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Contents

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Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project, Technical Specification Group RAN.

The contents of this TS may be subject to continuing work within the 3GPP and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released with an identifying change of release date and an increase in version number as follows:

Version m.t.e

where:

m indicates [major version number]

x the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

y the third digit is incremented when editorial only changes have been incorporated into the specification.

1 Scope

The present document specifies the standards for user data transport protocols and related signalling protocols to establish user plane transport bearers.

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.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] ITU-T Recommendation I.361, “B-ISDN ATM Layer Specification”.

[2] ITU-T Recommendation I.363.2, "B-ISDN ATM Adaptation Layer Type 2 Specification”.

[3] ITU-T Recommendation I.363.5, "B-ISDN ATM Adaptation Layer Type 5 Specification”.

[4] ITU-T Recommendation I.366.1, "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL Type2”.

[5] ITU-T Recommendation) Q.2150.1: "AAL type 2 Signalling Bearer Broadband MTP”.

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

3 Definitions, symbols and abbreviations

3.1 Definitions

3.2 Symbols

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ATM	Asynchronous Transfer Mode
AAL	ATM Adaptation Layer
SBC	Signalling Bearer Converter

4 ATM Layer

5 PSTN/ISDN domain

5.1 User data transport

<table>
<tr><td rowspan="2">Layer Mgmnt</td><td>AAL2</td></tr>
<tr><td>ATM</td></tr>
</table>

5.1.1 ATM Adaptation Layer 2

5.1.1.1 AAL2-specification (I.363.2)

5.1.1.2 AAL2-Segmentation and Reassembly Service Specific Convergence Sublayer (I.366.1)

5.2 User data transport signalling (ALCAP)

Layer Mgmnt	AAL2 connection signalling (Q.2630.1)
	AAL2 Signalling Bearer Converter for MTP3b (Q.2150.1)
	MTP3b
	SSCF-NNI
	SSCOP
	AAL5
	ATM

5.2.1 Signalling protocol

5.2.1.1 AAL2 Signalling Protocol (Q.2630.1)

Q.2630.1 is used for establishing AAL2 connections towards the PSTN/ISDN domain.

5.2.2 Signalling bearer converter

5.2.2.1 AAL2 MTP3B SBC (Q.2150.1)

Q.2150.1 is used as a signalling bearer converter.

6 IP domain

6.1 User data transport

Layer Mgmnt	GTP User Plane
	UDP/IP
	AAL5
	ATM (

The protocol architecture for the User Plane of the Iu interface towards the IP domain shall be based on the same principles as for the (evolved) Gn interface, i.e. the user plane part of GTP over UDP/IP shall be used for tunneling of end user data packets over the Iu interface.

IP on top of AAL5 and ATM is used as a bearer for the user plane.

One or several AAL5/ATM permanent VC's may be used as the common layer 2 resources between the UTRAN and the 'IP domain' of the CN. The reason for usage of several, permanent AAL5/ATM VC's may e.g. be for load sharing and redundancy. It is also possible to use one switched VC per user flow (PDP context or radio access bearer). SVC may be used, however the standardization of the procedures and protocols for use of Switched VC (SVC) is outside the scope of 3GPP.

The termination point of the GTP tunnel is FFS.

6.1.1 ATM Adaptation Layer 5 (I.363.5)

History

Document history		
Edition x	<MMMM yyyy>	Publication as <old doctype> <old docnumber>
0.0.1	Feb 1999	First draft
0.0.2	Feb 1999	Relevant contents from the Merged Description of Iu Interface, v0.0.2, incorporated.
0.0.3	March 1999	Modified contents based on comments from 3GPP TSG RAN
0.0.4	April 1999	Updated following TSG RAN WG3 #2 meeting
0.1.0	April 1999	Updates to packet domain user plane according to report from the 3GPP TSG RAN WG3/SA WG2 joint meeting, March 16 & 18,1999 in Nynäsham. Ready for approval TSG RAN WG3 #3 meeting
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