TSG-RAN Meeting #11
Palm Springs, CA, U.S.A., 13-16 March 2001

RP-010121

Title: **Agreed CRs to TS 25.426**

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
R3-010023	25.426	010		Application of AAL2 Link Characteristics on Iub/Iur DCHs	F	agreed	3.5.0	3.6.0
R3-010200	25.426	011	1	Clarification of the ALC values	F	agreed	3.5.0	3.6.0

CR-Form-v3

CHANGE REQUEST

| ⌘ | **25.426** CR **010** | ⌘ rev **-** ⌘ | Current version: | **3.5.0** ⌘ |

*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 ☐

Title:	⌘	Application of AAL2 Link Characteristics on Iur DCHs
Source:	⌘	R-WG3
Work item code:	⌘	**Date:** ⌘ December 2000
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:	⌘	Currently the application of AAL2 Link Characteristics (ALC) in 25.426 is only mandatory when there is AAL2 switching in the Transport Network Layer of the interface. However, even in absence of AAL2 switches, usage of the ALC parameters is important. In contrast to the Iub interface, on the Iur interface both peers can initiate AAL2 connection establishment. In order to have AAL2 connections established by both peers sharing the same AAL2 path (ATM VC), both peers should be able to perform CAC for this path. As a result, both sides should be aware of the ALC parameters used for each established AAL2 connection. If the ALC parameters are not transferred to the interface peer, in practice path sharing for AAL2 connections established by different peers will not be possible. As a result, the operator will have to configure the double amount of AAL2 paths. In addition the AAL2 multiplexing gain will be less since fewer AAL2 connections are multiplexed on one path. This CR is backward compatible with existing R99 specifications.
Summary of change:	⌘	This CR proposes the mandatory application of the ALC on Iur, in order to enable bi-directional path usage with both sides performing CAC on the Iur interface.
Consequences if not approved:	⌘	If this CR is not accepted, path sharing by two sides of the Iur interface is in practice impossible.

Clauses affected:	⌘	6.1

Other specs affected:	⌘	**X**	Other core specifications	⌘ 25.424 CR 007
		☐	Test specifications	
		☐	O&M Specifications	

Other comments: ⌘

6 Transport Signalling Application for DCH Data Streams

6.1 ALCAP

AAL2 signalling protocol Capability Set 1 [5] is the signalling protocol to control AAL2 connections on Iub and Iur interfaces.

Binding ID provided by the radio network layer shall be copied in SUGR parameter of ESTABLISH.request primitive of [5].

User Plane Transport bearers for Iur interface are established and released by the ALCAP in the Serving RNC. The binding identity shall already be assigned and tied to a radio application procedure when the first ALCAP message is received over the Iur interface in the Drift RNC.

User Plane Transport bearers for Iub interface are established and released by the ALCAP in the Controlling RNC.

AAL2 transport layer addressing is based on embedded E.164 or AESA variants of the NSAP addressing format [6, 7]. Native E.164 addressing shall not be used.

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

CR-Form-v3

CHANGE REQUEST

⌘ **25.426** CR **011** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

*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 ☐

Title: ⌘	Clarification of the ALC values .	
Source: ⌘	**R-WG3**	
Work item code: ⌘		***Date:*** ⌘ January 2001
Category: ⌘ **F**		***Release:*** ⌘ R99

Use one of the following categories:	*Use one of the following releases:*
F *(essential 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 can be found in 3GPP TR 21.900.	*REL-4 (Release 4)*
	REL-5 (Release 5)

Reason for change: ⌘	The LS Statement from ITU-T SG 13 with the title "Liaison for AAL2 Type 2 Signalling Protocol" clarifies the use of the ALC parameters. It clarifies that the enforcement of the ALC values is for further study.
Summary of change: ⌘	The purpose of the ALC parameters in the Establish Request message is clarified. Revision 1: The wording was changed.
Consequences if not approved: ⌘	If this CR is not accepted the specification 25.425 is not aligned with the ITU-T view of the AAL2 Link Characteristics.

Clauses affected: ⌘	6.2
Other specs affected: ⌘	☐ Other core specifications ⌘ ☐ 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.

5 I~ur~ and I~ub~ Data Transport for DCH Data Streams

5.1 Introduction

The Frame Protocol for DCH data streams [1] is the user of the transport layer specified in this Technical Specification.

5.2 Transport Layer

Asynchronous Transfer Mode (ATM) [2] and ATM Adaptation Layer type 2 (AAL2) [3, 4] are used as a transport layer for DCH data streams on Iur and Iub interfaces. Service Specific Segmentation and Reassembly (SSSAR) sublayer for AAL2 is used for the segmentation and reassembly of AAL2 SDUs.
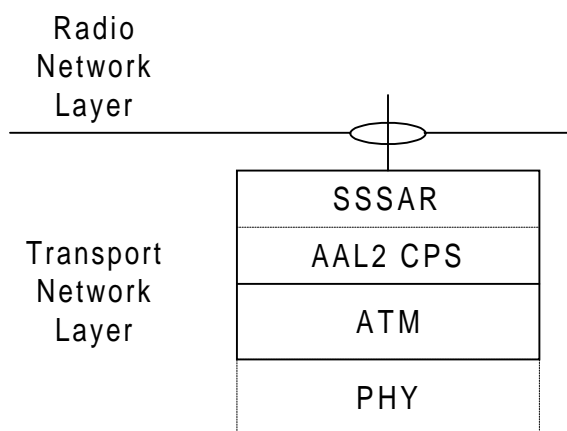

Figure 1: Transport network layer for DCH data streams over Iur and Iub interfaces

6 Transport Signalling Application for DCH Data Streams

6.1 ALCAP

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Binding ID provided by the radio network layer shall be copied in SUGR parameter of ESTABLISH.request primitive of [5].

User Plane Transport bearers for Iur interface are established and released by the ALCAP in the Serving RNC. The binding identity shall already be assigned and tied to a radio application procedure when the first ALCAP message is received over the Iur interface in the Drift RNC.

User Plane Transport bearers for Iub interface are established and released by the ALCAP in the Controlling RNC.

AAL2 transport layer addressing is based on embedded E.164 or AESA variants of the NSAP addressing format [6, 7]. Native E.164 addressing shall not be used.

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 shall be used.

7 Signalling Bearer for ALCAP on I_{ub} Interface

7.1 Introduction

This clause specifies the signalling bearer for the ALCAP on Iub interface.

7.2 Signalling Bearer

SAAL-UNI [8, 9] is used as a signalling bearer for the AAL Type 2 Signalling protocol on Iub interface. Signalling Transport Converter for SSCOP is applied [9]. The following figure shows the signalling bearer protocol stack for the ALCAP on Iub interface.
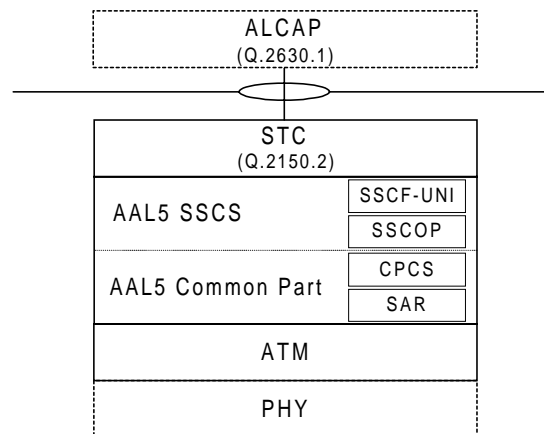

Figure 2: Signalling bearer for ALCAP on Iub interface

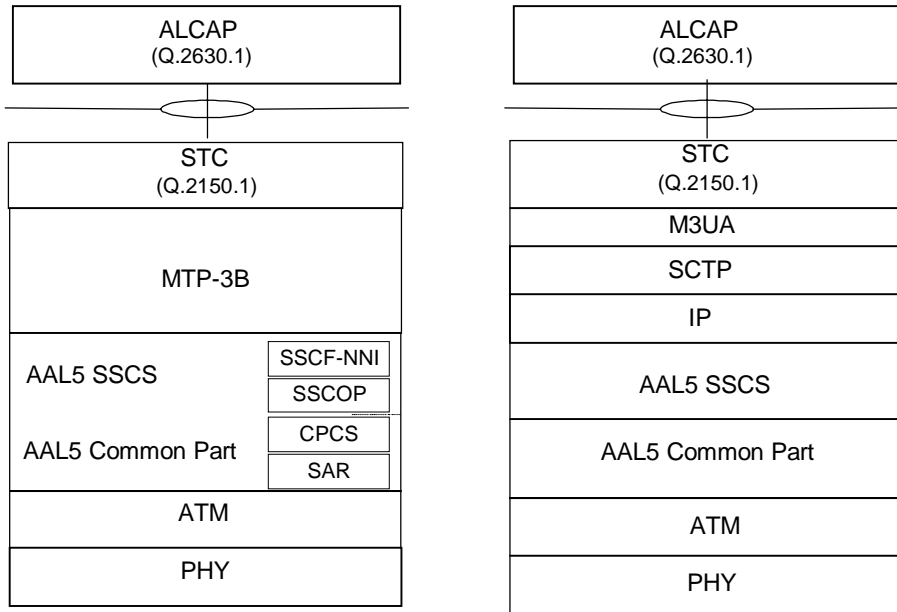# 8 Signalling Bearer for ALCAP on I_{ur} Interface

8.1 Introduction

This clause specifies the signalling bearer for the ALCAP on the Iur interface.

8.2 Signalling Bearer

There are two protocol stacks specified for Iur ALCAP Signalling Bearer - one based on MTP-3B [11, 21] and SAAL-NNI [12, 8] and the other based on SCTP [18]. Signalling Transport Converter for MTP-3B is applied [13]. MTP-3 User Adaptation Layer (M3UA) for SCTP is applied [19]. The following figure shows the signalling bearer protocol stacks for the ALCAP on Iur interface.

MTP-3B based Iur ALCAP Signaling Bearer   IP based Iur ALCAP Signaling Bearer

Figure 3: Signalling bearers for ALCAP on Iur interface

Annex A (informative):
Change history

Change history					
TSG RAN#	Version	CR	Tdoc RAN	New Version	Subject/Comment
RAN_04	-	-	-	3.0.0	Approved at TSG RAN #4 by correspondence and placed under Change Control
RAN_05	3.0.0	-	-	3.1.0	Approved at TSG RAN #5
RAN_07	3.1.0	-	-	3.2.0	Approved at TSG RAN #7
RAN_08	3.2.0	-	RP-000247	3.3.0	Approved at TSG RAN #8
RAN_09	3.3.0	003 004 006	RP-000383	3.4.0	Approved at TSG RAN #9
RAN_10	3.4.0	007 008 009	RP-000624	3.5.0	Approved at TSG RAN #10