TSG-RAN Meeting #9
Hawaii, US, 20 - 22 September 2000

TSGRP#9(00)0375

Title: **Agreed CRs to TS 25.414**

Source: **TSG-RAN WG3**

Agenda item: 5.3.3

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-001924	25.414	018	1	UDP port number over Iu	F	agreed	3.4.0	3.5.0
R3-002173	25.414	020		Addition of reference for usages of MTP3b on Iu	F	agreed	3.4.0	3.5.0

CHANGE REQUEST

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25.414	**CR**	**18r1**	Current Version:	3.4.0

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

For submission to: **TSG RAN#9**   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:**	2000-07-03

Subject:	UDP port number used over Iu

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:	It is not clear from the current specification where the UDP port number to be used for GTP in the Iu interface, is defined. The UDP port number used for GTP-U is defined in 29.060. This is the UDP port number used over the Iu interface. A reference to 29.060 is needed in the Iu specifications.

Clauses affected:	6.1.3

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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6 Packet switched domain

6.1 Transport network user plane

6.1.1 General

Figure 3 shows the protocol stack for the transport network user plane on the Iu interface towards the packet switched domain.
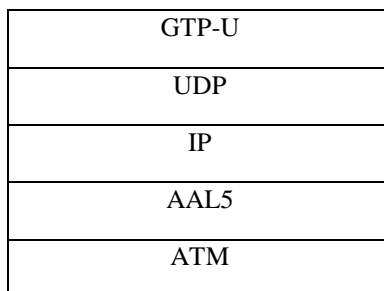
GTP-U
UDP
IP
AAL5
ATM

Figure 3

The protocol architecture for the User Plane of the Iu interface towards the packet switched domain shall be GTP-U [17] over UDP over IP over AAL5 over ATM. One or several AAL5/ATM permanent VC's may be used as the common layer 2 resources between the UTRAN and the packet switched domain of the CN.

One switched VC may be used per user flow. The standardisation of the procedures and protocols for use of Switched VC is outside the scope of 3GPP.

Congestion control shall be performed over the Iu user plane toward the packet switched domain using buffer management and no flow control.

6.1.2 GTP-U

The GTP-U [17] protocol shall be used over the Iu interface toward the packet switched domain.

6.1.3 UDP /IP

The path protocol used shall be UDP [12], which is specified in RFC 768.

The UDP port number for GTP-U shall be as defined in [17].

IPv4 [13] (RFC 791) shall be supported , IPv6 [16] (RFC 2460) support is optional.

There may be one or several IP addresses in the RNC and in the CN. The packet processing function in the CN shall send downstream packets of a given RAB to the RNC IP address (received in RANAP) associated to that particular RAB. The packet processing function in the RNC shall send upstream packets of a given RAB to the CN IP address (received in RANAP) associated to that particular RAB.

6.1.4 ATM Adaptation Layer Type 5 (I.363.5)

AAL5 shall be used according to I.363.5 [3].

AAL5 virtual circuits shall be used to transport the IP packets across the Iu interface toward the packet switched domain. Multiple VCs may be used over the interface. 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 shall be made using O&M or using ATM Inverse ARP according to Classical IP over ATM when PVCs are used.

When PVCs are used, quality of service differentiation shall only be performed at the IP layer using differentiated services [19].

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 [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.

6.2   Transport network control plane

ALCAP is not required over the Iu interface towards the packet switched domain.

CHANGE REQUEST

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| 25.414 | CR | 020 | Current Version: | 3.4.0 |

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

| **Source** | R-WG3 | | **Date:** | 2000-08-21 |

| **Subject:** | Addition of reference for usage of MTP3b on Iu |

| **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:** | Currently the text in 25.414 refers to the ITU-T recommendation for Q.2210 only. This CR proposes to also add a reference to the implementor's guide for Q.2210 which is to be used in conjunction with the recommendation itself. It contains essential information for the Iu interface such as a new service indicator for AAL2 Signalling Transport Converter.

If this change is not included, an incorrect value for the STC could be used. |

| **Clauses affected:** | 2, 5.2.4 |

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 (9/1999): "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".

[20]   ITU-T Implementor's guide (12/99) for recommendation Q.2210 (07/96)

NEXT MODIFIED SECTION

5.2.4   MTP3b (Q.2210)

MTP3b shall be used according to Q.2210 [9 & 20].