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Technical Specification

**Universal Mobile Telecommunications System (UMTS);
UTRAN Iur Interface Data Transport &
Transport Signalling for Common
Transport Channel Data Streams
(3G TS 25.424 version 3.1.0 Release 1999)**



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Foreword

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1 Scope

This document shall provide a specification of the UTRAN RNC-RNC (I_{ur}) interface Data Transport and Transport Signalling for Common Transport Channel data streams. References

References may be made to:

- a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply;
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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 (11/95)
- [2] ITU-T Recommendation I.363.2 B-ISDN ATM Adaptation Layer type 2 (9/97)
- [3] ITU-T Recommendation I.366.1 Segmentation and Re-assembly Service Specific Convergence Sublayer for the AAL type 2 (6/98)
- [4] Draft new ITU-T Recommendation Q.2630.1 AAL Type 2 signalling protocol (Capability Set 1)
- [5] ITU-T Recommendation E.191 B-ISDN numbering and addressing (10/96)
- [6] 3GPP TS 25.426 UTRAN I_{ur} and I_{ub} Interface Data Transport & Transport Signalling for DCH Data Streams V2.0.0
- [7] ITU-T Rec. **I.630** (2/99) ATM Protection Switching

2 Definitions, symbols and abbreviations

2.1 Definitions

Common Transport Channels are defined as transport channels that are shared by several users i.e. RACH, FACH and DSCH.

2.2 Symbols

2.3 Abbreviations

AAL2	ATM Adaptation Layer type 2
AESA	ATM End System Address
ALCAP	Access Link Control Application Part
ATM	Asynchronous Transfer Mode
CPS	Common Part Sublayer
DSCH	Downlink Shared Channel
FACH	Forward Access Channel
MTP	Message Transfer Part

NNI	Network-Node Interface
NSAP	Network Service Access Point
RACH	Random Access Channel
SAAL	Signalling ATM Adaptation Layer
SSCOP	Service Specific Connection Oriented Protocol
SSCF	Service Specific Co-ordination Function
SSCS	Service Specific Convergence Sublayer
SSSAR	Service Specific Segmentation and Re-assembly sublayer
STC	Signalling Transport Converter
UNI	User-Network Interface

3 ATM Layer

3.1 General

ATM shall be used in the transport network user plane and the transport network control plane according to I.361[1].

3.1 Protection Switching at ATM Layer

If redundancy of pathways at ATM layer between RNCs is supported, it shall be implemented using ATM Protection Switching according to I.630 [7].

4 I_{ur} Data Transport for Common Transport Channel Data Streams

4.1 Introduction

This chapter specifies the transport layers that support Common Channels (FACH, RACH, DSCH) Iur data streams.

4.2 Transport Layer

ATM [1], AAL type 2 (I363.2 [2] and I366.1 [3]) is used as the standard transport layer for RACH, FACH and DSCH Iur data streams.

These AAL2 connections are established via the transport signalling protocol described in chapter 5.

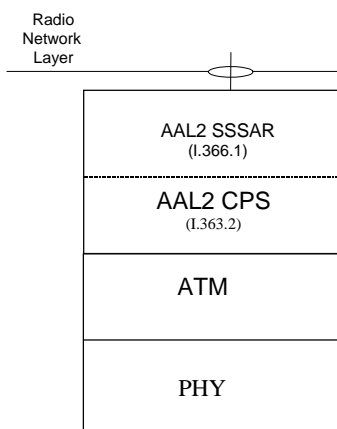


Figure 1: Protocol stack for RACH, FACH and DSCH data transport on Iur

Figure 1 shows the protocol stack for the transport of RACH, FACH and DSCH Iur data streams. Service Specific Segmentation and Re-assembly (SSSAR) is used for the segmentation and re-assembly of AAL2 SDUs (i.e. SSSAR is only considered from I366.1).

5 I_{ur} Transport Signalling for Common Transport Channel Data Streams

5.1 Introduction

This chapter specifies the transport signalling protocol(s) used to establish the user plane transport bearers. The protocol stack is shown in chapter 6 (Figure 2).

5.2 Transport Signalling

AAL2 signalling protocol Capability Set 1 Q.2630.1 [4] is the signalling protocol to control the AAL2 connections on Iur interfaces. AAL2 transport layer addressing is based on embedded E.164 or AESA variants of the NSAP addressing format [5]. Native E.164 addressing shall not be used.

Binding ID provided by the radio network layer shall be copied in SUGR parameter of ESTABLISH.request primitive of [4]

6 Signalling Bearer for Transport Signalling on I_{ur} Interface

The signalling bearer for the ALCAP on the Iur interface for common transport channels data streams is the same as the signalling bearer for the ALCAP on the Iur interface for DCH data streams, defined in [6].

History

Document history		
V3.1.0	January 2000	Publication