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

TSGRP#8(00)0237

Title: **Agreed CRs to TS 25.414**

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
R3-001415	25.414	016		Updating the RFC 1483 to RFC 2684	F	agreed	3.3.0	3.4.0
R3-001442	25.414	017		Alignment of clause 7with clause 6	F	agreed	3.3.0	3.4.0
R3-001539	25.414	015	1	Clarification of ATM cell format	F	agreed	3.3.0	3.4.0

CHANGE REQUEST

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25.414	CR	**015r1**	Current Version:	3.3.0

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

For submission to:	**RAN#8**	for approval	**X**	strategic		*(for SMG*
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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: (U)SIM ☐   ME ☐   UTRAN / Radio **X**   Core Network **X**
(at least one should be marked with an X)

Source:	R-WG3		**Date:**	24 May, 2000

Subject:	Clarification of ATM cell format

Work item:	

Category: F   Correction   **X**   **Release:** Phase 2   ☐
                   A   Corresponds to a correction in an earlier release   Release 96   ☐
(only one category   B   Addition of feature   Release 97   ☐
shall be marked   C   Functional modification of feature   Release 98   ☐
with an X)   D   Editorial modification   Release 99   **X**
                                                                                                 Release 00   ☐

Reason for change:	The ITU-T ATM Layer Specification I.361 provides three options: - - ATM layer for NNI - - ATM layer for UNI without use of GFC - - ATM layer for UNI with GFC. **Seamless interworking between these options is not possible.** Therefore, the user of this specification has to choose one of the options for a particular interface. ATM based Iu and Iur interfaces are interfaces between network nodes or networks (RAN, CN). **Therefore, the NNI cell format has to be chosen for the ATM layer**. Note: In contrast, the UNI cell format is chosen for interfaces between a user terminal and the operator's ATM network.

Clauses affected:	4

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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4 ATM Layer

4.1 General

ATM shall be used in the transport network user plane and the transport network control plane according to I.361 [1]. The structure of the cell header used in the UTRAN Iu interface is the cell header format and encoding at NNI (see Figure 3/I.361).

CHANGE REQUEST

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25.414	**CR**	**016**	Current Version:	**3.3.0**	

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

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

Source:	R-WG3		**Date:**	16th May 2000

Subject: Updating the RFC 1483 to RFC 2684

Work item:

Category:	F	Correction	**X**	**Release:**	Phase 2	
	A	Corresponds to a correction in an earlier release			Release 96	
(only one category	B	Addition of feature			Release 97	
shall be marked	C	Functional modification of feature			Release 98	
with an X)	D	Editorial modification			Release 99	**X**
					Release 00	

Reason for change:	The RFC 1483 that describes LLC/SNAP encapsulation has been updated. The new RFC number is 2684.

Clauses affected: 2, 6.1.5, 7.1.4

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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2   References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies.

[1]   ITU-T Recommendation I.361 (2/1999): "B-ISDN ATM Layer Specification".

[2]   ITU-T Recommendation I.363.2 (9/1997): "B-ISDN ATM Adaptation Layer Type 2 Specification".

[3]   ITU-T Recommendation I.363.5 (8/1996): "B-ISDN ATM Adaptation Layer Type 5 Specification".

[4]   ITU-T Recommendation I.366.1 (6/1998): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL Type 2".

[5]   ITU-T Recommendation E.164 (5/1997): "Numbering Plan for the ISDN Era".

[6]   ITU-T Recommendation Q.2110 (7/1994): "B-ISDN ATM Adaptation Layer-Service Specific Connection Oriented Protocol (SSCOP)".

[7]   ITU-T Recommendation Q.2140 (2/1995): "B-ISDN ATM Adaptation Layer-Service Specific Coordination Function for Support of Signalling at the Network Node Interface (SSCF-NNI)".

[8]   ITU-T Recommendation Q.2150.1 (1999): "B-ISDN ATM Adaptation Layer-Signalling Transport Converter for the MTP3b".

[9]   ITU-T Recommendation Q.2210 (7/1996): "Message Transfer Part level 3 functions and messages using the services of ITU-T Recommendation Q.2140".

[10]   ITU-T Recommendation Q.2630.1 (1999): "AAL type 2 Signalling Protocol (Capability Set 1)".

[11]   ITU-T Recommendation X.213 (8/1997): "Information Technology-Open Systems Interconnection-Network Service Definitions".

[12]   IETF RFC 768 (8/1980): "User Datagram Protocol".

[13]   IETF RFC 791 (9/1981): "Internet Protocol".

[14]   IETF RFC 2684 1483 (9/19997/1993): "Multiprotocol Encapsulation over ATM Adaptation Layer 5".

[15]   IETF RFC 2225 (4/1998): "Classical IP and ARP over ATM".

[16]   IETF RFC 2460 (12/1998): "Internet Protocol, Version 6 (IPv6) Specification".

[17]   3G TS 29.060: "3GPP; TSG CN; GPRS; GPRS Tunnelling Protocol (GTP)".

[18]   IETF RFC 793 (9/1981): "TCP, Transmission Control Protocol".

[19]   IETF RFC 2475 (12/1998): "An Architecture for Differentiated Services".

6.1.5 IP/ATM

Classical IP over ATM protocols and Multiprotocol Encapsulation over AAL5 shall be used to carry the IP packets over the ATM transport network when PVCs are used. Classical IP over ATM is specified in IETF RFC 2225 [15]. Multiprotocol Encapsulation over AAL5 is specified in IETF RFC 2684~~1483~~ [14].

Classical IP over ATM allows routers to be members of one or more LISs. The CN side of the Iu interface shall provide IP routing functionalities. The RNC side of the Iu interface may provide routing functionalities. If the RNC side of the Iu interface does not provide routing functionalities, the RNC routing tables shall include default route entries.

7.1.4   IP/ATM

Classical IP over ATM protocols are used to carry the IP packets over the ATM transport network when PVCs are used. Classical IP over ATM is specified in IETF RFC 2225. Multiprotocol Encapsulation over AAL5 is specified in IETF RFC 2684 [14] 1483.

CHANGE REQUEST

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25.414	**CR**	**017**	Current Version:	**3.3.0**

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

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

Source:	R-WG3		**Date:**	16th May 2000

Subject:	Alignment of clause 7 with clause 6

Work item:	

Category: F   Correction   **X**   **Release:**   Phase 2   ☐
                      A   Corresponds to a correction in an earlier release ☐   Release 96   ☐
(only one category   B   Addition of feature   ☐   Release 97   ☐
shall be marked   C   Functional modification of feature   ☐   Release 98   ☐
with an X)   D   Editorial modification   ☐   Release 99   **X**
                                                                                                     Release 00   ☐

| **Reason for change:** | Description text of Broadcast Domain (clause 7) is highly based on Packet Switched Domain description (clause 6). Clause 7 was included to the specification at the same time as when Packet Switched Domain (clause 6) was modified. Due to this some text in clause 7 is based on "obsoleted" text of clause 6.

This CR proposes to align the clause 7 description with clause 6 for the common parts. |
|---|---|

Clauses affected:	7.1.2, 7.1.3, 7.1.4, 7.2 (new)

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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7.1.2　TCP/IP

The path protocol used shall be TCP, which is specified in RFC793 [18]. ~~Both the Ipv4.0 and Ipv6.0 protocols shall be supported which are specified in RFC791 (IPv4.0) or RFC2460 (IPv6.0)~~IPv4 [13] (RFC 791) shall be supported, IPv6 [16] (RFC 2460) support is optional.

7.1.3　ATM Adaptation Layer Type 5 (I.363.5)

AAL5 shall be used according to I.363.5.

AAL5 virtual circuits ~~are~~ shall be used to transport the IP packets across the Iu interface toward the packet switched domain. Multiple VCs ~~can~~ may be used over the interface. ~~There is a one-to-one relationship between the VC and the IP address as required by Classical IP over ATM. An association must be made between a peer node's IP address and a VC.~~ An association shall be made between a VC and the IP addresses that are related to this VC in the peer node side. This association ~~can~~ shall be made using O&M or using ATM Inverse ARP according to Classical IP over ATM when PVCs are used.

7.1.4　IP/ATM

Classical IP over ATM protocols and Multiprotocol Encapsulation over AAL5 ~~are~~ shall be used to carry the IP packets over the ATM transport network when PVCs are used. Classical IP over ATM is specified in IETF RFC 2225 [15]. Multiprotocol Encapsulation over AAL5 is specified in IETF RFC 1483 [14].

7.2　Transport network control plane

ALCAP is not required over the Iu interface towards the broadcast domain.