Technical Specification Group Radio Access Network
Marco Island, USA 4 - 7 June 2002

RP#16(02) 0402

TSG_Doc_Num	Specification	CR_Num	Revision_Num	3G_Release	CR_Subject	CR_Category	Cur_Ver_Num	New_Ver_Num	Tdoc_Num	WorkItem
RP-020402	25.414	033		R99	Correction of Aesa formats	F	3.9.0	3.10.0	R3-021163	TEI
RP-020402	25.414	034		Rel-4	Correction of Aesa formats	A	4.3.0	4.4.0	R3-021167	TEI
RP-020402	25.414	035		Rel-5	Correction of Aesa formats	A	5.0.0	5.1.0	R3-021171	TEI
RP-020402	25.414	036		R99	Introduction of TCP Port Number for SABP	F	3.10.0	3.11.0	R3-021511	TEI
RP-020402	25.414	037		Rel-4	Introduction of TCP Port Number for SABP	A	4.3.0	4.4.0	R3-021512	TEI
RP-020402	25.414	038		Rel-5	Introduction of TCP Port Number for SABP	A	5.0.0	5.1.0	R3-021513	TEI

3GPP TSG-RAN WG3 Meeting #29 ***R3-021163***
Gyeongju, Korea, 13th – May17th, 2002

CR-Form-v3

CHANGE REQUEST

⌘ **25.414** **CR** **033** ⌘ rev **-** ⌘ Current version: **3.10.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network X

Title:	⌘	Correction of Aesa formats			
Source:	⌘	R-WG3			
Work item code:	⌘	TEI	***Date:*** ⌘	April 2002	
Category:	⌘	**F**	***Release:*** ⌘	R99	

Use one of the following categories:
F *(essential correction)*
A *(corresponds to a correction in an earlier release)*
B *(Addition of feature),*
C *(Functional modification of feature)*
D *(Editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Reference 5 is inaccurately used: it is not the embedded E164 address. Reference 11 (the recommendation X213) does not define the Aesa formats but only the general Nsap format. Reference 11 is also inaccurate since the 8/97 released recommendation is the amendment for IP address in Nsap format and not the generic Nsap format definition on which E191 refers. Therefore the recommendation E191 must be introduced to define the Aesa formats. The March 00 of E191 is the one than defines the Aesa variants and not only the embedded E164.
Summary of change:	⌘	The referenced recommendations for Aesa variants have been corrected since the current reference was dealing with only native E164. The reference for Nsap format has also been corrected since inaccurate. <u>Impact assessment towards the previous version of the specification (same release):</u> This CR has isolated impact with the previous version of the specification (same release) since the RNC can with this CR use Aesa variants according to their actual definition. This CR has an impact under functional point of view for implementations not behaving like indicated in the CR. The impact can be considered isolated because the change affects only the aal2 transport layer addressing function.
Consequences if not approved:	⌘	Erroneous specification referenced. Native E164 addresses could be used whereas they mustn't.

Clauses affected:	⌘	2, 5.2.2.1		
Other specs affected:	⌘	**X** Other core specifications	⌘	TS25414 CR034 REL-4 TS25414 CR035 REL-5
		Test specifications		
		O&M Specifications		
Other comments:	⌘			

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at:
http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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.
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[1] ITU-T Recommendation I.361 (11/95): "B-ISDN ATM layer specification".

[2] ITU-T Recommendation I.363.2 (9/97): "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".

[5] ITU-T Recommendation E.164 (5/97): "The international public telecommunication numbering plan".

[6] ITU-T Recommendation Q.2110 (7/94): "B-ISDN ATM adaptation layer - Service Specific Connection Oriented Protocol (SSCOP)".

[7] 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-NNI)".

[8] ITU-T Recommendation Q.2150.1 (12/99): "AAL type 2 signalling transport converter on 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".

[10] ITU-T Recommendation Q.2630.1 (12/99): "AAL type 2 signalling protocol (Capability Set 1)".

[11] ITU-T Recommendation X.213 (11~~8~~/95~~7~~): "Information technology - Open systems interconnection - Network Service Definition".

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

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

[14] IETF RFC 2684 (September 1999): "Multiprotocol Encapsulation over ATM Adaptation Layer 5".

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

[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".

[18] IETF RFC 793 (September 1981): "Transmission Control Protocol".

[19] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in the Ipv4 and Ipv6 Headers".

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

[21] ITU-T Recommendation E.191 (03/00): "B-ISDN addressing".

5.2.2 Signalling protocol (ALCAP)

5.2.2.1 AAL2 Signalling Protocol (Q.2630.1)

ITU-T Recommendation Q.2630.1 [10] shall be used for establishing AAL2 connections towards the circuit switched domain.

The AAL2 transport layer uses the embedded E.164 ~~[5]~~ or other AESA variants of the NSAP addressing formats [11,21]. Native E.164 [5] addressing shall not be used.

Binding ID provided by the radio network layer shall be copied in SUGR parameter of ESTABLISH request primitive of ITU-T Recommendation Q.2630.1 [10].

If there is an AAL2 switching function in the transport network layer of the interface, the AAL2 Link Characteristics parameter (ALC) shall be included in the Establish Request message of AAL2 signalling protocol.

3GPP TSG-RAN WG3 Meeting #29 ***R3-021167***
Gyeongju, Korea, 13th – May17th, 2002

CR-Form-v3

CHANGE REQUEST

⌘ **25.414** **CR** **034** ⌘ rev **-** ⌘ Current version: **4.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network X

Title:	⌘	Correction of Aesa formats
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	April 2002
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(essential correction)*
A *(corresponds to a correction in an earlier release)*
B *(Addition of feature),*
C *(Functional modification of feature)*
D *(Editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘

Reference 5 is inaccurately used: it is not the embedded E164 address.

Reference 11 (the recommendation X213) does not define the Aesa formats but only the general Nsap format.

Reference 11 is also inaccurate since the 8/97 released recommendation is the amendment for IP address in Nsap format and not the generic Nsap format definition on which E191 refers.

Therefore the recommendation E191 must be introduced to define the Aesa formats. The March 00 of E191 is the one than defines the Aesa variants and not only the embedded E164.

Summary of change: ⌘

The referenced recommendations for Aesa variants have been corrected since the current reference was dealing with only native E164. The reference for Nsap format has also been corrected since inaccurate.

Impact assessment towards the previous version of the specification (same release):
This CR has isolated impact with the previous version of the specification (same release) since the RNC can with this CR use Aesa variants according to their actual definition.

This CR has an impact under functional point of view for implementations not behaving like indicated in the CR.
The impact can be considered isolated because the change affects only the aal2 transport layer addressing function.

Consequences if not approved: ⌘

Erroneous specification referenced. Native E164 addresses could be used whereas they mustn't.

Clauses affected:	⌘	2, 5.2.2.1		
Other specs affected:	⌘	**X** Other core specifications	⌘	TS25414 CR033 R99 TS25414 CR035 REL-5
		Test specifications		
		O&M Specifications		
Other comments:	⌘			

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

2 References

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[1] ITU-T Recommendation I.361 (11/95): "B-ISDN ATM layer specification".

[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".

[5] ITU-T Recommendation E.164 (5/97): "The international public telecommunication numbering plan".

[6] ITU-T Recommendation Q.2110 (7/94): "B-ISDN ATM adaptation layer - Service Specific Connection Oriented Protocol (SSCOP)".

[7] 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-NNI)".

[8] ITU-T Recommendation Q.2150.1 (12/99): "AAL type 2 signalling transport converter on 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".

[10] ITU-T Recommendation Q.2630.1 (12/99): "AAL type 2 signalling protocol (Capability Set 1)".

[11] ITU-T Recommendation X.213 (118/9557): "Information technology - Open systems interconnection - Network Service Definitions".

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

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

[14] IETF RFC 2684 (September 1999): "Multiprotocol Encapsulation over ATM Adaptation Layer 5".

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

[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".

[18] IETF RFC 793 (September 1981): "Transmission Control Protocol".

[19] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in the Ipv4 and Ipv6 Headers".

[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] ITU-T Recommendation E.191 (03/00): "B-ISDN addressing".

5.2.2 Signalling protocol (ALCAP)

5.2.2.1 AAL2 Signalling Protocol (Q.2630.2)

ITU-T Recommendation Q.2630.2 [21] shall be used for establishing AAL2 connections towards the circuit switched domain. ITU-T Recommendation Q.2630.2 [21] adds new optional capabilities to ITU-T Recommendation Q.2630.1 [10].

The AAL2 transport layer uses the embedded E.164 ~~[5]~~ or other AESA variants of the NSAP addressing formats [11,22]. Native E.164 addressing [5] shall not be used.

Binding ID provided by the radio network layer shall be copied in SUGR parameter of ESTABLISH request primitive of ITU-T Recommendation Q.2630.2 [21].

If there is an AAL2 switching function in the transport network layer of the interface, the Link Characteristics parameter (LC) shall be included in the Establish Request message and in the Modification Request message of AAL2 signalling protocol.

3GPP TSG-RAN WG3 Meeting #29 ***R3-021171***
Gyeongju, Korea, 13th – May17th, 2002

CR-Form-v3

CHANGE REQUEST

⌘ **25.414** **CR** **035** ⌘ rev **-** ⌘ Current version: **5.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network X

Title:	⌘	Correction of Aesa formats			
Source:	⌘	R-WG3			
Work item code:	⌘	TEI	***Date:***	⌘	April 2002
Category:	⌘	**A**	***Release:***	⌘	REL-5

Use one of the following categories:
F *(essential correction)*
A *(corresponds to a correction in an earlier release)*
B *(Addition of feature),*
C *(Functional modification of feature)*
D *(Editorial modification)*
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Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Reference 5 is inaccurately used: it is not the embedded E164 address. Reference 11 (the recommendation X213) does not define the Aesa formats but only the general Nsap format. Reference 11 is also inaccurate since the 8/97 released recommendation is the amendment for IP address in Nsap format and not the generic Nsap format definition on which E191 refers. Therefore the recommendation E191 must be introduced to define the Aesa formats. The March 00 of E191 is the one than defines the Aesa variants and not only the embedded E164.
Summary of change:	⌘	The referenced recommendations for Aesa variants have been corrected since the current reference was dealing with only native E164. The reference for Nsap format has also been corrected since inaccurate. <u>Impact assessment towards the previous version of the specification (same release):</u> This CR has isolated impact with the previous version of the specification (same release) since the RNC can with this CR use Aesa variants according to their actual definition. This CR has an impact under functional point of view for implementations not behaving like indicated in the CR. The impact can be considered isolated because the change affects only the aal2 transport layer addressing function.
Consequences if not approved:	⌘	Erroneous specification referenced. Native E164 addresses could be used whereas they mustn't.

Clauses affected:	⌘	2, 5.2.2.1		
Other specs affected:	⌘	X Other core specifications	⌘	TS25414 CR033 R99 TS25414 CR034 REL-4
		Test specifications		
		O&M Specifications		
Other comments:	⌘			

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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[1] ITU-T Recommendation I.361 (11/95): "B-ISDN ATM layer specification".

[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".

[5] ITU-T Recommendation E.164 (5/97): "The international public telecommunication numbering plan".

[6] ITU-T Recommendation Q.2110 (7/94): "B-ISDN ATM adaptation layer - Service Specific Connection Oriented Protocol (SSCOP)".

[7] 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-NNI)".

[8] ITU-T Recommendation Q.2150.1 (12/99): "AAL type 2 signalling transport converter on 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".

[10] ITU-T Recommendation Q.2630.1 (12/99): "AAL type 2 signalling protocol (Capability Set 1)".

[11] ITU-T Recommendation X.213 (~~8~~11/9~~5~~7): "Information technology - Open systems interconnection - Network Service Definitions".

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

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

[14] IETF RFC 2684 (September 1999): "Multiprotocol Encapsulation over ATM Adaptation Layer 5".

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

[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".

[18] IETF RFC 793 (September 1981): "Transmission Control Protocol".

[19] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in the Ipv4 and Ipv6 Headers".

[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".

[31] IETF RFC 2474 (December 1998): "Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers".

[32] "IP-ALCAP" [ffs.]

[33] IETF RFC 3153 (August 2001): "PPP Multiplexing".

[34] IETF RFC 2364 (July 1998): "PPP over AAL5".

[35] IETF RFC 3031 (January 2001): "Multiprotocol Label Switching Architecture".

[36] ITU-T Recommendation E.191 (03/00): "B-ISDN addressing".

5.2.2 Transport Signalling for the ATM Transport Option

5.2.2.1 Signalling protocol (ALCAP)

5.2.2.1.1 AAL2 Signalling Protocol (Q.2630.2)

In the ATM transport option ITU-T Recommendation Q.2630.2 [21] shall be used for establishing AAL2 connections towards the circuit switched domain. ITU-T Recommendation Q.2630.2 [21] adds new optional capabilities to ITU-T Recommendation Q.2630.1 [10].

The AAL2 transport layer uses the embedded E.164 ~~[5]~~ or other AESA variants of the NSAP addressing formats [11,36]. Native E.164 addressing [5] shall not be used.

Binding ID provided by the radio network layer shall be copied in SUGR parameter of ESTABLISH request primitive of ITU-T Recommendation Q.2630.2 [21].

If there is an AAL2 switching function in the transport network layer of the interface, the Link Characteristics parameter (LC) shall be included in the Establish Request message and in the Modification Request message of AAL2 signalling protocol.

3GPP TSG-RAN WG3 Meeting #29 ***Tdoc R3-021511***
Gyeongju, South Korea, 13th – 17th May 2002

CR-Form-v5

CHANGE REQUEST

⌘ **25.414** **CR** **036** ⌘ **rev** **1** ⌘ Current version: **3.10.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network **X**

Title:	⌘	Inclusion of TCP Port Number for SABP
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	15th May 2002
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	The signalling protocol structure of the Iu-BC interface is: SABP/TCP/IP/AAL5/ATM. Thus far, RAN WG3 have omitted the need to include a specific TCP port number within the relevant section in TS 25.414, ~~SABP specification~~ nor had an application been made to IANA to obtain one. IANA have now alloated a TCP port number for sole use by SABP.
Summary of change:	⌘	A statement as to which TCP port number SABP shall be applicable is included within TS 25.414 in the relevant section. Impact assessment towards the previous version of the specification (same release): This CR has no impact because SABP could not be successfully implemented in any release prior to this change of stating the TCP port number to which SABP is referenced.
Consequences if not approved:	⌘	SABP messages will not be successfully transported across the Iu-BC interface if the TCP protocol is not aware of which port number has been allocated to SABP.

Clauses affected:	⌘	Section 7.1.2		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.414 V4.3.0 CR37~~xxx~~ 25.414 V5.0.0 CR38~~xxx~~
Other comments:	⌘			

How to create CRs using this form:
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Below is a brief summary:

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

7 Broadcast Domain

7.1 Transport network user plane

7.1.1 General

Figure 4 shows the protocol stack for the transport network user plane on the Iu interface towards the Broadcast domain.

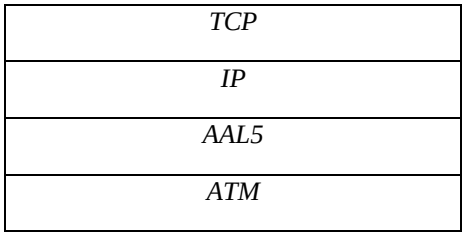

Figure 4

The protocol architecture for the Service Area Broadcast Plane of the Iu interface shall be TCP over IP over AAL5 over ATM.

7.1.2 TCP/IP

The path protocol used shall be TCP, which is specified in RFC793 [18]. IPv4 [13] (RFC 791) shall be supported, IPv6 [16] (RFC 2460) support is optional.

The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

7.1.3 ATM Adaptation Layer Type 5 (I.363.5)

AAL5 shall be used according to ITU-T Recommendation I.363.5.

AAL5 virtual circuits shall be used to transport the IP packets across the Iu interface toward the broadcast 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.

7.1.4 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 RFC 2225 [15]. Multiprotocol Encapsulation over AAL5 is specified in RFC 2684 [14].

7.2 Transport network control plane

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

3GPP TSG-RAN WG3 Meeting #29 ***Tdoc R3-021512***
Gyeongju, South Korea, 13th – 17th May 2002

CR-Form-v5

CHANGE REQUEST

⌘ **25.414** **CR** **37** ⌘ **rev** **1** ⌘ Current version: **4.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network **X**

Title:	⌘	Inclusion of TCP Port Number for SABP
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	15th May 2002
Category:	⌘	**F**
Release:	⌘	R4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	The signalling protocol structure of the Iu-BC interface is: SABP/TCP/IP/AAL5/ATM. Thus far, RAN WG3 have omitted the need to include a specific TCP port number within the relevant section in ~~the~~ TS 25.414, ~~SABP specification~~ nor had an application been made to IANA to obtain one. IANA have now alloated a TCP port number for sole use by SABP.
Summary of change:	⌘	A statement as to which TCP port number SABP shall be applicable is included within TS 25.414 in the relevant section. Impact assessment towards the previous version of the specification (same release): This CR has no impact because SABP could not be successfully implemented in any release prior to this change of stating the TCP port number to which SABP is referenced.
Consequences if not approved:	⌘	SABP messages will not be successfully transported across the Iu-BC interface if the TCP protocol is not aware of which port number has been allocated to SABP.

Clauses affected:	⌘	Section 7.1.2		
Other specs affected:	⌘	**X** Other core specifications	⌘	25.414 V3.10.0 CR36 ~~xxx~~ 25.414 V5.0.0 CR38 ~~xxx~~
		☐ Test specifications		
		☐ O&M Specifications		
Other comments:	⌘			

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm.
Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

7 Broadcast Domain

7.1 Transport network user plane

7.1.1 General

Figure 4 shows the protocol stack for the transport network user plane on the Iu interface towards the Broadcast domain.

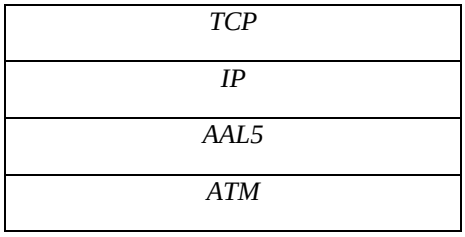

Figure 4

The protocol architecture for the Service Area Broadcast Plane of the Iu interface shall be TCP over IP over AAL5 over ATM.

7.1.2 TCP/IP

The path protocol used shall be TCP, which is specified in RFC793 [18]. IPv4 [13] (RFC 791) shall be supported, IPv6 [16] (RFC 2460) support is optional.

The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

7.1.3 ATM Adaptation Layer Type 5 (I.363.5)

AAL5 shall be used according to ITU-T Recommendation I.363.5.

AAL5 virtual circuits shall be used to transport the IP packets across the Iu interface toward the broadcast 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.

7.1.4 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 RFC 2225 [15]. Multiprotocol Encapsulation over AAL5 is specified in RFC 2684 [14].

7.2 Transport network control plane

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

3GPP TSG-RAN WG3 Meeting #29 ***Tdoc R3-021513***
Gyeongju, South Korea, 13th – 17th May 2002

CR-Form-v5

CHANGE REQUEST

⌘ **25.414** **CR** **038** ⌘ **rev** **1** ⌘ Current version: **5.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☐ Radio Access Network **X** Core Network **X**

Title:	⌘	Introduction of TCP Port Number for SABP
Source:	⌘	R-WG3
Work item code:	⌘	TEI
Date:	⌘	15th May 2002
Category:	⌘	**F**
Release:	⌘	R5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	The signalling protocol structure of the Iu-BC interface is: SABP/TCP/IP/AAL5/ATM. Thus far, RAN WG3 have omitted the need to include a specific TCP port number within the relevant section in TS 25.414~~SABP specification~~, nor had an application been made to IANA to obtain one. IANA have now alloated a TCP port number for sole use by SABP.
Summary of change:	⌘	A statement as to which TCP port number SABP shall be applicable is included within TS 25.414 in the relevant sections. Impact assessment towards the previous version of the specification (same release): This CR has no impact because SABP could not be successfully implemented in any release prior to this change of stating the TCP port number to which SABP is referenced.
Consequences if not approved:	⌘	SABP messages will not be successfully transported across the Iu-BC interface if the TCP protocol is not aware of which port number has been allocated to SABP.

Clauses affected:	⌘	7.1.2.2, 7.1.3.3		
Other specs affected:	⌘	**X** Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.414 V3.10.0 CR36~~xxx~~ 25.414 V4.3.0 CR37~~xxx~~
Other comments:	⌘			

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7 Broadcast Domain

7.1 Transport network user plane

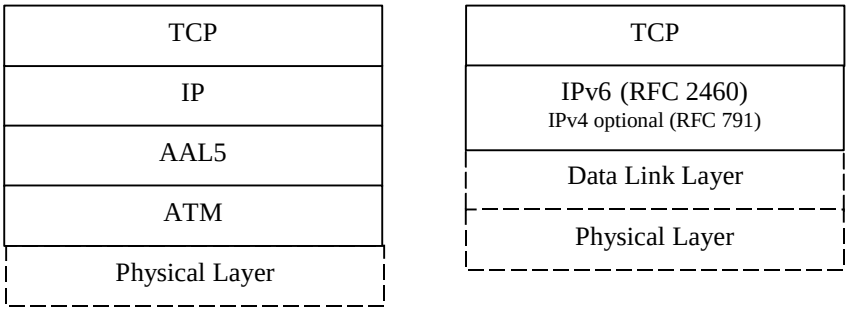
7.1.1 General

There are two options for the transport layer for data streams over Iu-BC:

1) ATM based Transport (ATM transport option)

2) IP based Transport (IP transport option)

The following figure shows the protocol stacks of the two options.



Protocol Stack for the ATM transport option

Protocol Stack for the IP transport option

Figure 4. Transport network layer for data streams over Iu-BC.

7.1.2 ATM Transport Option

7.1.2.1 General

In the ATM transport option, the protocol architecture for the Service Area Broadcast Plane of the Iu interface shall be TCP over IP over AAL5 over ATM.

7.1.2.2 TCP/IP

The path protocol used shall be TCP, which is specified in RFC793 [18]. IPv4 [13] (RFC 791) shall be supported, IPv6 [16] (RFC 2460) support is optional.

The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

7.1.2.3 ATM Adaptation Layer Type 5 (I.363.5)

AAL5 shall be used according to ITU-T Recommendation I.363.5.

AAL5 virtual circuits shall be used to transport the IP packets across the Iu interface toward the broadcast 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.

7.1.2.4 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 RFC 2225 [15]. Multiprotocol Encapsulation over AAL5 is specified in RFC 2684 [14].

7.1.3 IP Transport Option

7.1.3.1 General

In the IP transport option TCP over IP shall be supported as the transport for data streams on the Iu-BC interface. The data link layer is as specified in subclause 4.2.

The transport bearer is identified by the TCP port number and the IP address (source TCP port number, destination TCP port number, source IP address, destination IP address).

7.1.3.3 TCP /IP

The path protocol used shall be TCP, which is specified in RFC 793 [18].

The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

An IP RNC/CN-node shall support IPv6. The support of IPv4 is optional.

NOTE: This does not preclude single implementation and use of IPv4.

IP dual stack support is recommended for the potential transition period from IPv4 to IPv6 in the transport network.

7.1.3.4 Diffserv code point marking

IP Differentiated Services code point marking [x11] shall be supported. The Diffserv code point may be determined from the application parameters.