RP-040055

TSG RAN Meeting #23 Phoenix, Arizona, USA, 10 - 12 March 2004

Title

Source Agenda Item Technically endorsed CRs (Rel-5 and Rel-6 Category A) to TS 25.401, TS 25.410, TS 25.414, TS 25.420, TS 25.426, TS 25.430, Completion of the REL-5 IP Transport WI by removing the 3rd interworking option TSG RAN WG3 7.4.6

RAN3 Tdoc	CR.	Rev.	Cat	Spec.	curr. Vers.	new Vers.	REL	Work Item	Title
R3-040523	82	1	F	25.401	5.7.0	5.8.0	REL-5	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040524	83	1	А	25.401	6.2.0	6.3.0	REL-6	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040525	50	1	F	25.410	5.3.0	5.4.0	REL-5	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040526	51	1	А	25.410	6.0.0	6.1.0	REL-6	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040527	76	1	F	25.414	5.5.0	5.6.0	REL-5	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040528	77	1	А	25.414	6.0.0	6.1.0	REL-6	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040529	38	1	F	25.420	5.1.0	5.2.0	REL-5	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040530	39	1	Α	25.420	6.0.0	6.1.0	REL-6	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option

RAN3 Tdoc	CR.	Rev.	Cat	Spec.	curr. Vers.	new Vers.	REL	Work Item	Title
R3-040531	39	1	F	25.426	5.3.0	5.4.0	REL-5	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040532	40	1	А	25.426	6.0.0	6.1.0	REL-6	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040533	47	1	F	25.430	5.2.0	5.3.0	REL-5	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option
R3-040534	48	1	А	25.430	6.0.0	6.1.0	REL-6	ETRAN	Completion of the REL-5 IP Transport WI by removing the
								-Iptrans	3rd interworking option

	CHANGE REQUEST
æ	25.401 CR 082 # rev 1 ^{# Current version:} 5.7.0 [#]
For <u>HELP</u> on u	ing this form, see bottom of this page or look at the pop-up text over the $lpha$ symbols.
Proposed change a	ffects: UICC apps# ME Radio Access Network X Core Network
<i>Title:</i> ೫	Completion of the Rel-5 IP transport WI by removing the 3 rd IP-ATM interworking option
Source: ೫	RAN3
Work item code: अ	ETRAN-iptrans Date: 第 11/02/2004
Category: ⊮	FRelease: %Rel-5Use one of the following categories: F (correction)Use one of the following releases: 22A (corresponds to a correction in an earlier release)R96(Release 1996)B (addition of feature), C (functional modification of feature)R97(Release 1997)C (functional modification)R98(Release 1998)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories can be found in 3GPP TR 21.900.Rel-5(Release 5) Rel-6
Reason for change	光 To close the final open issue in Rel-5 WI on IP transport in UTRAN
Summary of chang	 The 3rd IP-ATM interworking option is removed from the Specifications while the other two interworking options remain. Rev1: Impact on functional and protocol Change refined in 11.1.3.3 Impact Analysis Impact assessment towards the previous version of the specification (same release): this CR has isolated impact on the previous version of the specification (same release) because only one optional function is impacted. This CR has an impact under functional and protocol point of view. The impact can be considered as isolated as it affects only the IP-ATM Interworking function.
Consequences if not approved:	# If this CR is not approved, the last remaining open issue in Rel-5 WI on IP transport in UTRAN remains open.
Clauses affected:	¥ 2, 11.1.3.3
Other specs	Y N % X Ø Other core specifications % CR083 25.401 Rel-6 CR050 25.410 Rel-5 CR051 25.410 Rel-6 CR076 25.414 Rel-5 CR077 25.414 Rel-6

affected:	X Test specifications X O&M Specifications	CR038 25.420 Rel-5 CR039 25.420 Rel-6 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
Other comments:	ж	

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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- [1] 3GPP TR 25.990: "Vocabulary".
- [2] 3GPP TS 23.110: "UMTS Access Stratum Services and Functions".
- [3] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [4] 3GPP TS 25.442: "UTRAN Implementation Specific O&M Transport".
- [5] 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2".
- [6] 3GPP TS 23.003: "Numbering, Addressing and Identification".
- [7] 3GPP TS 25.331: "RRC Protocol Specification".
- [8] 3GPP TS 23.101: "General UMTS Architecture".
- [9] 3GPP TS 25.414: " UTRAN Iu Interface Data Transport & Transport Signalling".
- [10] 3GPP TS 25.424: "UTRAN Iur Interface Data Transport & Transport Signalling for Common Transport Channel Data Streams".
- [11] 3GPP TS 25.434: "UTRAN Iub Interface Data Transport & Transport Signalling for Common Transport Channel Data Streams".
- [12] IETF RFC 2460: "Internet Protocol, Version 6 (Ipv6) Specification".
- [13] IETF RFC 2474: "Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers " December 1998
- [14] IETF RFC 768: "User Datagram Protocol", (8/1980)
- [15] "Information technology Open Systems Interconnection Network service definition", X.213, ISO/IEC 8348.
- [16] "Information technology Open Systems Interconnection Network service definition Amendment 1: Addition of the Internet protocol address format identifier", X.213/Amd.1, ISO/IEC 8348.
- [17] IETF RFC 791 (1981): "Internet Protocol".
- [18] 3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Signalling for DCH Data Streams".

<u>[19] TBD.</u>

[20] 3GPP TS 23.236: "Intra-domain connection of Radio Access Network (RAN) nodes to multiple Core Network (CN) nodes".

< Unaffected parts omitted >

11.1.3 Vertical Planes

11.1.3.1 Control Plane

The Control Plane Includes the Application Protocol, i.e. RANAP, RNSAP or NBAP, and the Signalling Bearer for transporting the Application Protocol messages.

Among other things, the Application Protocol is used for setting up bearers for (i.e. Radio Access Bearer or Radio Link) in the Radio Network Layer. In the three plane structure the bearer parameters in the Application Protocol are not directly tied to the User Plane technology, but are rather general bearer parameters.

The Signalling Bearer for the Application Protocol may or may not be of the same type as the Signalling Protocol for the ALCAP. The Signalling Bearer is always set up by O&M actions.

11.1.3.2 User Plane

The User Plane Includes the Data Stream(s) and the Data Bearer(s) for the Data Stream(s). The Data Stream(s) is/are characterised by one or more frame protocols specified for that interface.

11.1.3.3 Transport Network Control Plane

The Transport Network Control Plane does not include any Radio Network Layer information, and is completely in the Transport Layer. It includes the ALCAP protocol(s) that is/are needed to set up the transport bearers (Data Bearer) for the User Plane. It also includes the appropriate Signalling Bearer(s) needed for the ALCAP protocol(s).

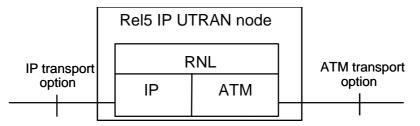
The Transport Network Control Plane is a plane that acts between the Control Plane and the User Plane. The introduction of Transport Network Control Plane is performed in a way that the Application Protocol in the Radio Network Control Plane is kept completely independent of the technology selected for Data Bearer in the User Plane. Indeed, the decision to actually use an ALCAP protocol is completely kept within the Transport Network Layer.

It should be noted that ALCAP might not be used for all types Data Bearers. If there is no ALCAP signalling transaction, the Transport Network Control Plane is not needed at all. This is the case when pre-configured Data Bearers are used or when the IP UTRAN option is used between two IP UTRAN nodes or between an IP UTRAN node and an IP CN node.

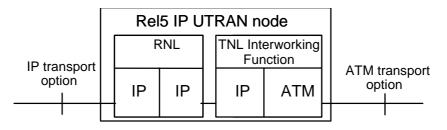
When Transport Network Control Plane is used, the transport bearers for the Data Bearer in the User Plane are set up in the following fashion. First there is a signalling transaction by the Application Protocol in the Control Plane, which triggers the set up of the Data Bearer by the ALCAP protocol that is specific for the User Plane technology.

For interworking of an IP UTRAN node with another UTRAN node using only the ATM transport option, an IP ALCAP protocol may be supported depending on the interworking solution selected: The following interworking alternatives are specified for the IP-ATM interworking:

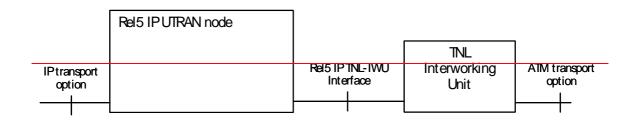
1) ATM/IP Dual Stack supported in the IP UTRAN node. When an ATM/IP dual stack is implemented in the IP UTRAN node, support of an IP ALCAP protocol is not required.



2) Use of an interworking function (IWF) as logical part of the IP UTRAN node. When the IWF is implemented in the IP UTRAN node, support of an IP ALCAP protocol is not required.



3) Use of an interworking unit (IWU) as a separate logical unit. When a separate logical IWU is used to perform the interworking, [19] shall be used as the signalling protocol to control the establishment of the connections between the IP UTRAN node and this IWU.



It should also be noted that the ALCAP protocol(s) in the Transport Network Control Plane is/are not used for setting up the Signalling Bearer for the Application Protocol or for the ALCAP during real time operation.

The Signalling Bearer for the ALCAP may or may not be of the same type as the Signalling Bearer for the Application Protocol. The Signalling Bearer for ALCAP is always set up by O&M actions.

11.1.3.4 Transport Network User Plane

	CHANGE REQUEST	CR-Form-v7
æ	25.401 CR 083 # rev 1 ^{# Curr}	ent version: 6.2.0 [#]
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop	-up text over the X symbols.
Proposed change a	affects: UICC apps೫ ME Radio Access	Network X Core Network X
Title: ೫	Completion of the Rel-5 IP transport WI by removing the option	ne 3 rd IP-ATM interworking
Source: ೫	RAN3	
Work item code: %	ETRAN-iptrans	Date: ೫ 11/02/2004
	Use <u>one</u> of the following categories: <i>F</i> (correction) <i>A</i> (corresponds to a correction in an earlier release) <i>B</i> (addition of feature), <i>C</i> (functional modification of feature) <i>D</i> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <u>TR 21.900</u> . <i>E</i> : # To close the final open issue in Rel-5 WI on IP tra	of the specification (same bus version of the specification
Comorriganos it	This CR has an impact under functional and proto The impact can be considered as isolated as it aff Interworking function.	col point of view. ects only the IP-ATM
Consequences if not approved:	If this CR is not approved, the last remaining oper transport in UTRAN remains open.	
Clauses affected:	策 <mark>2, 11.1.3.3</mark>	
Other specs	CR050 25 CR051 25 CR076 25	5.401 Rel-5 5.410 Rel-5 5.410 Rel-6 5.414 Rel-5 5.414 Rel-6

affected:	X Test specifications X O&M Specifications	CR038 25.420 Rel-5 CR039 25.420 Rel-6 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
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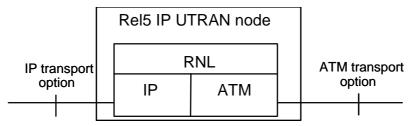
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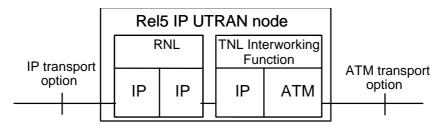
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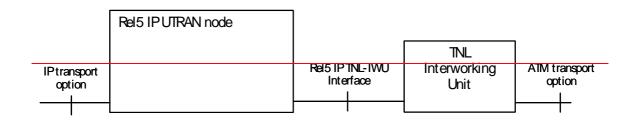
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11.1.3.4 Transport Network User Plane

			Cł	IANG	E RE	QUE	EST	•			CR-Form-v7
æ	25.	<mark>410</mark>	CR <mark>0</mark>	50	ж re	v <mark>1</mark>	ж	Current ve	rsion:	5.3.0	ж
For <u>HELP</u> on ι	using ti	his fori	m, see bo	ottom of th	his page	or lool	k at th	e pop-up tex	kt over	^r the	nbols.
Proposed change	affect	s: L	IICC app	s¥ 📃	ME	Ra	adio A	ccess Netw	ork <mark>X</mark>	Core Ne	etwork X
Title: अ	Con optio		n of the F	Rel-5 IP tr	ansport	WI by	remo	ving the 3 rd I	P-ATN	/ interwork	king
Source: ж	RAN	13									
Work item code: ℜ	ETF	RAN-ip	trans					Date:	<mark>₩ 11</mark>	/02/2004	
Category: ¥	ا ا Detail be fou	F (corradict (corradiate) (co	ection) esponds t ition of fea ctional modi- lanations 3GPP <u>TR</u> ose the fi b rd ATM-I two inter ct Analys ct assess se): this (e release CR has a	dification o fication) of the abov 21.900. nal open i P interworking o working o th function is ment tow CR has is n impact n impact n be cons	tion in an of feature) ve catego issue in rking opt pards the olated im e only on under fu	Rel-5 V ion is r protocco previo pact c e optio nctiona	n WI on remov ol ous ve on the onal fu	2 R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	of the f (GSI (Reli (Rei (Rei (Rei (Rei (Rei (Rei (Rei (Re	ollowing rel M Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5) ease 6) RAN fications w ication (sa of the spec J. view.	/hile the me
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affected:	X X X X X X X X X X X X X X X X X X X	CR039 25.420 Rel-6 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
Other comments: ೫		

6.2 lu-CS

Figure 6.1 shows the protocol structure for I_u -CS, following the structure described in [1].

Radio Network	Contro	ol Plane					User	Plane	
Layer	RAI	NAP						Protocol Lyer	
Transport Network		Network Plane			t Network ol Plane		Transport User		
Layer				Q.2630.2	FFS]			
	ili	CP		Q.2150.1	FFS**)				
	M3UA	MTP3b	╏╴┨	MTP3b					
		SSCF- NNI		SSCF- NNI				RTP/	
	SCTP	SSCOP		SSCOP			AAL2	RTCP*)	
	IP	IP AAL5		AAL5	IP			UDP/IP	
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Γ	1 1 1 1 1 1 1 1 1 1			Physical	Layer	 			
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*) RTCP is optional **) depends on the interworking alternative selected (see [7])

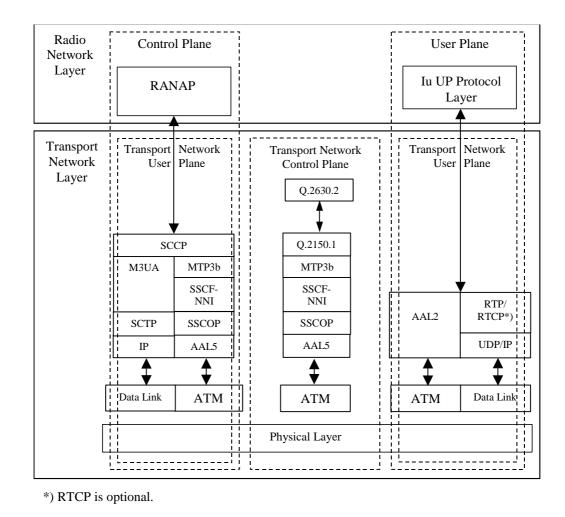


Figure 6.1: I_u –Interface Protocol Structure towards CS Domain

6.3 I_u-BC

			Cł	HANG	E RE	QUI	EST				CR-Form-v7
ж	25	<mark>.410</mark>	CR <mark>0</mark>	51	жre	v <mark>1</mark>	ж	Current ve	rsion:	6.0.0	ж
For <u>HELP</u> on u	ısing	this for	rm, see b	ottom of th	nis page	or looi	k at th	e pop-up te>	kt over	the	nbols.
Proposed change	affec	ts: l	JICC app	s೫ 📃	ME	R:	adio A	ccess Netw	ork <mark>X</mark>	Core Ne	etwork X
Title: अ	Cor opt		on of the l	Rel-5 IP tr	ansport	WI by	remo	ving the 3 rd I	P-ATN	1 interwork	king
Source: ೫	RA	N3									
Work item code: भ	ET	<mark>RAN-i</mark> p	otrans					Date: 8	₩ <mark>11</mark>	/02/2004	
Category: #	Deta be fo	F (con A (cor B (add C (fun D (edi iled exp und in To cl The other Rev1 - Imp Impa relea (sam This The	rection) responds a dition of fea ctional modi olanations 3GPP <u>TR</u> lose the fi 3 rd ATM-I r two options act both <u>lose the fi</u> ct Analys act assess use): this fi re release CR has a	dification o fication) of the above 21.900. nal open i P interwor ons remain functional is Sment tow CR has is because in impact in be cons	tion in an f feature) ve catego ssue in rking opt n. and pro ards the plated in e only or under fu	Rel-5 V ion is previo	n WI on remov	2	of the f (GSI (Rela (Re) (Re) (Re) (Re) (Re) (Re) (Re) (Re)	ollowing relived M Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5) ease 6) RAN fications w fication (sa of the spect	hile the
Consequences if not approved:	H			ot approve TRAN rem			aining	open issue	in Re	I-5 WI on I	P
Clauses affected:	ж	6.2									
Other specs	¥	Y N X	Other co	ore specifi	cations	ж	CRO CRO CRO CRO)82 25.401 F)83 25.401 F)50 25.410 F)76 25.414 F)77 25.414 F)38 25.420 F	Rel-6 Rel-5 Rel-5 Rel-6		

affected:	X X X X X X X X X X X X X X X X X X X	CR039 25.420 Rel-6 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
Other comments: ೫		

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Radio Network	Contro	ol Plane					User	Plane	
Layer	RAI	NAP						Protocol Lyer	
Transport Network		Network Plane			t Network ol Plane		Transport User		
Layer				Q.2630.2	FFS]			
	ili	CP		Q.2150.1	FFS**)				
	M3UA	MTP3b			MTP3b				
		SSCF- NNI		SSCF- NNI				RTP/	
	SCTP	SSCOP	1	SSCOP			AAL2	RTCP*)	
	IP	IP AAL5		AAL5	IP			UDP/IP	
	\$	•		•	\$		\$	‡	
	Data Link	ATM][ATM	Data Link][ATM	Data Link	
Γ	1 1 1 1 1 1 1 1 1 1			Physical	Layer	 			
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*) RTCP is optional **) depends on the interworking alternative selected (see [7])

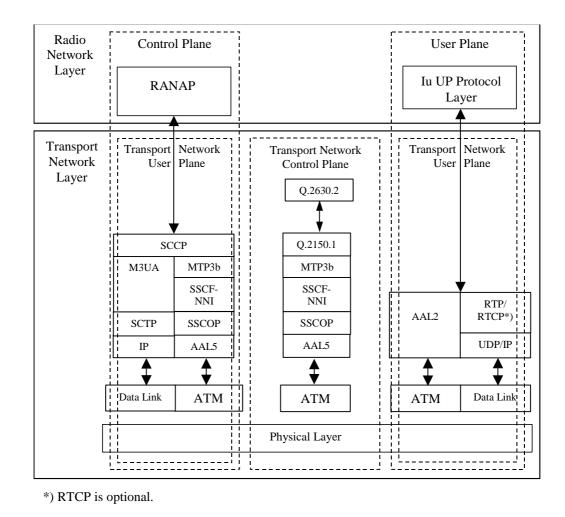


Figure 6.1: I_u –Interface Protocol Structure towards CS Domain

6.3 I_u-BC

CHANGE REQUEST								
æ	25.414 CR 076 # rev 1 ^{# Current version:} 5.5.0 [#]							
For <u>HELP</u> on u	ing this form, see bottom of this page or look at the pop-up text over the st symbol	ols.						
Proposed change	ffects: UICC apps# ME Radio Access Network X Core Netwo	ork X						
Title: ೫	Completion of the Rel-5 IP transport WI by removing the 3 rd IP-ATM interworking option	l						
Source: ೫	RAN3							
Work item code: ℜ	ETRAN-iptrans Date: 米 11/02/2004							
Category: Ж Reason for change Summary of change		the						
	This CR has an impact under functional and protocol point of view. The impact can be considered as isolated as it affects only the IP-ATM Interworking function.							
Consequences if not approved:	If this CR is not approved, the last remaining open issue in Rel-5 WI on IP transport in UTRAN remains open.							
Clauses affected:	¥ 2, 5.3.2, 5.3.3							
Other specs	Y N X Other core specifications X CR082 25.401 Rel-5 CR083 25.401 Rel-6 CR050 25.410 Rel-5 CR051 25.410 Rel-6 CR051 25.410 Rel-6 CR077 25.414 Rel-6							

affected:	X X X	Test specifications O&M Specifications	CR038 25.420 Rel-5 CR039 25.420 Rel-6 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
Other comments: #			

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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- ITU-T Recommendation I.361 (11/95): "B-ISDN ATM layer specification". [1] [2] ITU-T Recommendation I.363.2 (11/00): "B-ISDN ATM Adaptation layer specification: Type 2 AAL". [3] ITU-T Recommendation I.363.5 (8/96): "B-ISDN ATM Adaptation layer specification: Type 5 AAL". [4] ITU-T Recommendation I.366.1 (6/98): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2". ITU-T Recommendation E.164 (5/97): "The international public telecommunication numbering [5] plan". [6] ITU-T Recommendation Q.2110 (7/94): "B-ISDN ATM adaptation layer - Service Specific Connection Oriented Protocol (SSCOP)". ITU-T Recommendation Q.2140 (2/95): "B-ISDN ATM adaptation layer - Service Specific [7] Coordination Function for Support of Signalling at the Network Node Interface (SSCF-NNI)". ITU-T Recommendation Q.2150.1 (12/99): "AAL type 2 signalling transport converter on [8] broadband MTP". [9] ITU-T Recommendation Q.2210 (7/96): "Message transfer part level 3 functions and messages using the services of ITU-T Recommendation Q.2140". ITU-T Recommendation Q.2630.1 (12/99): "AAL type 2 signalling protocol (Capability Set 1)". [10] ITU-T Recommendation X.213 (11/95): "Information technology - Open systems interconnection -[11] Network Service Definitions". IETF RFC 768 (Auguest 1980): "User Datagram Protocol". [12] IETF RFC 791 (September 1981): "Internet Protocol". [13] [14] IETF RFC 2684 (September 1999): "Multiprotocol Encapsulation over ATM Adaptation Layer 5". IETF RFC 2225 (April 1998): "Classical IP and ARP over ATM". [15] [16] IETF RFC 2460 (December 1998): "Internet Protocol, Version 6 (IPv6) Specification". [17] 3GPP TS 29.060: "General Packet Radio Service (GPRS) Service description; Stage 2". IETF RFC 793 (September 1981): "Transmission Control Protocol". [18] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in [19] the Ipv4 and Ipv6 Headers".

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[20]	ITU-T Implementor's guide (12/99) for recommendation Q.2210 (07/96).
[21]	ITU-T Recommendation Q.2630.2 (12/00): "AAL type 2 signalling protocol (Capability Set 2)".
[22]	IETF RFC 1889 (January 1996): "RTP: A Transport Protocol for Real Time Applications".
[23]	IETF RFC 1890 (January 1996): "RTP Profile for Audio and Video Conferences with Minimal Control".
[24]	3G TS 25.415: "UTRAN Iu Interface User Plane Protocols"
[25]	IETF RFC 1661 (July 1994): "The Point-to-Point Protocol (PPP)".
[26]	IETF RFC 1662 (July 1994): "PPP in HDLC-like Framing".
[27]	IETF RFC 2507 (February 1999): "IP header compression".
[28]	IETF RFC 1990 (August 1996): "The PPP Multilink Protocol (MP)".
[29]	IETF RFC 2686 (September 1996): "The Multi-Class Extension to Multi-Link PPP".
[30]	IETF RFC 2509 (February 1999): "IP Header Compression over PPP".
<u>-[31]</u>	
[32]	IETF RFC 3153 (August 2001): "PPP Multiplexing".
[33]	IETF RFC 2364 (July 1998): "PPP over AAL5".
[34]	IETF RFC 3031 (January 2001): "Multiprotocol Label Switching Architecture".
[35]	ITU-T Recommendation E.191 (03/00): "B-ISDN addressing".

<Unaffected parts omitted>

5.3 Interworking between ATM and IP Transport Options

5.3.1 Introduction

This clause specifies the interworking between IP and ATM transport options. An RNC/CN-node supporting IP transport option shall provide interworking to a CN-node/RNC supporting only ATM transport option.

5.3.2 Interworking Alternatives

For interworking with a CN-node/RNC supporting only ATM transport option, the RNC/CN-node supporting IP transport option shall additionally support at least one of the following interworking mechanisms:

- 1) ATM&IP dual stack. An IP-ALCAP protocol is not required in this interworking solution.
- 2) Interworking Function (IWF) as a logical part of the RNC/CN-node supporting IP transport option. An IP-ALCAP protocol is not required in this interworking solution.
- 3) Interworking Unit (IWU) as a logically separate unit. An IP ALCAP protocol shall be used in the interface between the RNC/CN node supporting IP transport option and the Interworking Unit.

5.3.3 IP-ALCAP for the Interworking

In the third interworking alternative as introduced in subclause 5.3.2, [31] is used as the IP ALCAP protocol between the RNC/CN node supporting IP transport option and the Transport Network Layer Interworking Unit.

The following figure shows the protocol stack for IP ALCAP over Iu CS in the third interworking alternative as introduced in subclause 5.3.2.

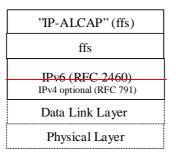


Figure 2a. Signalling bearer for IP-ALCAP.

6 Packet switched domain

CR-Form-v7									CR-Form-v7	
æ	25	25.414 CR 077 * rev 1 * Current version: 6.0.0								ж
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.										
Proposed change	affec	ts:	UICC apps₩	n N	ИЕ	Radio A	Access Networ	rk X	Core Ne	etwork X
<i>Title:</i> ⊮		mpleti tion	on of the Rel	-5 IP transpo	ort WI b	oy remo	ving the 3 rd IP	-ATN	l interwork	ing
Source: ¥	RA	N3								
Work item code: ¥	ET	RAN-i	ptrans				<i>Date:</i> ೫	11/	02/2004	
Reason for change	Work item code: # ETRAN-iptrans Date: # 11/02/2004 Fategory: # A Release: # Rel-6 Use one of the following categories: Use one of the following releases: 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) Rofe (Release 1996) B (addition of feature), R97 (Release 1997) C (functional modification) R99 (Release 1998) Deteiled explanations of the above categories can Rel-4 (Release 5) Rel-6 (Release 6) Rel-6 (Release 6) Reason for change: # To close the final open issue in Rel-5 WI on IP transport in UTRAN tummary of change: # The 3 rd ATM-IP interworking option is removed from the specifications while the other two options remain. Rev1: - Impact both functional and protocol - - Refined changes in 5.3.2 Impact Analysis Impact assessment towards the previous version of the specification (same release) because only one optional function is impacted. This CR has an impact under functiona and protocol point of view. The impact can be considered as isolated as it affects only the IP-ATM Interworking function.								nile the	
Consequences if # If this CR is not approved, the last remaining open issue in Rel-5 WI on IP not approved: transport in UTRAN remains open.								P		
Clauses affected:	ж	2, 5	.3.2, 5.3.3							
Other specs	ж	Y N X		specificatior	IS	CR CR CR	082 25.401 Re 083 25.401 Re 050 25.410 Re 051 25.410 Re 076 25.414 Re	el-6 el-5 el-6		

affected:	X X X	Test specifications O&M Specifications	CR038 25.420 Rel-5 CR039 25.420 Rel-6 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
Other comments: #			

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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- ITU-T Recommendation I.361 (11/95): "B-ISDN ATM layer specification". [1] [2] ITU-T Recommendation I.363.2 (11/00): "B-ISDN ATM Adaptation layer specification: Type 2 AAL". [3] ITU-T Recommendation I.363.5 (8/96): "B-ISDN ATM Adaptation layer specification: Type 5 AAL". [4] ITU-T Recommendation I.366.1 (6/98): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2". ITU-T Recommendation E.164 (5/97): "The international public telecommunication numbering [5] plan". [6] ITU-T Recommendation Q.2110 (7/94): "B-ISDN ATM adaptation layer - Service Specific Connection Oriented Protocol (SSCOP)". ITU-T Recommendation Q.2140 (2/95): "B-ISDN ATM adaptation layer - Service Specific [7] Coordination Function for Support of Signalling at the Network Node Interface (SSCF-NNI)". ITU-T Recommendation Q.2150.1 (12/99): "AAL type 2 signalling transport converter on [8] broadband MTP". [9] ITU-T Recommendation Q.2210 (7/96): "Message transfer part level 3 functions and messages using the services of ITU-T Recommendation Q.2140". ITU-T Recommendation Q.2630.1 (12/99): "AAL type 2 signalling protocol (Capability Set 1)". [10] ITU-T Recommendation X.213 (11/95): "Information technology - Open systems interconnection -[11] Network Service Definitions". IETF RFC 768 (Auguest 1980): "User Datagram Protocol". [12] IETF RFC 791 (September 1981): "Internet Protocol". [13] [14] IETF RFC 2684 (September 1999): "Multiprotocol Encapsulation over ATM Adaptation Layer 5". IETF RFC 2225 (April 1998): "Classical IP and ARP over ATM". [15] [16] IETF RFC 2460 (December 1998): "Internet Protocol, Version 6 (IPv6) Specification". [17] 3GPP TS 29.060: "General Packet Radio Service (GPRS) Service description; Stage 2". IETF RFC 793 (September 1981): "Transmission Control Protocol". [18] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in [19] the Ipv4 and Ipv6 Headers".

4

[20]	ITU-T Implementor's guide (12/99) for recommendation Q.2210 (07/96).
[21]	ITU-T Recommendation Q.2630.2 (12/00): "AAL type 2 signalling protocol (Capability Set 2)".
[22]	IETF RFC 1889 (January 1996): "RTP: A Transport Protocol for Real Time Applications".
[23]	IETF RFC 1890 (January 1996): "RTP Profile for Audio and Video Conferences with Minimal Control".
[24]	3G TS 25.415: "UTRAN Iu Interface User Plane Protocols"
[25]	IETF RFC 1661 (July 1994): "The Point-to-Point Protocol (PPP)".
[26]	IETF RFC 1662 (July 1994): "PPP in HDLC-like Framing".
[27]	IETF RFC 2507 (February 1999): "IP header compression".
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[29]	IETF RFC 2686 (September 1996): "The Multi-Class Extension to Multi-Link PPP".
[30]	IETF RFC 2509 (February 1999): "IP Header Compression over PPP".
<u>[31]</u>	
[32]	IETF RFC 3153 (August 2001): "PPP Multiplexing".
[33]	IETF RFC 2364 (July 1998): "PPP over AAL5".
[34]	IETF RFC 3031 (January 2001): "Multiprotocol Label Switching Architecture".
[35]	ITU-T Recommendation E.191 (03/00): "B-ISDN addressing".

<Unaffected parts omitted>

5.3 Interworking between ATM and IP Transport Options

5.3.1 Introduction

This clause specifies the interworking between IP and ATM transport options. An RNC/CN-node supporting IP transport option shall provide interworking to a CN-node/RNC supporting only ATM transport option.

5.3.2 Interworking Alternatives

For interworking with a CN-node/RNC supporting only ATM transport option, the RNC/CN-node supporting IP transport option shall additionally support at least one of the following interworking mechanisms:

- 1) ATM&IP dual stack. An IP-ALCAP protocol is not required in this interworking solution.
- 2) Interworking Function (IWF) as a logical part of the RNC/CN-node supporting IP transport option. An IP-ALCAP protocol is not required in this interworking solution.
- 3) Interworking Unit (IWU) as a logically separate unit. An IP ALCAP protocol shall be used in the interface between the RNC/CN node supporting IP transport option and the Interworking Unit.

5.3.3 IP-ALCAP for the Interworking

In the third interworking alternative as introduced in subclause 5.3.2, [31] is used as the IP ALCAP protocol between the RNC/CN node supporting IP transport option and the Transport Network Layer Interworking Unit.

The following figure shows the protocol stack for IP ALCAP over Iu CS in the third interworking alternative as introduced in subclause 5.3.2.

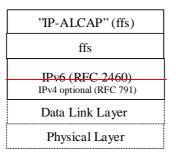


Figure 2a. Signalling bearer for IP-ALCAP.

6 Packet switched domain

CR-Form-v7								
ж	25.420 CR 038 # rev 1 ^{# Current version:} 5.1.0 [#]							
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the st symbols.							
Proposed change	affects: UICC apps# ME Radio Access Network X Core Network							
Title: ដ	Completion of the Rel-5 IP transport WI by removing the 3 rd IP-ATM interworking option							
Source: ೫	RAN3							
Work item code: ℜ	ETRAN-iptrans Date: # 11/02/2004							
	# F Release: # Rel-5 Use one of the following categories: Ise one of the following releases: 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996) B (addition of feature), R97 (Release 1997) C (functional modification of feature) R98 (Release 1998) D (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can be found in 3GPP TR 21.900. Rel-4 (Release 5) Rel-6 (Release 6)							
Consequences if not approved:	Interworking function. # If this CR is not approved, the last remaining open issue in Rel-5 WI on IP transport in UTRAN remains open.							
Clauses affected:	₩ <mark>8</mark>							
Other specs	Y N X Other core specifications X CR082 25.401 Rel-5 CR083 25.401 Rel-6 CR050 25.410 Rel-5 CR051 25.410 Rel-6 CR076 25.414 Rel-5 CR076 25.414 Rel-5							

affected:	X X X X X X X X X	CR077 25.414 Rel-6 CR039 25.420 Rel-6 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
Other comments:	X	

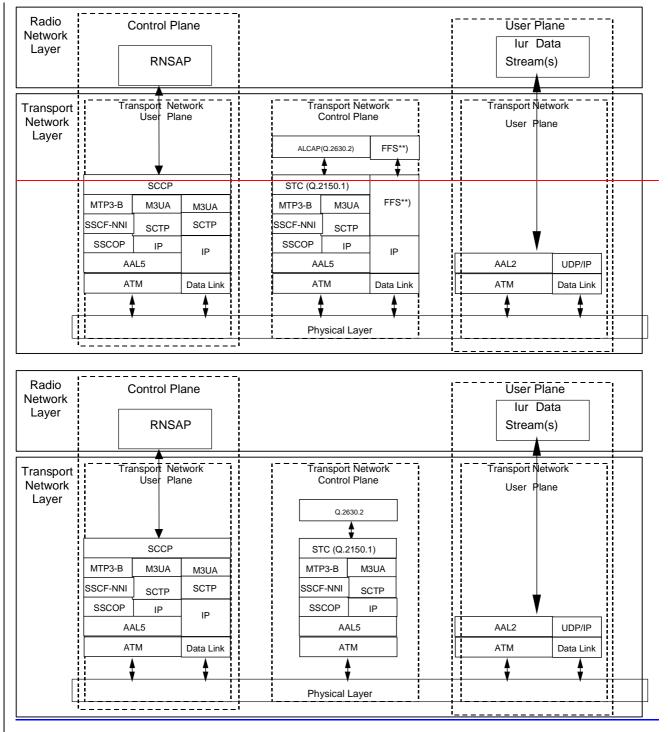
8 I_{ur} Interface Protocol Structure

The Iur interface protocol architecture consists of two functional layers:

- Radio Network Layer, defines the procedures related to the interaction of two RNCs within a PLMN. The radio network layer consists of a Radio Network Control Plane and a Radio Network User Plane.
- Transport layer, defines procedures for establishing physical connections between two RNCs within a PLMN.

An IP ALCAP protocol may be supported depending on the ATM - IP inter-working solution selected. Further information on the ATM - IP interworking is provided in the transport layer specifications [15]

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Figure 4: lur Interface Protocol Structure

CHANGE REQUEST											
æ	25	<mark>.420</mark>	CR <mark>039</mark>	я	rev	1	ж	Current vers	sion:	6.0.0	ж
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Title: ೫	Co opt	mpletio ion	on of the Rel	-5 IP trans	port WI	l by re	emov	ring the 3 rd IP	-ATM	interwork	king
Source: ೫	RA	N3									
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affected:	X X X X X X X X X	CR077 25.414 Rel-6 CR038 25.420 Rel-5 CR039 25.426 Rel-5 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
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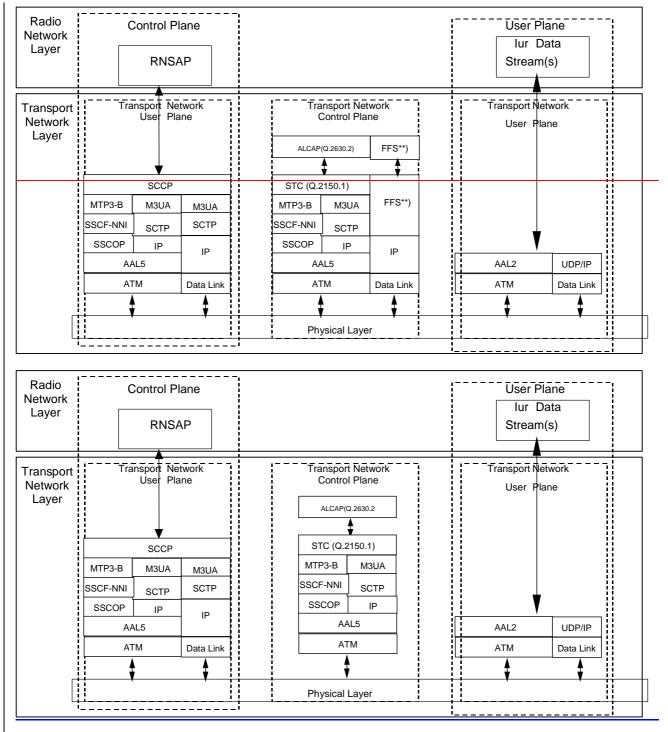
8 I_{ur} Interface Protocol Structure

The Iur interface protocol architecture consists of two functional layers:

- Radio Network Layer, defines the procedures related to the interaction of two RNCs within a PLMN. The radio network layer consists of a Radio Network Control Plane and a Radio Network User Plane.
- Transport layer, defines procedures for establishing physical connections between two RNCs within a PLMN.

An IP ALCAP protocol may be supported depending on the ATM - IP inter-working solution selected. Further information on the ATM - IP interworking is provided in the transport layer specifications [15].

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Figure 4: lur Interface Protocol Structure

CHANGE REQUEST						
æ	25.426 CR 039 # rev 1 ^{# Current version:} 5.3.0 [#]					
For <u>HELP</u> on u	ng this form, see bottom of this page or look at the pop-up text over the st symbols.] `-				
Proposed change affects: UICC apps# ME Radio Access Network X Core Network						
<i>Title:</i> ೫	Completion of the Rel-5 IP transport WI by removing the 3 rd IP-ATM interworking option					
Source: ೫	RAN3					
Work item code: Ж	ETRAN-iptrans Date: # 11/02/2004					
Category: ⊮	FRelease: %Rel-5Use one of the following categories:Use one of the following releases:F (correction)2(GSM Phase 2)A (corresponds to a correction in an earlier release)R96(Release 1996)B (addition of feature),R97(Release 1997)C (functional modification of feature)R98(Release 1998)D (editorial modification)R99(Release 1999)Detailed explanations of the above categories canRel-4(Release 4)Defound in 3GPP TR 21.900.Rel-5(Release 5)Rel-6(Release 6)Rel-6					
Reason for change	To close the final open issue in Rel-5 WI on IP transport in UTRAN					
Summary of chang						
Consequences if not approved:	# If this CR is not approved, the last remaining open issue in Rel-5 WI on IP transport in UTRAN remains open.					
Clauses affected:	¥ 2, 9.2, 9.3					
Other specs	Y N X Other core specifications X CR082 25.401 Rel-5 CR083 25.401 Rel-6 CR050 25.410 Rel-5 CR051 25.410 Rel-6 CR076 25.414 Rel-5 CR076 25.414 Rel-5					

affected:	X X X X X X X X X	CR077 25.414 Rel-6 CR038 25.420 Rel-5 CR039 25.420 Rel-6 CR040 25.426 Rel-6 CR047 25.430 Rel-5 CR048 25.430 Rel-6
Other comments:	X	

2 References

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

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- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- [1] 3GPP TS 25.427: "UTRAN Iur and Iub User interface plane protocols for DCH data streams".
- [2] ITU-T Recommendation I.361 (11/95): "B-ISDN ATM layer specification".
- [3] ITU-T Recommendation I.363.2 (11/2000): "B-ISDN ATM Adaptation Layer specification; Type 2 AAL".
- [4] ITU-T Recommendation I.366.1 (6/98): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2".
- [5] ITU-T Recommendation Q.2630.1 (12/99): "AAL type 2 signalling protocol (Capability Set 1)".
- [6] ITU-T Recommendation E.191 (03/00): "B-ISDN addressing".
- [7] ITU-T Recommendation X.213 (11/95): "Information Technology Open Systems Interconnection - Systems Interconnection - Network Service Definition".
- [8] ITU-T Recommendation Q.2110 (7/94): "B-ISDN ATM adaptation layer Service Specific Connection Oriented Protocol (SSCOP)".
- [9] ITU-T Recommendation Q.2130 (7/94): "B-ISDN signalling ATM adaptation layer Service Specific Coordination Function for Support of Signalling at the User-Network Interface (SSCF at UNI)".
- [10] ITU-T Recommendation Q.2150.2 (12/99): "AAL type 2 signalling transport converter on SSCOP)".
- [11] ITU-T Recommendation Q.2210 (7/96): Message transfer part level 3 functions and messages using the services of the ITU-T Recommendation Q.2140".
- [12] ITU-T Recommendation Q.2140 (2/95): "B-ISDN ATM adaptation layer Service Specific Coordination Function for Support of Signalling at the Network Node Interface (SSCF at NNI)".
- [13] ITU-T Recommendation Q.2150.1 (12/99): "AAL type 2 signalling transport converter on broadband MTP".
- [14] IETF RFC 791 (September 1981): "Internet Protocol".
- [15] IETF RFC 1483 (July 1993): "Multiprotocol Encapsulation over ATM Adaptation Layer 5".
- [16] IETF RFC 2225 (April 1998): "Classical IP and ARP over ATM".
- [17] IETF RFC 768 (August 1980): "User Datagram Protocol".
- [18] IETF RFC 2960 (October 2000): "Stream Control Transmission Protocol".
- [19] G. Sidebottom et al, "SS7 MTP3 User Adaptation Layer", draft-ietf-sigtran-m3ua-12.txt (Work In Progress), IETF, February 2002.

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[20] ITU-T Recommendation I.630 (2/99): "ATM protection switching". ITU-T Recommendation Q.Imp2210: "Implementor's guide (03/99) for Recommendation Q.2210 [21] (07/96)". [22] ITU-T Recommendation Q.2630.2 (12/2000): "AAL type 2 signalling protocol (Capability Set 2)". [23] IETF STD 51, RFC 1661 (July 1994): "The Point-To-Point Protocol (PPP)". IETF STD 51, RFC 1662 (July 1994): "PPP in HDLC-like Framing". [24] [25] IETF RFC 2507, (February 1999): "IP header compression". [26] IETF RFC 1990 "The PPP Multilink Protocol (MP)". [27] IETF RFC 2686 "The Multi-Class Extension to Multi-Link PPP". [28] IETF RFC 2509, (February 1999):"IP Header Compression over PPP". IETF RFC 2460 "Internet Protocol, Version 6 (IPv6) Specification". [29] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in [30] the IPv4 and IPv6 Headers". IETF RFC 768 (8/1980): "User Datagram Protocol". [31] [32] IETF RFC 3153 (August 2001): "PPP Multiplexing". [33] IETF RFC 2364 (July 1998): "PPP over AAL5". [34] IETF RFC 3031 (January 2001): "Multiprotocol Label Switching Architecture". "IP ALCAP" [ffs] [35] ITU-T Recommendation E.164 (5/97): " The international public telecommunication numbering [36] plan ". [37] RFC 3309: "SCTP Checksum Change".

<Unaffected parts are omitted>

9 Interworking between ATM and IP Transport Options

9.1 Introduction

This clause specifies the interworking between IP and ATM transport options. A UTRAN node supporting IP transport option shall provide interworking to a UTRAN node supporting only ATM transport option.

9.2 Interworking Alternatives

For interworking with a UTRAN node supporting only ATM option, the UTRAN node supporting IP option shall additionally support at least one of the following interworking mechanisms:

1) ATM&IP dual stack. An ALCAP protocol is not required in this interworking solution

2) Interworking Function (IWF) as a logical part of the UTRAN node supporting IP option. AAL2 signalling protocol Capability Set 2 [22] shall be supported as ALCAP protocol between the Interworking Function and the UTRAN node supporting ATM transport option.

5

3) Interworking Unit (IWU) as a logically separate unit. An IP ALCAP protocol shall be used in the interface between the UTRAN node supporting IP option and the Interworking Unit.

9.3 IP-ALCAP for the Interworking

In the third interworking alternative as introduced in chapter 9.2, IP ALCAP protocol [35] is used as the IP ALCAP protocol between the UTRAN node supporting IP option and the Transport Network Layer Interworking Unit.

[ffs]

CHANGE REQUEST							
æ	25.426 CR 040 # rev 1 ^{# Current version: 6.0.0 [#]}						
For <u>HELP</u> on u	For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the # symbols.						
Proposed change affects: UICC apps# ME Radio Access Network X Core Network							
Title: ೫	Completion of the Rel-5 IP transport WI by removing the 3 rd IP-ATM interworking option						
Source: ೫	RAN3						
Work item code: ℜ	ETRAN-iptrans Date: # 11/02/2004						
Category: ℜ Reason for change Summary of chang							
	release): this CR has isolated impact on the previous version of the specification (same release) because only one optional function is impacted. This CR has an impact under functional and protocol point of view. The impact can be considered as isolated as it affects only the IP-ATM Interworking function.						
Consequences if not approved:	If this CR is not approved, the last remaining open issue in Rel-5 WI on IP transport in UTRAN remains open.						
Clauses affected:	¥ 2, 9.2, 9.3						
Other specs	Y N X Other core specifications % CR082 25.401 Rel-5 CR083 25.401 Rel-6 CR050 25.410 Rel-6 CR051 25.410 Rel-6 CR076 25.414 Rel-5						

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Other comments:	ж	

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. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- [1] 3GPP TS 25.427: "UTRAN Iur and Iub User interface plane protocols for DCH data streams".
- [2] ITU-T Recommendation I.361 (11/95): "B-ISDN ATM layer specification".
- [3] ITU-T Recommendation I.363.2 (11/2000): "B-ISDN ATM Adaptation Layer specification; Type 2 AAL".
- [4] ITU-T Recommendation I.366.1 (6/98): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2".
- [5] ITU-T Recommendation Q.2630.1 (12/99): "AAL type 2 signalling protocol (Capability Set 1)".
- [6] ITU-T Recommendation E.191 (03/00): "B-ISDN addressing".
- [7] ITU-T Recommendation X.213 (11/95): "Information Technology Open Systems Interconnection - Systems Interconnection - Network Service Definition".
- [8] ITU-T Recommendation Q.2110 (7/94): "B-ISDN ATM adaptation layer Service Specific Connection Oriented Protocol (SSCOP)".
- [9] ITU-T Recommendation Q.2130 (7/94): "B-ISDN signalling ATM adaptation layer Service Specific Coordination Function for Support of Signalling at the User-Network Interface (SSCF at UNI)".
- [10] ITU-T Recommendation Q.2150.2 (12/99): "AAL type 2 signalling transport converter on SSCOP)".
- [11] ITU-T Recommendation Q.2210 (7/96): Message transfer part level 3 functions and messages using the services of the ITU-T Recommendation Q.2140".
- [12] ITU-T Recommendation Q.2140 (2/95): "B-ISDN ATM adaptation layer Service Specific Coordination Function for Support of Signalling at the Network Node Interface (SSCF at NNI)".
- [13] ITU-T Recommendation Q.2150.1 (12/99): "AAL type 2 signalling transport converter on broadband MTP".
- [14] IETF RFC 791 (September 1981): "Internet Protocol".
- [15] IETF RFC 1483 (July 1993): "Multiprotocol Encapsulation over ATM Adaptation Layer 5".
- [16] IETF RFC 2225 (April 1998): "Classical IP and ARP over ATM".
- [17] IETF RFC 768 (August 1980): "User Datagram Protocol".
- [18] IETF RFC 2960 (October 2000): "Stream Control Transmission Protocol".
- [19] G. Sidebottom et al, "SS7 MTP3 User Adaptation Layer", draft-ietf-sigtran-m3ua-12.txt (Work In Progress), IETF, February 2002.

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[20] ITU-T Recommendation I.630 (2/99): "ATM protection switching". ITU-T Recommendation Q.Imp2210: "Implementor's guide (03/99) for Recommendation Q.2210 [21] (07/96)". [22] ITU-T Recommendation Q.2630.2 (12/2000): "AAL type 2 signalling protocol (Capability Set 2)". [23] IETF STD 51, RFC 1661 (July 1994): "The Point-To-Point Protocol (PPP)". IETF STD 51, RFC 1662 (July 1994): "PPP in HDLC-like Framing". [24] [25] IETF RFC 2507, (February 1999): "IP header compression". [26] IETF RFC 1990 "The PPP Multilink Protocol (MP)". [27] IETF RFC 2686 "The Multi-Class Extension to Multi-Link PPP". [28] IETF RFC 2509, (February 1999):"IP Header Compression over PPP". IETF RFC 2460 "Internet Protocol, Version 6 (IPv6) Specification". [29] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in [30] the IPv4 and IPv6 Headers". IETF RFC 768 (8/1980): "User Datagram Protocol". [31] [32] IETF RFC 3153 (August 2001): "PPP Multiplexing". [33] IETF RFC 2364 (July 1998): "PPP over AAL5". [34] IETF RFC 3031 (January 2001): "Multiprotocol Label Switching Architecture". "IP ALCAP" [ffs] [35] ITU-T Recommendation E.164 (5/97): " The international public telecommunication numbering [36] plan ". [37] RFC 3309: "SCTP Checksum Change".

<Unaffected parts are omitted>

9 Interworking between ATM and IP Transport Options

9.1 Introduction

This clause specifies the interworking between IP and ATM transport options. A UTRAN node supporting IP transport option shall provide interworking to a UTRAN node supporting only ATM transport option.

9.2 Interworking Alternatives

For interworking with a UTRAN node supporting only ATM option, the UTRAN node supporting IP option shall additionally support at least one of the following interworking mechanisms:

1) ATM&IP dual stack. An ALCAP protocol is not required in this interworking solution

2) Interworking Function (IWF) as a logical part of the UTRAN node supporting IP option. AAL2 signalling protocol Capability Set 2 [22] shall be supported as ALCAP protocol between the Interworking Function and the UTRAN node supporting ATM transport option.

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3) Interworking Unit (IWU) as a logically separate unit. An IP ALCAP protocol shall be used in the interface between the UTRAN node supporting IP option and the Interworking Unit.

9.3 IP-ALCAP for the Interworking

In the third interworking alternative as introduced in chapter 9.2, IP ALCAP protocol [35] is used as the IP ALCAP protocol between the UTRAN node supporting IP option and the Transport Network Layer Interworking Unit.

[ffs]

CR-Form-v7 CHANGE REQUEST						
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For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the <i>X</i> symbols.						
Proposed change affects: UICC apps ME Radio Access Network X Core Network						
Title: भ	Completion of the Rel-5 IP transport WI by removing the 3 rd IP-ATM interworking option					
Source: ೫	RAN3					
Work item code: ℜ	ETRAN-iptrans Date: 第 11/02/2004					
	F Release: 3t Rel-5 Use one of the following categories: Use one of the following releases: 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996) B (addition of feature), R97 (Release 1997) C (functional modification) R98 (Release 1998) D (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can Rel-4 (Release 1999) Detailed explanations of the above categories can Rel-4 (Release 5) Rel-6 (Release 6) Rel-6 (Release 6) : # To close the final open issue in Rel-5 WI on IP transport in UTRAN Rev1: e: # The 3 rd ATM-IP interworking option is removed from the specifications while the other two options remain. Rev1: - Impact Analysis Impact assessment towards the previous version of the specification (same release): this CR has isolated impact on the previous version of the specification (same release): because only one optional function is impacted. This CR has an impact under functional and protocol point of view. The impact can be considered as isolated as it affects only the IP-ATM					
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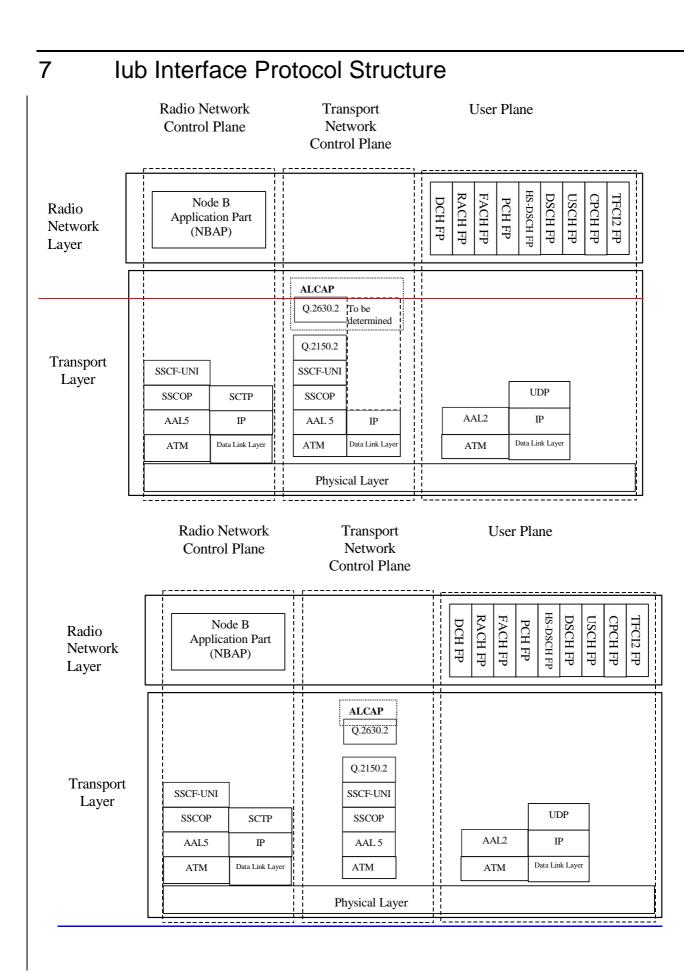


Figure 7: lub Interface Protocol Structure.

The Iub interface protocol architecture consists of two functional layers:

- 1. Radio Network Layer, defines procedures related to the operation of Node B. The radio network layer consists of a radio network control plane and a radio network user plane.
- 2. Transport Layer, defines procedures for establishing physical connections between Node B and the RNC.

There shall be one dedicated AAL2 or UDP/IP transport bearer for each RACH, one for each FACH transport channel, and one for each CPCH [FDD].

An IP ALCAP protocol may be supported by an IP UTRAN node depending on the ATM – IP inter working solution selected. Further information on the ATM – IP interworking is provided in the transport layer specification [10].

8 Other lub Interface Specifications

CHANGE REQUEST											
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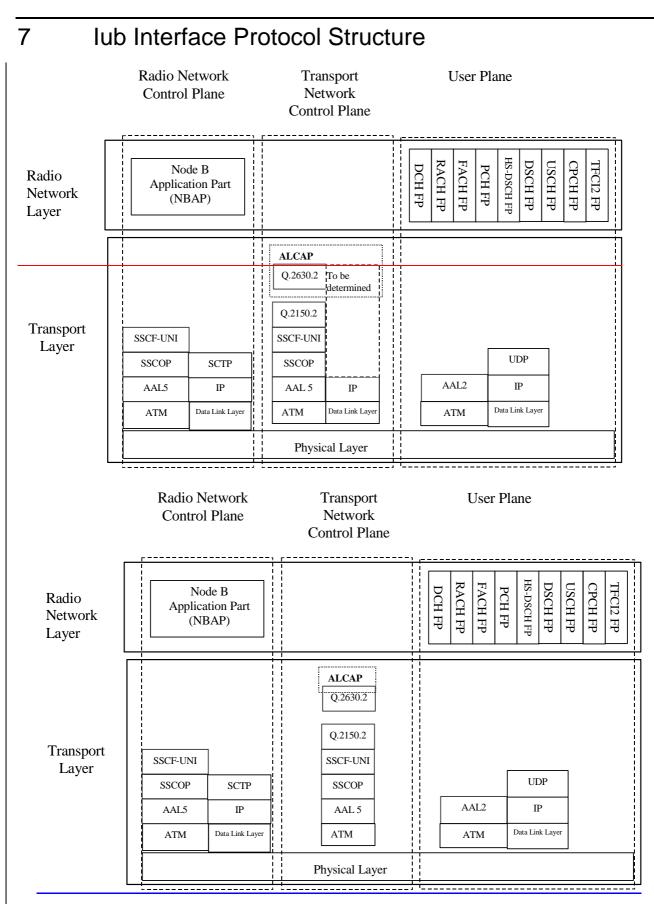


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8 Other lub Interface Specifications