

Source: RAN WG3 Chairman
Title: Report from WG3 chairman to TSG RAN
Document for: Discussion
Agenda Item: 5.3.1

1. GENERAL

Since the last TSG RAN, RAN WG3 has had two meetings, focusing on corrections and functional additions for R99. Around 210 CRs are presented for approval.

Most of the R99 open issues presented at RAN#7 have been solved. Besides these, there have been even more contributions to solve other issues. Nevertheless, there are still many issues to solve, but the severity of the issues decreases all the time. None of the remaining identified issues need to be reported to TSG SA for potential exclusion of R99.

A problem for completion of R99 specifications is the late availability of the new versions of specifications, once the CRs have been approved by TSG RAN. After RAN#7, the most critical specifications (25.413, 25.423, and 25.433) were not available until the following WG3 meeting, despite hard work by the MCC support team. Some extra resources need to be provided to the MCC support team for implementing CRs after each TSG meeting.

A big risk for the quality, and openness, of the UTRAN interfaces (especially Iur/Iub) is the dependency on very few experts within RAN3. At the last meeting, more than 50% of the contributions to RAN3 were from one company. All companies finding inconsistencies in the specifications are requested to provide CRs to RAN3 as soon as possible.

So far in 3GPP, there has been very much focus on specifying much new functionality in a short timeframe. From now on, we need to emphasize the quality aspects, i.e. ensure good quality of R99 specifications, as well as work with higher quality requirements for the additional R00 functionality.

2. ORGANISATION AND WORKPLAN

The following representatives have been appointed for WG3:

- WG3 chairman: Per Willars, Ericsson
- WG3 vice chairman: Jean-Marie Calmel, Nortel
- WG3 secretary: Carolyn Taylor, MCC

Most work has been done in the two subworking groups (SWGs):

- Iu SWG (Chairman: Atte Lämsä, Nokia)
- Iur/Iub SWG (Chairman: Per Willars, Ericsson)

Meetings have been held and are planned on the following dates:

Meeting	Dates	Venue, host
WG3#12	10 – 13 April, 2000	Korea
WG3#13	22 – 26 May, 2000	US, T1P1
WG3#14	3 – 7 July, 2000	Finland, Nokia
WG3#15	21 – 25 August, 2000	Germany, Berlin, Siemens
Cancelled WG3#16	11 – 15 September, 2000, cancelled!	
WG3#16	16 – 20 October, 2000, moved!	UK, Nortel+BT+ Vodafone+Motorola
WG3#17	20 - 24 November, 2000	US, Motorola

3. STATUS OF ADDITIONAL R99 FUNCTIONS FOR RAN#7

The following functions were requested by RAN#7 to be part of R99.

Iur / Iub – related:

- CPCH support on Iur and Iub: Solved.
- Possibility to perform soft handover during an active compressed mode pattern: Solved.
- Support for positioning methods on Iur and Iub, basic (cell and RTT based). Solved.
 - Missing support on Iur to transfer mapping between UC-id and geographical area to SRNC: solved.
 - Missing support on Iur/Iub for the RTT measurements: solved.
- DSCH and USCH over Iur, reusing RACH/FACH principles (25.423, 25.425): Solved, with minor correction remaining on Iub.

4. R99 TSs AND TRs

Below the status of each document is summarised, together with a list of issues still not completed, i.e. corrections / clarifications will be needed. It should be noted that many of the new issues are due to late changes in RAN1 and RAN2 specifications.

4.1 Radio network layer specifications, General

25.401 UTRAN Overall Description

Rapporteur: Pierre Lescuyer, Nortel

Agreed CRs: RP-000231

Still not completed issues:

- List of functions may still need some update and review
- Performance requirements missing (delay budget still open)

Solved issue:

- Support for fast AMR rate control commands over Iub/Iur (redefinition of coordinated set of DCHs)

25.402 Synchronisation in UTRAN, stage 2

Rapporteur: Flavio Piolini, Italtel

Agreed CRs: RP-000232

4.2 Radio network layer specifications, Iu

25.410 UTRAN Iu Interface: General Aspects and Principles

Rapporteur: Richard Townsend, BT

Agreed CRs: none

25.413 UTRAN Iu interface RANAP signalling

Rapporteur: Jyrki Jussila, Nokia

Agreed CRs: RP-000234, RP-000235, RP-000236.

Still not completed 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)

Solved issue:

- Clarification of ASN.1 vs. tabular (normative/informative etc)

25.415 UTRAN Iu interface user plane protocols

Rapporteur: Martin Israelsson, Ericsson

Agreed CRs: RP-000238.

25.419 UTRAN Iu interface: Service Area Broadcast Protocol SABP

Rapporteur: Brendan McWilliams, Vodafone

Agreed CRs: RP-000239

29.108 Application of the Radio Access Network Application Part (RANAP) on the E-interface

Rapporteur: Alexander Vesely, Siemens

Version 2.0.0: RP-000257 (cover sheet), RP-000258 (TR)

RAN3 was requested by N1 to write this CN specification. v2.0.0 is sent for approval.

Open issue:

- Stage 2 specification of subsequent intra MSC-B handover (dependency to N1)

4.3 Radio network layer specifications, Iur/Iub

25.420 UTRAN Iur Interface: General Aspects and Principles

Rapporteur: tentative Babul Miah, Lucent

Agreed CRs: none

Solved issues:

- Align diversity control description with NBAP, RNSAP

25.430 UTRAN Iub Interface: General Aspects and Principles

Rapporteur: Mick Wilson, Fujitsu

Agreed CRs: RP-000249

Solved issues:

- Align diversity control description with NBAP, RNSAP

25.423 UTRAN Iur interface RNSAP signalling

Rapporteur: Göran Rune, Ericsson

Agreed CRs: RP-000241, RP-000242, RP-000243, RP-000244

New 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 it 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

Solved issues:

- DSCH and USCH over Iur - *correction of TFCI signalling within DRNS needed [FDD]*
- The handling of the Transaction ID and its scope of uniqueness.
- Triggering of the Common Transport Channel Resources Initiation procedure (selection of S CCPCH)
- Crossing signalling between the Physical Channel Reconfiguration procedure and other procedures.
- U-RNTI reallocation over Iur – *considered not needed.*
- STTD indicator in neighbor cell information
- Positioning: Geographical area indication from DRNC to SRNC

25.433 UTRAN Iub interface NBAP signalling

Rapporteur: Nobutaka Ishikawa, NTT Docomo

Agreed CRs: RP-000250, RP-000251, RP-000252, RP-000253

Still not completed issues:

- Cause values e.g. for the Common procedures
- Resource Status Indication: sometimes ambiguous (e.g. can only 1 error be reported or cleared with 1 message or multiple)

New issues:

- Multiple TTI's on one RACH (2 RACH's on one PRACH ?);
- How many PCH's (FDD) are there in one cell ? Currently WG3 assumes multiple, but WG2 assumes 1?
- RACH measurement name, alignment with R1+R4.
- Selection of DSCH TFCI-2 signalling mode

Solved issues:

- Configuration of out of sync parameters via CELL SETUP
- Range of PRACH codeword range (awaiting outcome L1)
- Is timer needed in Synchronous RL_Reconfiguration case? – *considered not needed*
- CPCH support on NBAP

Issues common for 25.423 and 25.433:

Still not completed issues:

- Error Cases/Error Handling details (e.g. timers for synchronised RL reconfiguration etc)
- Need text alignment with tabular format (e.g. handling of all optional elements)
- The need for extensibility of range need to be reviewed for each parameter
- Compressed mode – *depends on approval of CR126(25.423) and CR146(25.433)*
 - Major update of compressed mode parameters (to align with updates in RAN1)
 - RL Setup/Addition during compressed mode
 - Compressed mode procedure: Is repetition of commit allowed ?
- 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)

New issues:

- 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 transport channels ? Is it a problem at all?
- Carrier power measurements in case of transmit diversity (should 2 values be provided) ?

Solved issues:

- Usage of the *Cause* IE on message level and the *Cause* IE for a specific RL as in the RL RECONFIGURATION FAILURE message.
- Definitions of the maximum values for the various “range bounds” in the tabular format.
- Alignment of ASN.1 description and coding to tabular format
- Positioning: RTT measurement
 - DL-DPCH, UL-DPCCH and S-CCPCH slot formats (Pilot Bits Used IE)
- DL power control behaviour in Node B, if needed for interoperability? (currently unspecified) - *specified*
- Measurement report grouping (more than one measurement report per message?)
- Clarification of ASN.1 vs. tabular (normative/informative etc)

25.425 UTRAN Iur interface user plane protocols for Common Transport Channel data streams

Rapporteur: Nicolas Drevon, Alcatel

Agreed CRs: RP-000246

25.435 UTRAN Iub interface user plane protocols for Common Transport Channel data streams

Rapporteur: Jean-Marie Calmel, Nortel

Agreed CRs: RP-000254

New issues:

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

25.427 UTRAN Iur and Iub interface user plane protocols for DCH data streams

Rapporteur: Fabio Longoni, Nokia

Agreed CRs: RP-000248

New issue:

- BER at UL DTX for TDD
- Solve timing adjustment problem of the DSCH TFCI-2 frame

Solved:

- Multiple transport formats with zero user data (new WG1 option interfering with Iub/Iur silent mode)

4.4 Transport layer specifications

25.411 UTRAN Iu interface Layer 1

Rapporteur: Achim von Brandt, Siemens

25.421 UTRAN Iur interface Layer 1

Rapporteur: Achim von Brandt, Siemens

25.431 UTRAN Iub interface Layer 1

Rapporteur: Achim von Brandt, Siemens

25.412 UTRAN Iu interface signalling transport

Rapporteur: Cheng-Hock Ng, NEC

Agreed CRs: RP-000233

25.422 UTRAN Iur interface signalling transport

Rapporteur: tentative Babul Miah, Lucent

Agreed CRs: RP-000240

25.432 UTRAN Iub interface signalling transport

Rapporteur: Mick Wilson, Fujitsu

25.414 UTRAN Iu interface data transport & transport signalling

Rapporteur: Martin Israelsson, Ericsson

Agreed CRs: RP-000237

25.424 UTRAN Iur interface data transport & transport signalling for CCH data streams

Rapporteur: Nicolas Drevon, Alcatel

Agreed CRs: RP-000245

25.434 UTRAN Iub interface data transport & transport signalling for CCH data streams

Rapporteur: Håkan Persson, Telia

25.426 UTRAN Iur and Iub interface data transport & transport signalling for DCH data streams

Rapporteur: Sami Kekki, Nokia

Agreed CRs: RP-000247

25.442 UTRAN Implementations specific O&M transport

Rapporteur: Stephan Recker, Mannesman

4.5 Technical reports

25.931 UTRAN Functions, examples on signalling procedures

Rapporteur: Enrico Scarrone, CSELT

Version 2.0.0: RP-000255 (cover sheet), RP-000256 (TR)

Updated primarily in ad hoc meetings and offline. Proposed to be approved to v3.0.0.

25.932 Delay Budget within the Access Stratum

Rapporteur: Massimo Dell'Acqua, Siemens

Version 1.0.0: RP-000261 (cover sheet), RP-000262 (TR)

Substantial number of ad hoc meetings. Still not ready for approval. Major issues:

- Confirm / adjust simulation results based on updated network / traffic model
- Check processing delay assumptions, incl. delays in UE

25.832 Manifestations of handover and SRNS relocation

Rapporteur: Richard Townsend, BT

25.831 TSG RAN WG3 Study Items for Future Releases

Editor: Nicolas Drevon, Alcatel

Not presented to TSG RAN. No work on this in the WG since last TSG RAN. Work on R00 to be documented in relevant TRs per work item.

4.6 Administrative documents

30.531 TSG RAN WG3 Work Plan and Study Items

Editor: Carolyn Taylor, MCC

Version x.x.x: RP-000259 (cover sheet), RP-000260 (TR)

5 R00 WORK ITEMS

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 R00 CRs are to be approved

5.1 Iu related work items

Handover for realtime services from PS-domain

Work is ongoing but no TR created.

RAB support enhancements

No activity.

RAB QoS negotiation

No activity.

TrFO / TFO

Work is ongoing. Have had one TrFO/TFO meeting with S4, S2, N1. Another one planned for July.

Two corrections have been done to R99 to support TrFO (UP version negotiation, support for Codec negotiation).

5.2 Iur/Iub related work items

Support for LCS, FDD

No activity.

Support for LCS, TDD

No activity.

Low chiprate TDD option

No activity.

Improved support of inter-frequency/system measurements

No activity.

RRM optimisation

Congestion handling of DCH: No activity.

RRM optimisation: Procedure parallelism on Iub/Iur: No activity

RRM optimisation: DPC Rate Reduction in soft handover: No activity

RRM optimisation: Introduction of common measurements over Iur for neighbouring cell load measurements: No activity

RRM optimisation: Extension of Radio Interface Parameters updating in the user plane: No activity

Hybrid ARO (WG2 leading)

Initial contribution noted.

Support for multiple CCTrCHs

No activity

Node B synchronisation for TDD

No activity

Incorporation of narrowband TDD mode

No activity

Terminal power saving features

Initial contributions noted.

Improved common DL channel for CELL_FACH state

Initial contributions noted.

Candidate enhancements for RL performance (R1 leading)

No activity

USTS (R1 leading)

Initial contribution, deferred to mail discussion.

Hightspeed DL packet access study

No activity

Overall UTRAN

QoS optimization for AAL2 connections (O.2630 CS2) (TR 25.934)

TR structure agreed. Discussions on contents.

IP transport in UTRAN (TR 25.933)

Initial version of the TR agreed, including TR structure and initial list of requirements and study areas.

RAN3 requests guidance on how to liaise with IETF.

6 COMING MEETINGS

Many corrections are still expected for R99, but at least on the next WG meeting, substantial time is expected to be available for R00 discussions. However, the priority will as usual be as follows:

1. 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