# TSG-RAN Meeting #8
# Düsseldorf, Germany, 21 - 23 June 2000

***TSGRP#8(00)0246***

**Title:** **Agreed CRs to TS 25.425**

**Source:** **TSG-RAN WG3**

**Agenda item:** **5.3.3**

| Tdoc_Num | Specification | CR_Num | Revision_Nu | CR_Subject | CR_Category | WG_Status | Cur_Ver_Num | New_Ver_Nu |
|---|---|---|---|---|---|---|---|---|
| R3-001286 | 25.425 | 014 | | Addition of protocol version | F | agreed | 3.1.0 | 3.2.0 |
| R3-001289 | 25.425 | 015 | | Scheduling of SDU delivery from DRNC | F | agreed | 3.1.0 | 3.2.0 |
| R3-001597 | 25.425 | 016 | 3 | Selection of S-CCPCH in the FACH data transfer | F | agreed | 3.1.0 | 3.2.0 |

**3GPP TSG-RAN Working Group Meeting #13**
**Hawaii, USA, 22nd-26th May 2000**

***R3-001286***
*e.g. for 3GPP use the format TP-99xxx*
*or for SMG, use the format P-99-xxx*

# CHANGE REQUEST

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| 25.425 | CR | 014 | 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 #8 | for approval | X | strategic | | (for SMG use only) |
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**Proposed change affects:** *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

**Source:** R-WG3 **Date:** May 2000

**Subject:** Addition of User Plane Protocol Version.

**Work item:**

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

| | | | | | |
|---|---|---|---|---|---|
| F | Correction | X | **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 | | | Release 98 | |
| D | Editorial modification | | | Release 99 | X |
| | | | | Release 00 | |

**Reason for change:** The working assumption is that the user plane protocol version will be negotiated on the control plane. Currently user plane specifications do not indicate the protocol version. Therefore this CR introduces a subclause with protocol version indication.

**Clauses affected:** 4.3

**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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# 4 General Aspects

## 4.1 Common Transport Channel Data Streams User Plane Protocol Services

This chapter describes the services that the User Plane Protocols provide such as data transfer, flow control.

### 4.1.1 RACH/CPCH[FDD] Data Streams User Plane Protocol Services

RACH/CPCH[FDD] frame protocol provides the following services:

- Transport of MAC-c/sh SDUs from the DRNC to the SRNC for RACH/CPCH[FDD] common transport channels.

### 4.1.2 FACH Data Streams User Plane Protocol Services

FACH frame protocol provides the following services:

- Transport of MAC-c SDUs from the SRNC to the DRNC for FACH common transport channel.
- Flow Control between MAC-d and MAC-c.

### 4.1.3 [TDD USCH]/DSCH Data Streams User Plane Protocol Services

[TDD USCH]/DSCH frame protocol provides the following services:

- Transport of MAC-c/sh SDUs between the SRNC and the DRNC for [TDD USCH] and DSCH common transport channels.
- Flow Control between MAC-d and MAC-c/sh.

## 4.2 Services expected from data transport

The following services are expected from the transport layer:

- In sequence delivery of Frame Protocol PDUs.

## 4.3 Protocol Version

This revision of the specification specifies version 1 of the protocols.

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**Hawaii, USA, 22nd – 26th May 2000**

*Document* ***R3-001289***
*e.g. for 3GPP use the format TP-99xxx*
*or for SMG, use the format P-99-xxx*

# CHANGE REQUEST

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| **25.425** | **CR** | **15** | 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 #8 | for approval | X | strategic | | (for SMG use only) |
|---|---|---|---|---|---|---|
| *list expected approval meeting # here ↑* | | for information | | non-strategic | | |

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

**Source:** R-WG3 **Date:** May 2000

**Subject:** Scheduling of SDU delivery from DRNC.

**Work item:**

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

| | | | | | |
|---|---|---|---|---|---|
| F | Correction | X | **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 | | | Release 98 | |
| D | Editorial modification | | | Release 99 | X |
| | | | | Release 00 | |

**Reason for change:**

The scheduling of SDU transmission from DRNC is not clearly stated. This CR clarifies that the SDUs are transmitted in the same order as received within one priority and SDU size.

In Release 99 there is only one PU in an AMD PDU (RLC Protocol Specification 25.322 ch. 9.2.2.8). Therefore the SDU size within one RLC entity is always equal.

**Clauses affected:** 5.1.2, 5.1.4

**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:**

help.doc

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### 5.1.2 FACH data transfer

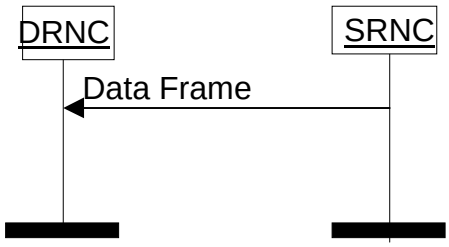


**Figure 2: FACH data transfer**

Data to be transmitted on the FACH transport channel is transmitted from the SRNC to the DRNC using FACH data frames. Multiple MAC-c/sh SDUs of same length and same priority (CmCH-PI) may be transmitted in the same FACH data frame. Within one priority and size the SDUs shall be transmitted by the DRNS on the Uu interface in the same order as they were received from the SRNC.

The *UE-ID Type Indicator* IE indicates which UE-ID type MAC-c/sh shall include in the MAC header.

The *S-CCPCH Indicator* IE indicates if the data in the payload shall be sent on the S-CCPCH coupled to the PRACH, or if it shall be sent on the S-CCPCH selected by the DRNC for subsequent user data. The S-CCPCH selected for subsequent user data may be the S-CCPCH coupled to the PRACH or another S-CCPCH.

### 5.1.4 DSCH Data Transfer

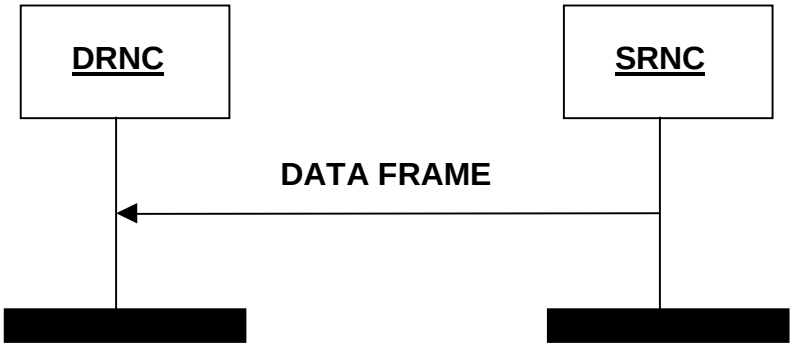


**Figure 4: DSCH Data Transfer**

When the SRNC has been granted capacity by the DRNC and the SRNC has data waiting to be sent, then the DSCH data frame is used to transfer the data. When data is waiting to be transferred, and a capacity allocation is received, a data frame will be transmitted immediately according to allocation received.

Multiple MAC-c/sh SDUs of same length and same priority (CmCH-PI) may be transmitted in the same DSCH data frame.

The DSCH data frame includes a user buffer size indication to indicate the amount of data pending for the respective UE and for the indicated priority level. Within one priority and size the SDUs shall be transmitted by the DRNS on the Uu interface in the same order as they were received from the SRNC.

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***Document R3-001597***
*e.g. for 3GPP use the format TP-99xxx*
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# CHANGE REQUEST

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| 25.425 | CR | CR16R3 | 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 #8 | 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:** April 2000

**Subject:** Selection of S-CCPCH in the FACH Data Transfer procedure

**Work item:**

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

| | | | | | |
|---|---|---|---|---|---|
| F | Correction | X | **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 | | | Release 98 | |
| D | Editorial modification | | | Release 99 | X |
| | | | | Release 00 | |

**Reason for change:**

CR16r1: Editorial change is made.

CR16r2: Correction of language is done for the choice of Secondary CCPCH. The change is highlighted in green.

CR16r1: The choise of Secondary CCPCH has been clarified. The change is highlighted in yellow.

CR16:
The selection of the Secondary CCPCH to be used for a DL data transfer on an FACH is currently defined to be either the S-CCPCH coupled to the RACH where the UE made its first access to the cell or the S-CCPCH selected by the DRNC. However, in the RRC Specification it is defined that the selection of the Secondary CCPCH is based on the U-RNTI currently assigned to the UE (in RRC described as “old U-RNTI”), see the RRC Specification chapter 8.5.7.6.3.

This CR clarifies the selection of the S-CCPCH to be used in the FACH Data Transfer procedure to be either the one selected by the UE or the one selected by the DRNC.

**Clauses affected:** 2, 3.3, 5.1.2, 6.2.5.6

**Other specs affected:**

| | | | |
|---|---|---|---|
| Other 3G core specifications | [ ] | → List of CRs: | TS 25.423 CR118 |
| 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:**

# 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.

[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 type 2".

[3] ITU-T Recommendation I.366.1 (6/98): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2".

[4] 3G TS 25.427: "Iub/Iur User Plane Protocols for DCH Data Streams".

[5] 3G TS 25.401: "UTRAN overall description".

[6] 3G TS 25.990: "UTRAN vocabulary".

[7] 3G TS 25.331: "RRC Protocol Specification"

## 3.3 Abbreviations

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

| | |
|---|---|
| AAL2 | ATM Adaptation Layer type 2 |
| ATM | Asynchronous Transfer Mode |
| CFN | Connection Frame Number |
| CmCH | CoMmon transport Channel |
| CPCH | Common Packet Channel |
| CPS | Common Part Sublayer |
| C-RNC | Controlling Radio Network Controller |
| CRC | Cyclic Redundancy Checksum |
| DCH | Dedicated Transport Channel |
| DL | Downlink |
| D-RNTI | Drift RNTI |
| DSCH | Downlink Shared Channel |
| FACH | Forward Access CHannel |
| FP | Frame Protocol |
| FT | Frame Type |
| PC | Power Control |
| RACH | Random Access CHannel |
| RNC | Radio Network Controller |
| RNTI | Radio Network Temporary Identity |
| SRNC | Serving Radio Network Controller |
| S-RNTI | Serving RNTI |
| SSCS | Service Specific Convergence Sublayer |
| SSSAR | Service Specific Segmentation and Reassembly sublayer |
| TB | Transport Block |
| TBS | Transport Block Set |
| TFI | Transport Format Indicator |
| ToA | Time of arrival |
| TTI | Transmission Time Interval |
| UE | User Equipment |
| UL | Uplink |
| U-RNTI | UTRAN RNTI |
| USCH | Uplink Shared Channel |

### 5.1.2 FACH data transfer

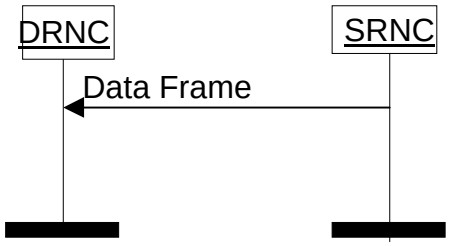


**Figure 2: FACH data transfer**

Data to be transmitted on the FACH transport channel is transmitted from the SRNC to the DRNC using FACH data frames. Multiple MAC-c/sh SDUs of same length and same priority (CmCH-PI) may be transmitted in the same FACH data frame.s

The *UE-ID Type Indicator* IE indicates which UE-ID type MAC-c/sh shall include in the MAC header.

The *S-CCPCH Indicator* IE indicates if the data in the payload shall be sent on either the S-CCPCH selected by the UE based on U-RNTI as defined in ref. [7] subclause 8.5.7.6.3~~coupled to the PRACH~~, or ~~if it shall be sent on~~ the S-CCPCH selected by the DRNC for subsequent user data. The S-CCPCH selected for subsequent user data may be the S-CCPCH selected by the UE ~~coupled to the PRACH~~ or ~~another~~ the S-CCPCH selected by the DRNC.

### 6.2.5.6 S-CCPCH Indicator (S-CI)

**Description:** Indicates the S-CCPCH to be used for transmission of the user data.

**Value range:** {0=S-CCPCH ~~coupled to PRACH~~selected by the UE based on U-RNTI as defined in ref. [7] subclause 8.5.7.6.3, 1=S-CCPCH selected by the DRNC}.

**Field Length:** 1 bit.