3GPP TSG RAN   **Tdoc RAN 614/99**
13 - 15 December 1999
Nice, France

Source :   RAN WG2 Chairman

Object :   Status report for RAN WG2

1   Introduction

This document contains the status report of 3GPP TSG RAN WG2 at RAN#6.

The progress has been important since RAN#6, with a completion of most of the outstanding items related to the architecture aspects. Aspects which were recently solved include
- SRNS relocation
- PDCP architecture
- Ciphering architecture
- LCS stage 2
- Methodology for RRC description
- Routing of NAS signaling

Stability can now be expected on the mechanisms which are in place for release 99. This is reflected by a low number of Change Requests on the document describing the radio interface mechanisms, and a very important effort to align the RRC specification with the overall features and mechanisms of the radio interface.

The following contains the status for each report or specification from RAN WG2.

2   25.301

2.1   Status of the document

Document is stable and complete

2.2   Change Requests presented for approval by category

2.2.1   Editorial

The following CRs are in RP-99620:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99h76	agreed	25.301	027		Alignment to MAC-c/sh merge	D	3.2.0	3.3.0
R2-99k54	agreed	25.301	030	1	Editorial issues	D	3.2.0	3.3.0

2.2.2   Corrections/Modifications

The following CRs are in RP-99621:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99g19	agreed	25.301	026	1	Support of shared channel operation	C	3.2.0	3.3.0
R2-99h95	agreed	25.301	028		Radio Interface Functions for Cell	C	3.2.0	3.3.0
R2-99k65	agreed	25.301	031	1	Definition of ciphering unit	C	3.2.0	3.3.0

2.3   Addition of features

3   25.302

3.1   Status of the document

Document is stable and complete except one minor section left to be completed.

3.2   Change Requests presented for approval by category

3.2.1   Editorial

The following CRs are in RP-99623:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99g27	agreed	25.302	018		Compressed Mode description	D	3.1.0	3.2.0
R2-99k61	agreed	25.302	030	1	Editorial issues	D	3.1.0	3.2.0

3.2.2 Corrections/Modifications

The following CRs are in RP-99624:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99g20	agreed	25.302	015		Alignment of measurement names	F	3.1.0	3.2.0
R2-99h77	agreed	25.302	022		Alignment with TDD layer 1	F	3.1.0	3.2.0
R2-99j30	agreed	25.302	023	1	Physical Channel Parameters	C	3.1.0	3.2.0
R2-99h91	agreed	25.302	025		Addition of PICH and Corrections for	F	3.1.0	3.2.0
R2-99i50	agreed	25.302	026		Removal of compressed mode	F	3.1.0	3.2.0
R2-99k06	agreed	25.302	028	1	Measurement of Transmitted carrier	C	3.1.0	3.2.0
R2-99k86	agreed	25.302	031		Measurement of Physical Channel	C	3.1.0	3.2.0

3.2.3 Addition of features

The following CRs are in RP-99625:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99g11	agreed	25.302	021		Gated transmission of DPCCH	B	3.1.0	3.2.0

4 25.303

4.1 Status of the document

Document is stable and can be considered complete for release 99. The section on CPCH may be revised when item is completed.

4.2 Change Requests presented for approval by category

4.2.1 Editorial

The following CRs are in RP-99628:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k68	agreed	25.303	018	2	Corrections to RRC State Names	D	3.1.0	3.2.0
R2-99k12	agreed	25.303	021		Editorial issues	D	3.1.0	3.2.0

4.2.2 Corrections/Modifications

The following CRs are in RP-99629:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99j31	agreed	25.303	017	1	Support of shared channels and	C	3.1.0	3.2.0

4.2.3 Addition of features

None

5 25.304

5.1 Status of the document

Document is stable and but not complete on:
- SoLSA
- Support for hierarchical cell structures
- Support for cell barring

5.2 Change Requests presented for approval by category

5.2.1 Editorial

The following CRs are in RP-99631:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k13	agreed	25.304	011		Editorial issues	D	3.0.0	3.1.0

5.2.2 Corrections/Modifications

The following CRs are in RP-99632:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k77	agreed	25.304	001	2	Modification and editorial changes	F	3.0.0	3.1.0
R2-99j00	agreed	25.304	006		Discontinuous reception	C	3.0.0	3.1.0

5.2.3 Addition of features

The following CRs are in RP-99633:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k78	agreed	25.304	002	3	Specification of Cell reselection	B	3.0.0	3.1.0
R2-99k31	agreed	25.304	003	2	Integration of Cell Broadcast Service	B	3.0.0	3.1.0
R2-99k51	agreed	25.304	004	2	Measurement used as a quality	B	3.0.0	3.1.0
R2-99k63	agreed	25.304	008	3	Barred Cells and Access Control	B	3.0.0	3.1.0

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k08	agreed	25.304	009		Introduction of network control of UE	B	3.0.0	3.1.0

6 25.321

6.1 Status of the document

Document is stable and complete except CPCH.

6.2 Change Requests presented for approval by category

6.2.1 Editorial

The following CRs are in RP-99637:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k22	agreed	25.321	030	1	Editorial changes	D	3.1.0	3.2.0

6.2.2 Corrections/Modifications

The following CRs are in RP-99638:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k53	agreed	25.321	022	3	Modified MAC header field sizes	C	3.1.0	3.2.0
R2-99f01	agreed	25.321	023		MAC: Multiple shared channels	C	3.1.0	3.2.0
R2-99f02	agreed	25.321	024		Parameters for Status Primitive	C	3.1.0	3.2.0
R2-99k20	agreed	25.321	025	1	Support of shared channel operation	C	3.1.0	3.2.0
R2-99h97	agreed	25.321	028		Modification of Cell Broadcast	C	3.1.0	3.2.0
R2-99k87	agreed	25.321	031	1	Simultaneous mapping of logical	C	3.1.0	3.2.0

6.2.3 Addition of features

None

7 25.322

7.1 Status of the document

Document is stable and complete. Some sections have to be checked after recent decisions on the ciphering unit and the SRNS relocation mechanism.

7.2 Change Requests presented for approval by category

7.2.1 Editorial

The following CRs are in RP-99641:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99f04	agreed	25.322	001		RLC: Editorial corrections	D	3.0.0	3.1.0
R2-99i00	agreed	25.322	002	1	Editorial changes on RLC protocol	D	3.0.0	3.1.0
R2-99i01	agreed	25.322	007		Updated RLC SDL	D	3.0.0	3.1.0
R2-99k23	agreed	25.322	014		Editorial changes	D	3.0.0	3.1.0
R2-99k71	agreed	25.322	017	1	RLC editorial corrections	D	3.0.0	3.1.0

7.2.2 Addition of features

The following CRs are in RP-99642:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k19	agreed	25.322	006	1	Editorial corrections regarding CTCH	F	3.0.0	3.1.0
R2-99i93	agreed	25.322	011		RLC Editorial Changes	F	3.0.0	3.1.0
R2-99j01	agreed	25.322	013		Editorial Modification on RLC	F	3.0.0	3.1.0
R2-99k25	agreed	25.322	015		Change to one PU in a AMD PDU	F	3.0.0	3.1.0

7.2.3 Corrections/Modifications

The following CRs are in RP-99643:

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio

Doc #	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99g52	agreed	25.322	003	1	MRW procedure	B	3.0.0	3.1.0
R2-99h56	agreed	25.322	004		SDU Discard Functionality	B	3.0.0	3.1.0
R2-99k70	agreed	25.322	005	2	Change in RLC control PDU format	B	3.0.0	3.1.0
R2-99k72	agreed	25.322	016	1	Introduction of RLC suspend state	B	3.0.0	3.1.0

8   25.331

8.1   Status of the document

The document is close to a complete description of the RRC protocol, besides the features which are not yet complete as indicated in release 99 submission forms.

The main parts which is missing is the ASN.1 description of the messages. A complete review of the document after release 99 has been frozen in RAN#6 will be necessary, both to ensure completeness of the RRC protocol respective to release 99 features, but also to ensure correctness and unambiguous. Work is expected to now concentrate on these activities in the coming months.

8.2   Change Requests presented for approval by category, with inclusion on interim version

8.2.1   Editorial

The following CRs are in RP-99650:

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99f81	agreed	25.331	001		Modification of RRC procedure	D	3.0.0	interm
R2-99g35	agreed	25.331	050		UE capability information elements	D	3.0.0	interm

8.2.2   Corrections/Modifications

The following CRs are in RP-99651:

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99e67	agreed	25.331	018		Corrections and editorial changes	F	3.0.0	interm
R2-99f20	agreed	25.331	025		Logical CH for RRC Connection Re-	C	3.0.0	interm
R2-99f23	agreed	25.331	028		Cell Update Cause	C	3.0.0	interm
R2-99f73	agreed	25.331	039		Information elements for RLC reset	C	3.0.0	interm

8.2.3   Addition of features

The following CRs are in RP-99652:

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99e65	agreed	25.331	017		Inclusion of ciphering information	B	3.0.0	interm
R2-99e44	agreed	25.331	038		Addition of the UE controlled AMR	B	3.0.0	interm

8.3   Change Requests on interim version presented for approval by category

8.3.1   Editorial

The following CRs are in RP-99653:

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99k48	agreed	25.331	096	1	Editorial Modification of IEs in RRC	D	interm	3.1.0
R2-99k46	agreed	25.331	120	1	Selected RRC message transfer	D	interm	3.1.0

8.3.2   Corrections/Modifications

The following CRs are in RP-99654 and RP-99655:

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99h08	agreed	25.331	005	1	Introduction of Information Element	C	interm	3.1.0
R2-99h58	agreed	25.331	007	1	RRC parameters for SSDT	F	interm	3.1.0
R2-99h17	agreed	25.331	019	1	Algorithm for CTCF Calculation	C	interm	3.1.0
R2-99L02	agreed	25.331	026	1	Gain factors	C	interm	3.1.0
R2-99h21	agreed	25.331	027	1	Parameters for CELL UPDATE	C	interm	3.1.0
R2-99h22	agreed	25.331	029	1	RRC Initialisation Information	C	interm	3.1.0
R2-99j87	agreed	25.331	036	2	Compressed mode parameters with	C	interm	3.1.0
R2-99h24	agreed	25.331	044	1	Gated transmission of DPCCH	F	interm	3.1.0
R2-99h27	agreed	25.331	047	1	Editorial Corrections and Alignments	F	interm	3.1.0
R2-99h28	agreed	25.331	048	1	Information elements for TDD shared	F	interm	3.1.0
R2-99h31	agreed	25.331	052		New and corrected CPCH	C	interm	3.1.0
R2-99j86	agreed	25.331	053	2	Compressed mode parameters	C	interm	3.1.0
R2-99h55	agreed	25.331	054		Transport format combination set	C	interm	3.1.0
R2-99h80	agreed	25.331	056		Corrections and Alignments of the	F	interm	3.1.0

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99i08	agreed	25.331	064		RRC procedure interactions	C	interm	3.1.0
R2-99j97	agreed	25.331	066	1	Transfer of UE capabilities	C	interm	3.1.0
R2-99i20	agreed	25.331	074		CN information elements	C	interm	3.1.0
R2-99i22	agreed	25.331	076		UE information elements	F	interm	3.1.0
R2-99i24	agreed	25.331	078		Other information elements	C	interm	3.1.0
R2-99i47	agreed	25.331	080		Content of Measurement Control	F	interm	3.1.0
R2-99i48	agreed	25.331	081		RRC Information Elements to	F	interm	3.1.0
R2-99j91	agreed	25.331	085	1	RRC Connection Establishment	C	interm	3.1.0
R2-99j03	agreed	25.331	097		Selection of SCCPCH	C	interm	3.1.0
R2-99j89	agreed	25.331	098	1	RRC Initialisation Information	C	interm	3.1.0
R2-99k32	agreed	25.331	102	1	RRC Connection Re-establishment	C	interm	3.1.0
R2-99k40	agreed	25.331	109	1	TX Diversity Mode for Dedicated	C	interm	3.1.0
R2-99L01	agreed	25.331	116	1	TBS Identification in TFS	C	interm	3.1.0

8.3.3   Addition of features

The following CRs are in RP-99656 and RP-99657:

Doc-1st-	Status-	Spec	CR	Rev	Subject	Cat	Versio	Versio
R2-99h09	agreed	25.331	009	1	Inclusion of information elements for	B	interm	3.1.0
R2-99j70	agreed	25.331	010	2	Security mode control procedure	B	interm	3.1.0
R2-99k45	agreed	25.331	011	3	Updates of the system information	B	interm	3.1.0
R2-99k33	agreed	25.331	012	2	Inter-frequency measurements and	B	interm	3.1.0
R2-99k35	agreed	25.331	013	1	Inter-system measurements and	B	interm	3.1.0
R2-99h14	agreed	25.331	014	1	Additional measurements in RRC	B	interm	3.1.0
R2-99j78	agreed	25.331	015	3	Value range for Measurement	B	interm	3.1.0
R2-99k37	agreed	25.331	016	2	Message contents for inter system	B	interm	3.1.0
R2-99k99	agreed	25.331	034	1	Open loop power control for PRACH	B	interm	3.1.0
R2-99h37	agreed	25.331	040		Support for DS-41 Initial UE Identity	B	interm	3.1.0
R2-99k41	agreed	25.331	042	2	Integration of Cell Broadcast Service	B	interm	3.1.0
R2-99h25	agreed	25.331	045		Modification to the Transport Format	B	interm	3.1.0
R2-99h26	agreed	25.331	046		New Information elements and	B	interm	3.1.0
R2-99h29	agreed	25.331	049		Description of CN dependent IEs in	B	interm	3.1.0

R2-99j20	agreed	25.331	051	1	UTRAN response time to uplink	B	interm	3.1.0
R2-99j83	agreed	25.331	055	1	Information elements for cell	B	interm	3.1.0
R2-99j84	agreed	25.331	057	1	Introduction of a SCCH procedure	B	interm	3.1.0
R2-99i02	agreed	25.331	061		Support for DS-41 Paging UE	B	interm	3.1.0
R2-99k49	agreed	25.331	062	2	Support for cdma2000 Hard	B	interm	3.1.0
R2-99k42	agreed	25.331	063	1	Provide necessary signalling to	B	interm	3.1.0
R2-99i11	agreed	25.331	067		Selection of initial UE identity	B	interm	3.1.0
R2-99i13	agreed	25.331	069		UE capability verification in the	B	interm	3.1.0
R2-99j90	agreed	25.331	070	1	DPCH initial power	B	interm	3.1.0
R2-99i15	agreed	25.331	071		Actions when entering idle mode	B	interm	3.1.0
R2-99i17	agreed	25.331	072		Specification of inter-frequency and	B	interm	3.1.0
R2-99j92	agreed	25.331	073	1	Signalling radio bearers	B	interm	3.1.0
R2-99k43	agreed	25.331	077	1	Radio bearer, transport channel and	B	interm	3.1.0
R2-99k28	agreed	25.331	079	2	RRC signalling for PDCP	B	interm	3.1.0
R2-99k47	agreed	25.331	082	1	Signalling connection release	B	interm	3.1.0
R2-99k38	agreed	25.331	083	1	Addition of cell access restriction	B	interm	3.1.0
R2-99k34	agreed	25.331	092	1	Support of UE autonomous update	B	interm	3.1.0
R2-99k39	agreed	25.331	095	1	TPC combining for power control	B	interm	3.1.0
R2-99j85	agreed	25.331	100	1	Support of physical channel	B	interm	3.1.0
R2-99j96	agreed	25.331	106	1	System information on FACH	B	interm	3.1.0
R2-99j94	agreed	25.331	108	1	SAPs and Primitives for DS-41 mode	B	interm	3.1.0
R2-99k50	agreed	25.331	110	1	RACH message length signaling on	B	interm	3.1.0
R2-99j80	agreed	25.331	113	1	Routing of NAS messages in	B	interm	3.1.0
R2-99j95	agreed	25.331	117	1	Merging the hard handover and	B	interm	3.1.0
R2-99k88	agreed	25.331	121		Efficient rate command signalling	B	interm	3.1.0

9 25.323

The document is presented for approval. Cover sheet is RP-99644. Document is RP-99645.

10 25.324

The document is presented for approval. Cover sheet is RP-99646. Document is RP-99647.

11 25.921

The document is presented for approval. Cover sheet is RP-99658. Document is RP-99659.

RAN WG2 has performed an important work related to the protocol methodology for UTRAN, reflected in the document 25.921 covering UTRAN network and radio interfaces. Nevertheless, aspects specific to Iu, Iur and Iub interfaces needs to be reviewed since work has been focused lately on the RRC protocol aspects.

12 25.922

The document is presented for approval. Cover sheet is RP-99660. Document is RP-99661.

13 25.924

The document is presented for approval. Cover sheet is RP-99662. Document is RP-99663.

14 25.925

The document is presented for approval. Cover sheet is RP-99664. Document is RP-99665.

15 25.926

The document is presented for information because the section on the allowed combination of UE parameter is not completed yet. Cover sheet is RP-99665. Document is RP-99667.

The document will be presented for approval at RAN#7.

16 Release 99 submission forms

Documents RP-99668 to RP-99673 contain the description of 6 items from release 99 which are not completed.

17 Miscellaneous

In the course of its activities on protocol methodology, RAN WG2 studied the applicability of ASN.1 to the RAN specifications. RAN WG2 concluded positively provided some specific extensions were brought to ASN.1 in order to reach an optimal compactness when it is critical. Also, it appeared that the way to use ASN.1 was key to the compactness that could be obtained at the end on the radio interface.

It appeared that a direct collaboration from standardization bodies which are external to 3GPP, and from which TSG RAN intends to use the standards, would be beneficial, in particular the joint ISO-ITU expert group working on the evolution of ASN.1. This group is currently working on ASN.1 extensions that would allow any kind of encoding to meet some specific needs for compactness, called Encoding Control Notation. Some of these experts joined RAN WG2 informally during the last meeting. RAN WG2 agreed on using the new ECN whenever available, and this would be applied to the description of RRC messages so that there is no impact on the radio interface i.e. a strict change of description method, without impact on the final encoding.

In order to ensure good utilization of ASN.1 and a timely application of the new ECN technique, a direct link between RAN WG2 and the ISO-ITU expert group would be beneficial. RAN is kindly asked whether such a direct liaison this could be requested from PCG in January.

18 Concluding remarks

RAN WG2 has achieved considerable work over the last year, and all companies and delegates must be acknowledged for their hard work and fruitful collaboration. Most of the documents that had to be completed by December 99 are presented for approval to RAN #6. Although some features are not yet completed, I am fairly confident that this will be achieved rapidly, since many difficult problems are behind us, and we have solved in particular most of the items which had an impact on other groups (Stage 2 documents, protocol mechanisms impacting the physical layer or the network interfaces).

Nevertheless, experience shows that an approval of specifications does not yet mean that the work is completed, in particular for an evolved system like UTRAN. Work will be completed when the quality of the specifications will be sufficient for an unambiguous design allowing full multi-vendor operability as well as good performances of the system.

As a consequence, and also based on past experience, the Chairman kindly reminds companies that work is not yet finished, and also that the delegates having contributed in reaching this very important milestone should remain active and members of the group at least until the level of completeness and stability is reached.

19 RAN WG2 meetings in year 00

Year	Meeting	Dates	Location	Country	Host
2000	WG2 #10	17 - 21 January	San Diego	USA	Qualcomm
	WG2 #11	28 Feb - 03 March	Torino	Italy	CSELT
	RAN #7	13 - 15 March	Madrid	Spain	Telefónica Moviles
	WG2 #12	10 - 14 April	tbd	tbd	tbd
	WG2 #13	22 - 26 May	tbd	USA (tbc)	T1P1 (?)
	RAN #8	19 - 21 June	Düsseldorf	Germany	Mannesmann
	WG2 #14	03 - 07 July	Paris (tbc)	France (tbc)	Nortel Networks
	WG2 #15	21 - 25 August	Sophia Antipolis/ Helsinki	France/ Finland	ETSI/ Nokia
	RAN #9	25 - 27 September	tbd	tbd	Unisys/ARIB
	WG2 #16	09 - 13 October	Seoul (tbc)	Korea (tbc)	LGIC (tbc)
	WG2 #17	13 - 17 November	Sophia Antipolis	France	ETSI
	RAN #10	11 - 13 December	tbd	USA	T1