TSG-RAN Meeting #7 ***TSGRP#7(00)148***
Madrid, Spain, 13 - 15 March 2000

Title: **Agreed CRs to TS 25.424**

Source: **TSG-RAN WG3**

Agenda item: **6.4.3**

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-000148	25.424	002		Removal of ATM Protection Switching	C	agreed	3.1.0	3.2.0
R3-000318	25.424	001	1	Changes for CPCH	C	agreed	3.1.0	3.2.0
R3-000566	25.424	003		USCH over Iur	C	agreed	3.1.0	3.2.0

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

***Document* R3-000148**

CHANGE REQUEST

25.424 **CR** **002** Current Version: 3.1.0

↑ *CR number as allocated by MCC support team*

For submission to: TSG RAN #7 *list expected approval meeting # here ↑*

for approval [X] for information [ ]

strategic [ ] non-strategic [ ] *(for SMG use only)*

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: TSG-RAN WG3 **Date:** 17th of Jan. 2000

Subject: Removal of ATM Protection Switching

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	[ ]
A	Corresponds to a correction in an earlier release	[ ]
B	Addition of feature	[ ]
C	Functional modification of feature	[X]
D	Editorial modification	[ ]

Release:

Phase 2	[ ]
Release 96	[ ]
Release 97	[ ]
Release 98	[ ]
Release 99	[X]
Release 00	[ ]

Reason for change: As explained in *R3-000145* the application of ITU-T I.630 for ATM layer Protection Switching in the UTRAN is not a reasonable approach due to several identified problems.

Clauses affected: Chapter 1 and 3.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

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1 Scope

This document shall provide a specification of the UTRAN RNC-RNC (Iur) 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;

b) all versions up to and including the identified version (identified by "up to and including" before the version identity);

c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or

d) publications without mention of a specific version, in which case 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 (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~~

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].~~

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

Document R3-000318
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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25.424	CR	001r1	Current Version:	3.1.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑CR number as allocated by MCC support team*

For submission to: TSG-RAN#7 *list expected approval meeting # here ↑*

for approval	X	strategic		*(for SMG use only)*
for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [X] Core Network [ ]

Source: TSG-RAN WG3 **Date:** 27 Jan 2000

Subject: Changes for CPCH

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	
A	Corresponds to a correction in an earlier release	
B	Addition of feature	
C	Functional modification of feature	X
D	Editorial modification	

Release:

Phase 2	
Release 96	
Release 97	
Release 98	
Release 99	X
Release 00	

Reason for change: This CR adds changes to include transport of CPCH messages on the specified interface.

Clauses affected: 2.1, 2.3, 4.1, 4.2

Other specs affected:

Other 3G core specifications		→ List of CRs:
Other GSM core specifications		→ List of CRs:
MS test specifications		→ List of CRs:
BSS test specifications		→ List of CRs:
O&M specifications		→ List of CRs:

Other comments:

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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, CPCH [FDD], 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
CPCH	Common Packet Channel
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

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, CPCH [FDD], 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, CPCH [FDD], FACH and DSCH Iur data streams.

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

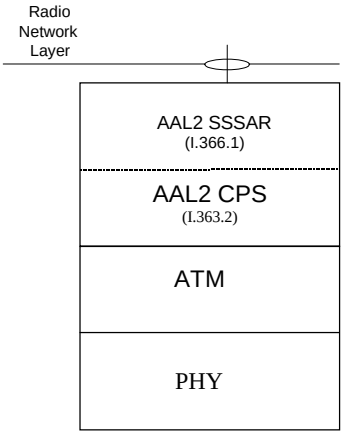

Figure 1: Protocol stack for RACH, CPCH [FDD], FACH and DSCH data transport on Iur

Figure 1 shows the protocol stack for the transport of RACH, CPCH [FDD], 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).

3GPP TSG-RAN Working Group 3, Meeting #11
Sophia Antipolis, France, 28 February – 3 March, 2000

Document R3-000566
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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25.424	CR	0003	Current Version:	3.1.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑CR number as allocated by MCC support team*

For submission to:	RAN #7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: R-WG3 **Date:** Feb 22, 2000

Subject: USCH over Iur

Work item: DSCH and USCH over Iur (Agenda point 20.2 at RAN3#11)

Category: *(only one category shall be marked with an X)*

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature	X		Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: 25.424 supports all the common channels including DSCH, but not USCH. This CR adds USCH.

Clauses affected: 1, 2.3, 4.2, 5.1

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
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[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

[8] 3GPP TS 25.434 UTRAN I_{ub} Interface Data Transport & Transport Signalling for Common Transport Channel Data Streams

2 Definitions, symbols and abbreviations

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STC	Signalling Transport Converter
UNI	User-Network Interface
USCH	Uplink Shared Channel

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

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

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

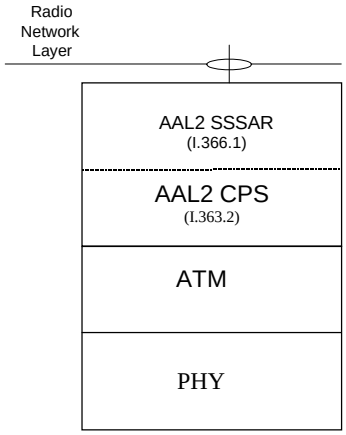

Figure 1: Protocol stack for RACH, FACH, USCH[TDD] and DSCH data transport on Iur

Figure 1 shows the protocol stack for the transport of RACH, FACH, USCH[TDD] 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 [8]. ~~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]