TSG-RAN Meeting #8
Düsseldorf, Germany, 21 - 23 June 2000

TSGRP#8(00)0231

Title: **Agreed CRs to TS 25.401**

Source: **TSG-RAN WG3**

Agenda item: **5.3.3**

Tdoc_Num	Specification	CR_Num	Revision_Nu	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Nu
R3-001114	25.401	009	1	Change of cell definition	F	agreed	3.2.0	3.3.0
R3-001115	25.401	008	1	Introduction of RLS in 25.401	C	agreed	3.2.0	3.3.0
R3-001240	25.401	010	2	Redefinition of coordinated DCHs	F	agreed	3.2.0	3.3.0

3GPP TSG-RAN Working Group Meeting #12
Seoul, South-Korea, 10th – 13th April 2000

Document R3-001114
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

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25.401	CR	009 R1	Current Version:	3.2.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

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Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: R-WG3 **Date:** April , 2000

Subject: Change of cell definition

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change:

Today 25.401 and 25.990 define a "Cell" as:

> "A geographical area that can be identified by a UE from a (Cell) identification that is broadcast from a UTRAN access point."

This definition is ambiguous: it seems to exclude a situation in which two cells (e.g. at different frequencies) span the same geographical area.

The problem seems to be that the definition makes a cell equal to a geographical area. However in other parts of the R3 specifications (e.g. TS 25.430) a cell is used as a radio network object, characterised by carrier frequency and containing multiple physical channels.

In order to solve this ambiguity, it is proposed to change the definition of cell to:

> "A radio network object that can be uniquely identified by a UE from a (cell) identification that is broadcasted over a geographical area from one UTRAN access point."

Clauses affected: 3.1.

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other

comments:

3 Definitions and abbreviations

3.1 Definitions

NOTE: Cleaned version of subclause 5.1 from [1] with a reference to a more general vocabulary document

For the purposes of the present document, the following definitions apply:

ALCAP: Generic name for the transport signalling protocols used to set-up and tear-down transport bearers.

Cell: ~~A cell is a geographical area~~ Radio Network object that can be uniquely identified by a User Equipment from a (cell) identification that is broadcasted over a geographical area from one *UTRAN Access Point*
A Cell is either FDD or TDD mode.

Iu: Interconnection point between the RNS and the Core Network. It is also considered as a reference point.

Iub: Interface between the RNC and the Node B.

Iur: A logical interface between two RNCs. Whilst logically representing a point to point link between RNCs, the physical realisation may not be a point to point link.

Logical Model: A Logical Model defines an abstract view of a network or network element by means of information objects representing network element, aggregations of network elements, the topological relationship between the elements, endpoints of connections (termination points), and transport entities (such as connections) that transport information between two or more termination points.
The information objects defined in the Logical Model are used, among others, by connection management functions. In this way, a physical implementation independent management is achieved.

Node B: A logical node responsible for radio transmission / reception in one or more cells to/from the UE. The logical node terminates the Iub interface towards the RNC.

Radio Network Controller: This equipment in the RNS is in charge of controlling the use and the integrity of the radio resources.

Controlling RNC: A role an RNC can take with respect to a specific set of Node B's. There is only one Controlling RNC for any Node B. The Controlling RNC has the overall control of the logical resources of its node B's.

Radio Network Subsystem: Either a full network or only the access part of a UMTS network offering the allocation and the release of specific radio resources to establish means of connection in between an UE and the UTRAN.
A Radio Network Subsystem contains one RNC and is responsible for the resources and transmission/reception in a set of cells.

Serving RNS: A role an RNS can take with respect to a specific connection between an UE and UTRAN. There is one Serving RNS for each UE that has a connection to UTRAN. The Serving RNS is in charge of the radio connection between a UE and the UTRAN. The Serving RNS terminates the Iu for this UE.

Drift RNS: The role an RNS can take with respect to a specific connection between an UE and UTRAN. An RNS that supports the Serving RNS with radio resources when the connection between the UTRAN and the UE need to use cell(s) controlled by this RNS is referred to as Drift RNS.

Radio Access Network Application Part: Radio Network Signalling over the Iu.

Radio Network Subsystem Application Part: Radio Network Signalling over the Iur.

RRC Connection: A point-to-point bi-directional connection between RRC peer entities on the UE and the UTRAN sides, respectively. An UE has either zero or one RRC connection.

User Equipment: A Mobile Equipment with one or several UMTS Subscriber Identity Module(s).

UMTS Terrestrial Radio Access Network: UTRAN is a conceptual term identifying that part of the network which consists of RNCs and Node Bs between Iu an Uu. The concept of UTRAN instantiation is currently undefined.

UTRAN Access Point: A conceptual point within the UTRAN performing radio transmission and reception. A UTRAN access point is associated with one specific *cell*, i.e. there exists one UTRAN access point for each cell. It is the UTRAN-side end point of a *radio link*.

Radio Link: A "radio link" is a logical association between a single User Equipment and a single UTRAN access point. Its physical realisation comprises one or more radio bearer transmissions.

Uu: The Radio interface between UTRAN and the User Equipment.

RAB sub-flows: A Radio Access Bearer can be realised by UTRAN through several sub-flows. These sub-flows correspond to the NAS service data streams that have QoS characteristics that differ in a predefined manner within a RAB e.g. different reliability classes.

RAB sub-flows have the following characteristics:

1) The sub-flows of a RAB are established and released at the RAB establishment and release, respectively.

2) The sub-flows of a RAB are submitted and delivered together at the RAB SAP.

3) The sub-flows of a RAB are carried over the same Iu transmission connection.

4) The sub-flows of a RAB are organised in a predefined manner at the SAP and over the Iu interface. The organisation is imposed by the NAS as part of its co-ordination responsibility.

Coordinated DCHs: Dedicated transport channels transporting information for different RAB subflows belonging to one and the same RAB. Coordinated DCHs are always established and released in combination. Coordinated DCHs cannot be operated on individually e.g. if the establishment of one DCH fails, the establishment of all other coordinated DCHs shall be terminated unsuccessfully and the establishment of the RAB fails.

TSG-RAN Working Group 3 Meeting #12
Seoul, Korea, 10th– 13th April 2000

Document R3-001115
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25.401	CR	008r1	Current Version:	3.2.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #8	for approval	X	Strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: R-WG3 **Date:** April 2000

Subject: Introduction of Radio Link Set in TS 25.401

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature	X		Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: Previously the concept Radio Link Set has been introduced in NBAP and RNSAP. However, since this is a concept existing in several specifications (R3 and R1) it is proposed to remove it from NBAP and RNSAP and instead move it to the TS 25.401.

Clauses affected: 3.1

Other specs affected:	Other 3G core specifications	X	→ List of CRs:	25.423 v3.1.0 CR86, 25.433 v3.1.0 CR101
	Other GSM core specifications		→ List of CRs:	
	MS test specifications		→ List of CRs:	
	BSS test specifications		→ List of CRs:	
	O&M specifications		→ List of CRs:	

Other comments:

3.1 Definitions

NOTE: Cleaned version of subclause 5.1 from [1] with a reference to a more general vocabulary document

For the purposes of the present document, the following definitions apply:

ALCAP: Generic name for the transport signalling protocols used to set-up and tear-down transport bearers.

Cell: A cell is a geographical area that can be identified by a User Equipment from a (cell) identification that is broadcast from one *UTRAN Access Point*
A Cell is either FDD or TDD mode.

Iu: Interconnection point between the RNS and the Core Network. It is also considered as a reference point.

Iub: Interface between the RNC and the Node B.

Iur: A logical interface between two RNCs. Whilst logically representing a point to point link between RNCs, the physical realisation may not be a point to point link.

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The information objects defined in the Logical Model are used, among others, by connection management functions. In this way, a physical implementation independent management is achieved.

Node B: A logical node responsible for radio transmission / reception in one or more cells to/from the UE. The logical node terminates the Iub interface towards the RNC.

Radio Network Controller: This equipment in the RNS is in charge of controlling the use and the integrity of the radio resources.

Controlling RNC: A role an RNC can take with respect to a specific set of Node B's. There is only one Controlling RNC for any Node B. The Controlling RNC has the overall control of the logical resources of its node B's.

Radio Network Subsystem: Either a full network or only the access part of a UMTS network offering the allocation and the release of specific radio resources to establish means of connection in between an UE and the UTRAN.
A Radio Network Subsystem contains one RNC and is responsible for the resources and transmission/reception in a set of cells.

Serving RNS: A role an RNS can take with respect to a specific connection between an UE and UTRAN. There is one Serving RNS for each UE that has a connection to UTRAN. The Serving RNS is in charge of the radio connection between a UE and the UTRAN. The Serving RNS terminates the Iu for this UE.

Drift RNS: The role an RNS can take with respect to a specific connection between an UE and UTRAN. An RNS that supports the Serving RNS with radio resources when the connection between the UTRAN and the UE need to use cell(s) controlled by this RNS is referred to as Drift RNS.

Radio Access Network Application Part: Radio Network Signalling over the Iu.

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UTRAN Access Point: A conceptual point within the UTRAN performing radio transmission and reception. A UTRAN access point is associated with one specific *cell*, i.e. there exists one UTRAN access point for each cell. It is the UTRAN-side end point of a *radio link*.

Radio Link: A "radio link" is a logical association between a single User Equipment and a single UTRAN access point. Its physical realisation comprises one or more radio bearer transmissions.

Radio Link Set: A set of one or more Radio Links that has a common generation of Transmit Power Control (TPC) commands in the DL.

Uu: The Radio interface between UTRAN and the User Equipment.

RAB sub-flows: A Radio Access Bearer can be realised by UTRAN through several sub-flows. These sub-flows correspond to the NAS service data streams that have QoS characteristics that differ in a predefined manner within a RAB e.g. different reliability classes.

RAB sub-flows have the following characteristics:

1) The sub-flows of a RAB are established and released at the RAB establishment and release, respectively.

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Coordinated DCHs: Dedicated transport channels transporting information for different RAB subflows belonging to one and the same RAB. Coordinated DCHs are always established and released in combination. Coordinated DCHs cannot be operated on individually e.g. if the establishment of one DCH fails, the establishment of all other coordinated DCHs shall be terminated unsuccessfully and the establishment of the RAB fails.

3GPP TSG-RA WG3 Meeting #12
Seoul, Korea, 10-13 April 2000

***Document* R3-001240**
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25.401	CR	10r2	Current Version:	3.2.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to: RAN#8 *list expected approval meeting # here ↑*	for approval	X	strategic		*(for SMG use only)*
	for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: R-WG3 **Date:** April 2000

Subject: Independence of the coordinated DCHs from the RAB subflows

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: The definition of the coordinated DCHs in 25.401 is not formally correct, because it mandate the correspondence of coordinated DCHs to the RAB subflows, while the mapping RAB vs transport channel shall not be specified. The definition shall state only the characteristics of the coordinated DCH (established and release in combination, transported in one transport connection).

Clauses affected: 3.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

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