapporteur: Brendan McWilliams, Vodafone
Open issues: None

29.108 Application of the Radio Access Network Applicaton Part (RANAP) on the E-interface, v3.0.0
Rapporteur: Alexander Vesely, Simens

Open issue: None

Solved issues:
- Stage 2 specification of subsequent intra MSC-B handover (GSM-UMTS). *Note: This issue should be studied by N1 since N1 is responsible for the stage 2 specifications in the CN.*

6.3 Radio network layer specifications, Iur/Iub

25.420 UTRAN Iur Interface: General Aspects and Principles, v3.2.0
Rapporteur: Babul Miah, Lucent
Open issues: None

25.430 UTRAN Iub Interface: General Aspects and Principles, v3.3.0
Rapporteur: Mick Wilson, Fujitsu
Open issues: None

25.423 UTRAN Iur interface RNSAP signalling, v3.3.0
Rapporteur: Göran Rune, Ericsson

Open issues: None

Solved issues:
- Is the DRNC required to group measurement reports when several node-B's are involved for SRNC initiated measurements?

- Retention capabilities of a DRNC (what does this really mean; can the DRNC request release of RL's from SRNC?)?
- Handling of blocking in CRNC: how can it ensure that common/dedicated resources are freed?
- How can the SRNC perform DL power control balancing if tit is not aware of the power range set by the DRNC for each RL?
- Cell_FACH to Cell_DCH in DRNS [FDD].
- cell_DCH to URA_PCH, transfer of URA info without crnti.
- Knowledge of maximum DL power in the SRNC.
- Potential problem with message size limitations for RNSAP on CL SCCP.

25.433 UTRAN Iub interface NBAP signalling, v3.2.0
Rapporteur: Sungho Choi, Samsung

New issues:
- Segmentation of very large NBAP messages (working assumption: new protocol layer). *Note: This may require a new TS number.*
- Increased efficiency for large and frequent NBAP messages (e.g. pre-configuration solution).

Solved issues:
- Cause values e.g. for the Common procedures
- Resource Status Indication: sometimes ambiguous (e.g. can only have 1 error reported or cleared with 1 message or multiple)
- How many PCH's (FDD) are there in one cell? Both WG3 and WG2 support multiple.
- RACH measurement name, alignment with R1+R4.
- Selection of DSCH TFCI-2 signalling mode
- Minimum power level of a Node B.
- Retention capabilities of a Node B.
- Lost communication context / Reset procedure.
- Multiple TTI's on one RACH (2 RACH's on one PRACH?). *Note: Clarification from RAN2 requested (with LS)*

Issues common for 25.423 and 25.433:

New issues:
- Dated references to R4 mapping tables. *Note: to avoid compatibility problems, the mapping tables must not change.*

Solved issues:
- The need for extensibility of range needs to be reviewed for each parameter.
- Compress mode.
- Message syntax clarification (add new type or Abstract Syntax error in 10.3)
- Handling of not supported procedure codes, criticality set to “reject”: error indication or failure message?
- Handling of not–supported non-core functionality (procedure text + cause values)
- D-field size (only 1 bit supported in WG1 specs; IE in NBAP/RNSAP can probably be removed)
- Relation between UL interference included in RNSAP/NBAP RL_SETUP/ADD RESPONSE/FAILURE messages, and RSSI measurement (should be the same?)
- SIR error value when SIR target has changed in the middle of a measuring interval? (Specify averaging or indicate "value incorrect")? Note that this also applies to the compressed mode case.
- How to resolve the inconsistency between WG1/2 and WG3 specs on uni-directional <-> bidirectional dedicated transprot channels? Is it a problem at all?
- Carrier power measurements in case of transmit diversity (should 2 values be provided)?
- What is the criteria for including the SFN/CFN in the measurement report? Update measurement initiation & reportnig procedure text accordingly.
- Report periodicity for measurement reporting (currently labelled as a first working assumption - this should be updated or removed).
- Error Cases/Error Handling details (e.g. timers for synchronised RL reconfiguration etc)
- Pre-emption at admission control (Alignment to RANAP "preemptable", specify pre-emption behaviour, spare/not used priority values.).
- Implementation of narrowband TDD is unclear with respect to the dDMode parameter extensibility.
- Compress mode, handling of invalid patterns (TGPAI) (implement agreed principle)

- Need text alignment with tabular format (e.g. handling of all optional elements). *Note: Solved for NBAP but not RNSAP.*

25.425 UTRAN Iur interface user plane protocols for CCH data streams, v3.2.0
Rapporteur: Nicolas Drevon, AlcatelOpen issues: None

Open issues: None

25.435 UTRAN Iub interface user plane protocols for CCH data streams, v3.4.0
Rapporteur: Jean-Marie Calmel, Nortel

Open issues: None

Solved issue:
- Include DSCH TFCI-2 control frame; solve timing adjustment.

25.427 UTRAN Iur and Iub interface user plane protocols for DCH data streams, v3.3.0
Rapporteur: Woonhee Hwang, Nokia
Open issues: None

Solved issue:
- BER at UL DTX for TDD

- Solve timing adjustment problem of the DSCH TFCI-2 frame

6.4 Transport layer specifications

25.411 UTRAN Iu interface Layer 1, v3.2.0
Rapporteur: Achim von Brandt, Siemens
Open issues: None

25.421 UTRAN Iur interface Layer 1, v3.0.0
Rapporteur: Achim von Brandt, Siemens
Open issues: None

25.431 UTRAN Iub interface Layer 1, v3.0.0
Rapporteur: Achim von Brandt, Siemens
Open issues: None

25.412 UTRAN Iu interface signalling transport, v3.5.0
Rapporteur: Cheng-Hock Ng, NEC
Open issues: None

25.422 UTRAN Iur interface signalling transport, v3.4.1
Rapporteur: Babul Miah, Lucent
Open issues: None

25.432 UTRAN Iub interface signalling transport, v3.1.0
Rapporteur: Mick Wilson, Fujitsu
Open issues: None

25.414 UTRAN Iu interface data transport & transport signalling, v3.5.0
Rapporteur: Martin Israelsson, Ericsson

Open issues: None

Solved issue:
- Diffserv codepoint clarifications to the PS domain.

25.424 UTRAN Iur interface data transport & transport signalling for CCH data streams, v3.4.0
Rapporteur: Nicolas Drevon, Alcatel

Open issues: None

25.434 UTRAN Iub interface data transport & transport signalling for CCH data streams, v3.3.0
Rapporteur: Hakan Persson, Telia
Open issues: None

25.426 UTRAN Iur and Iub interface data transport & transport signalling for DCH data streams, v3.4.0
Rapporteur: Sami Kekki, Nokia

Open issue: None

Solved issue:
- Clarification of AAL2 switching case.

25.442 UTRAN Implementations specific O&M transport, v3.1.0
Rapporteur: Stephan Recker, Mannesman
Open issues: None

6.5 Technical reports

25.931 UTRAN Functions, examples on signalling procedures, v3.1.0
Rapporteur: Enrico Scarrone, CSELT
Updated primarily in ad hoc meeting and off-line.

25.832 Manifestations of handover and SRNS relocation, v3.0.0
Rapporteur: Richard Townend, BT
Open issues: None

25.831 TSG RAN WG3 Study Items for Future Releases, v0.0.2
This TR is dormant.

30.531 TSG RAN WG3 Work Plan and Study Items, v0.8.5
Rapporteur: Carolyn Taylor, ETSI (MCC)
Updated based on TSG RAN WG3 meeting #16 and #17.

25.932 Delay budget in the Access Stratum, v2.0.0

Rapporteur: Massimo dell'Acqua, Siemens
Ready for approval at TSG RAN#10..

Open issues: None

Solved issue:
- Confirm/adjust simulation results based on updated network/traffic model
- Check processing delay assumptions, incl. delays in UE. *Note: LS sent to RAN4 to ask for comments.*

7 Release 00 Work

Milestones and deliverables for each Work Item are presented in the Work Item descriptions. RAN3 has decided to create a TR for each Work Item, in order to:

1. Facilitate agreement of requirements and principles before entering detailed solutions, and

2. Have a placeholder for agreed specification text, until the Release 4 CRs are to be presented.

7.1 Work Items agreed by TSG-RAN

7.1.1 Release 4, Iu related work items agreed by TSG RAN

Agreed work items:

- PS-domain handover for real-time services, 25.936
  - Status: First version of TR created, v0.3.0.
- RAB support enhancements, 25.852
  - Status: First version of TR created, v0.1.1.
- RAB QoS negotiation, 25.946
  - Status: First version of TR created, v0.1.1.
- TrFO/TFO, 25.953
  - Status: Progress of the joint workshops on TrFO is reported separately. First version of TR created, v0.0.3.
- RAB Quality of Service Renegotiation over Iu, 25.851
  - Status: First version of TR created, v0.0.2.

7.1.2 R00, Iur/Iub related work items agreed by TSG RAN

Agreed work items for R00:

- UE positioning in UTRAN FDD Iub/Iur protocol aspects, 25.850
  - Status: First version of TR created, v0.0.1. The TR has been revised to v0.0.2.
- Low chiprate TDD option, 25.937
  - Status: First version of TR created, v0.1.0. The TR has been revised to v0.3.2.
- Improved support of inter-frequency/system measurements
  - Status: No activity.
- RRM optimisation, 25.935:
  1. RRM optimisation: Congestion handling of DCH
  2. RRM optimisation: Procedure parallelism on Iub/Iur
  3. RRM optimisation: DPC Rate Reduction in soft handover
  4. RRM optimisation: Introduction of common measurements over Iur for neighbouring cell load measurements
  5. RRM optimisation: Extension of Radio Interface Parameters updating in the user plane
  6. RRM optimisation: Separation of resource reservation and radio link activation
  7. RRM optimisation: Triggering of common transport channel resources initiation procedure by DRNC

  - Status: First version of TR created, v0.1.1.
- Hybrid ARQ (WG2 leading), 25.837
  - Status: First version of TR created, v0.1.0.

- Support for multiple CCTrCHs
  - Status: No activity.
- Node B synchronisation for TDD, 25.838
  - Status: First version of TR created, v0.11.
- Terminal power saving features, 25.938
  - Status: First version of TR created, v0.1.1.
- Improved common DL channel for CELL_FACH state
  - Status: No activity.
- Candidate enhancements for RL performance (R1 leading)
  - Status: No activity.
- USTS (R1 leading), 25.839
  - Status: First version of TR created, v0.1.0.
- Highspeed DL packet access study
  - Status: No activity.

7.1.3 Release 4, UTRAN-wide TSG RAN approved work items

Agreed work items for R00:

- QoS optimisation for AAL2 connections (Q.2630 CS2), 25.934
  - Status: Several contributions and some discussion. The TR is revised to v0.2.1.
- IP transport in UTRAN, 25.933
  - Status: Several contributions and some discussion. The TR is revised to v0.4.0.

8 Study items

Table 4: Study items

#	Title	Responsible person/company	Status

Annex A:
Change history

Document history		
Edition x	<MMMM yyyy>	Publication as <old doctype> <old docnumber>
0.8.5	November 2000	Made modifications according to RAN WG3 meeting #17.
0.8.4	November 2000	Ch 5.3: meeting schedule updated; Ch 6.3: updated open issues list according to R3 #16; Ch 6.5: updated open issues list according to R3#16; Ch 7.1.1: updated R00 work items according to R3#16; Ch 7.1.2: updated R00 work items according to R3#16.
0.8.3	October 2000	Updated according to TSG RAN#9.
0.8.2	September 2000	Updated Ch. 6.1 the rapporteur information. In 7.1.2 deleted "Incorporation of narrowband TDD mode".
0.8.1	August 2000	Updated according to TSG RAN#8.
0.8.0	June 2000	Editorial corrections
0.7.1	March 2000	Ch.6.1: open issue list updated; ch. 8: open issues lists updated according to R3 chairman's status report to RAN#7.
0.7.0	March 2000	Approved v.0.6.1 at R3#11.
0.6.1	February 2000	Ch. 8: I3.05 deleted, 25.414 and 25.415 editor changed, 25.419 added; open issues solved at R3#10 deleted.
0.6.0	February 2000	Ch. 5.3: meeting schedule updated
0.5.1	January 2000	Ch. 4.1: editorial; 5.1: 25.402 added, resp. of 25.410/20/30 moved to SWGs; ch. 5.3: meeting schedule added; new ch. 5.4 'Priority of work' added; ch. 6 'Contents and prioritisation in R99' and ch. 7 'Contents and prioritisation in R00' updated according to agreements at RAN#7; ch. 8 'Milestones' – spec. revisions and open issue lists updated acc. to RP(99)611, spec. approval date -> 'approved', sub-rows for 'features under study (sections)' deleted; ch. 9 'Study Items' updated, deleted SIs covered in spec. OI-list ch. 8;
0.5.0	December 1999	TS versions for specifications sent to TSG RAN#6 for approval updated to reflect the version agreed at R3#9. Otherwise the same as v.0.4.1.
0.4.1	November 1999	• Ch. 6.3 'Features/functions for RAN#7 split into two subchapters 6.3.1 'Features/functions proposed by R3' and 6.3.2 'Features/functions agreed by TSG-RAN'. • New ch. 7 'Contents and Prioritisation in Release 00' created. • Features/functions deferred to RAN#7 at R3#8 (Abiko) listed in ch. 6.3.1 (ref. Iub/Iur SWG report g09) • Ch. 8 'Milestones': TS versions stepped. • Ch. 9 'Study items' updated (old Iu SWG study items closed. SI: Iu Time Alignment added).
0.4.0	November 1999	V.0.3.2 approved by R3#8 (Abiko). 25.402 version corrected to v.0.0.1.

0.3.2	October 1999	V.0.3.1 submitted to RAN #5. V.0.3.2 reflects decisions at RAN #5. TS versions updated; list of open issues in TSs added in ch. 6 (Milestones); new TS 25.402 'Synchronisation in UTRAN, stage 2' added; new ch. 6 'Contents and Prioritisation in Release 99'.
0.3.1	September 1999	Spec. versions updated in ch. 6. SI-list updated.
0.3.0	August 1999	Study items from WG3#6 in Sophia Antipolis added. Version stepped.
0.2.1	July 1999	Ch. 6: milestones for xxxAP and user plane specifications updated according to agreements in Helsinki. Ch. 7.1: SI-ARC/1 closed; ch. 7.2: New study items added.
0.2.0	July 1999	Updated according to comments at WG3#5 in Helsinki.
0.1.2	June 1999	Updated according to comments at WG3#4 in Warwick.
0.1.1	May 1999	Updated according to comments at WG3#3 in Kawasaki.
0.1.0	April 1999	Version stepped, otherwise same as 0.0.3.
0.0.3	April 1999	Table of work plan with milestones updated according to TSG#2 RP(99)157 as agreed at TSG RAN #2 in Florida.
0.0.2	Mar 1999	Updated according to comments and changes made at WG3#2 in Nynäshamn, Sweden.
0.0.1	Feb 1999	First draft

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