TSG RAN Meeting #19 **RP-030075**
Birmingham, UK, 11 - 14 March 2003

Title **CR (Rel-5 only) to TS 25.425 and 25.435 on Clarification for the flow control**
Source **TSG RAN WG3**
Agenda Item **8.3.6**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030313	25.425	5.3.0	5.4.0	REL-5	058	-	F	Clarification for the flow control	HSDPA-Iublur
R3-030314	25.435	5.3.0	5.4.0	REL-5	096	-	F	Clarification for the flow control	HSDPA-Iublur

3GPP TSG-RAN3 Meeting #34
Sophia Antipolis, France, 17th – 21st February 2003

Tdoc R3-030313

CR-Form-v7

CHANGE REQUEST

⌘ **25.425** **CR** **058** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Clarification for the flow control
Source:	⌘	RAN WG3
Work item code:	⌘	HSDPA-Iublur
Date:	⌘	19/02/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(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)*
Rel-6 *(Release 6)*

Reason for change: ⌘ The mechanism of the flow control is ambiguous and there might be a few interpretations (see R3-030181).

Summary of change: ⌘ The following clarifications are made.
- The time duration between each HS-DSCH DATA FRAME is arbitrary.
- The number of HS-DSCH DATA FRAME(s), which can be transmitted in one interval, is arbitrary.
- For each HS-DSCH Interval, the amount of payload except spare bits shall not exceed Maximum MAC-d PDU Length * HS-DSCH Credits.
- HS-DSCH Repetition Period indicates the number of subsequent HS-DSCH Interval.
- MAC-d PDU Length can be different in each HS-DSCH DATA FRAME transmission.

The above descriptions also applied to DSCH.

Consequences if not approved: ⌘ If this CR is not approved, the ambiguity of the flow control remains and this ambiguity might case an interoperability problem.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):

This CR has [isolated impact] with the previous version of the specification (same release) because it might affect the flow control.

This CR has an impact under [functional] point of view.
The impact [can] be considered isolated because the change affects [one] [system function] namely the flow control.

Clauses affected:	⌘	6.3.3.3.3, 6.3.3.3.4, 6.3.3.3.5, 6.3.3.6.3, 6.3.3.6.4 and 6.3.3.6.5				
Other specs affected:	⌘	**Y**	**N**		⌘	CR096 on TS25.435v5.3.0
		X		Other core specifications		
			X	Test specifications		
			X	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/specs/CR.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://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

6.3.3.3 DSCH CAPACITY ALLOCATION

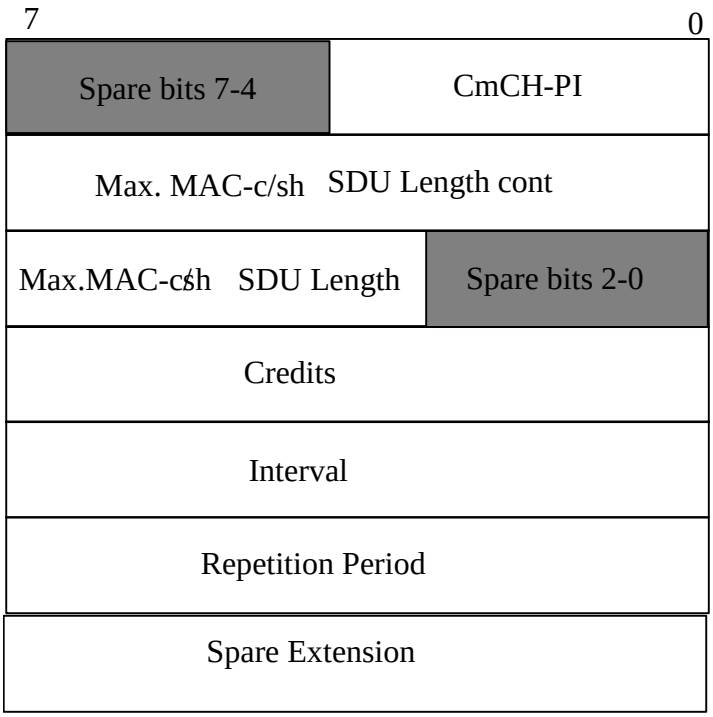

Figure 16: CAPACITY ALLOCATION payload structure

The CAPACITY ALLOCATION Control Frame describes an allocation that the SRNC may use. When the *Credits* IE has a value of 0 it signifies that there is no resources allocated for transmission and to thus stop transmission. When the *Credits* IE has a value of 255, it signifies unlimited capacity for transmission of SDUs. When the *Repetition Period* IE has a value of 0, it signifies that the allocation (*Maximum MAC-c/sh SDU Length*, *Credits* and *Interval* IEs) can be repeated without limit.

6.3.3.3.1 Common Transport Channel Priority Indicator (CmCH-PI)

Refer to subclause 6.2.5.7.

6.3.3.3.2 Maximum MAC-c/sh SDU Length

Description: The values indicated the maximum allowable SDU size. MAC-c/sh SDU contains the C/T field of the MAC header followed by one RLC PDU.

Field length: See the value of the *MAC-c/sh SDU Length* IE.

6.3.3.3.3 Credits

Description: The *Credits* IE indicates the number of MAC-c/sh SDUs that a SRNC may transmit during one Interval granted in the DSCH CAPACITY ALLOCATION Control Frame.~~Refer to subclause 6.3.3.1.3.~~

Value range: Refer to subclause 6.3.3.1.3.

Field Length: Refer to subclause 6.3.3.1.3.

6.3.3.3.4 Interval

Description: The value of this field indicates the time interval during which the *Credits* IE granted in the DSCH CAPACITY ALLOCATION Control Frame may be used~~transmitted~~. This value is only applied to the DSCH transport channel.

Value range: {0-2550 ms}.

Granularity: 10ms.

Field Length: 8 bits.

6.3.3.3.5 Repetition Period

Description: The value of this field indicates the number of subsequent intervals that the *Credits* IE granted in the DSCH CAPACITY ALLOCATION Control Frame may be used~~transmitted~~. These values represent an integer number of Intervals (see subclause 6.3.3.3.4). This field is only applied to the DSCH transport channel.

Value range: {0-255, where 0= unlimited repetition period}.

Field Length: 8 bits.

<partly omitted>

6.3.3.6 HS-DSCH CAPACITY ALLOCATION

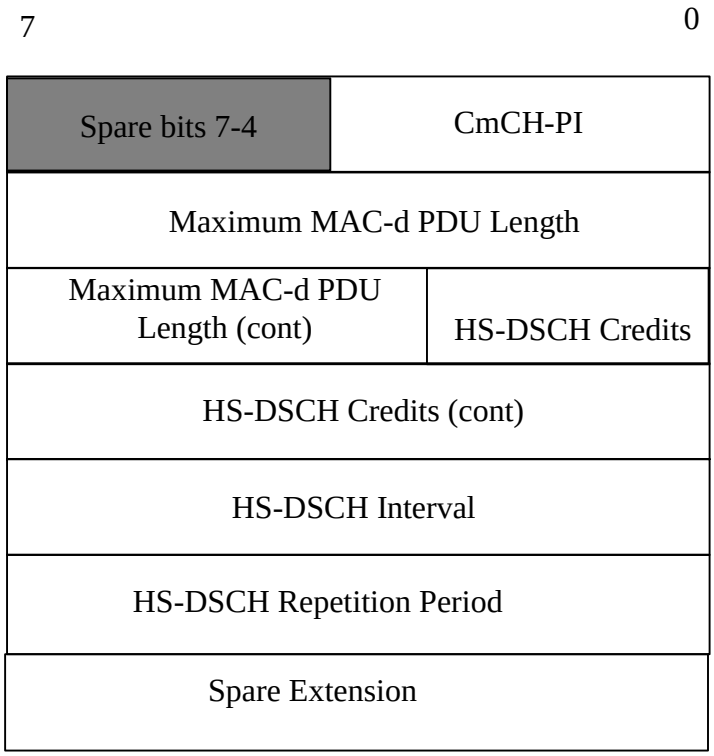

Figure 19: CAPACITY ALLOCATION payload structure

The CAPACITY ALLOCATION Control Frame describes an allocation that the SRNC may use. When the *HS-DSCH Credits* IE has a value of 0 it signifies that there is no resources allocated for transmission and to thus stop transmission. When the *HS-DSCH Credits* IE has a value of 2047, it signifies unlimited capacity for transmission of PDUs. When the *HS-DSCH Repetition Period* IE has a value of 0, it signifies that the allocation (*Maximum MAC-d PDU Length*, *HS-DSCH Credits* and *HS-DSCH Interval* IEs) can be repeated without limit.

6.3.3.6.1 Common Transport Channel Priority Indicator (CmCH-PI)

Refer to subclause 6.2.5.7.

6.3.3.6.2 Maximum MAC-d PDU Length

Description: The value indicates the maximum allowable PDU size among the MAC-d PDU sizes configured via RNSAP [8].

Value range: Refer to subclause 6.2.5.16.

Field length: Refer to subclause 6.2.5.16.

6.3.3.6.3 HS-DSCH Credits

Description: The *HS-DSCH Credits* IE indicates the number of MAC-d PDUs that a SRNC~~user~~ may transmit during one HS-DSCH Interval granted in the HS-DSCH CAPACITY ALLOCATION Control Frame.

Value range: {0-2047, where 0=stop transmission, 2047=unlimited}.

Field length: 11 bits.

6.3.3.6.4 HS-DSCH Interval

Description: The value of this field indicates the time interval during which the *HS-DSCH Credits* IE granted in the HS-DSCH CAPACITY ALLOCATION Control Frame may be used~~transmitted~~. This value is only applied to the HS-DSCH transport channel.

Value range: Refer to subclause 6.3.3.3.4.

Granularity: Refer to subclause 6.3.3.3.4.

Field Length: Refer to subclause 6.3.3.3.4.

6.3.3.6.5 HS-DSCH Repetition Period

Description: The value of this field indicates the number of subsequent intervals that the *HS-DSCH Credits* IE granted in the HS-DSCH CAPACITY ALLOCATION Control Frame may be used~~transmitted~~. These values represent an integer number of Intervals (see subclause 6.3.3.6.4). This field is only applied to the HS-DSCH transport channel.

Value range: Refer to subclause 6.3.3.3.5.

Field Length: Refer to subclause 6.3.3.3.5.

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CHANGE REQUEST

⌘ **25.435** **CR** **096** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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Summary of change:	⌘	The following clarifications are made. - The time duration between each HS-DSCH DATA FRAME is arbitrary. - The number of HS-DSCH DATA FRAME(s), which can be transmitted in one interval, is arbitrary. - For each HS-DSCH Interval, the amount of payload except spare bits shall not exceed Maximum MAC-d PDU Length * HS-DSCH Credits. - HS-DSCH Repetition Period indicates the number of subsequent HS-DSCH Interval. - MAC-d PDU Length can be different in each HS-DSCH DATA FRAME transmission.
Consequences if not approved:	⌘	If this CR is not approved, the ambiguity of the flow control remains and this ambiguity might case an interoperability problem. Impact Analysis: Impact assessment towards the previous version of the specification (same release): This CR has [isolated impact] with the previous version of the specification (same release) because it might affect the flow control. This CR has an impact under [functional] point of view. The impact [can] be considered isolated because the change affects [one] [system function] namely the flow control.

Clauses affected:	⌘	6.3.3.11.3, 6.3.3.11.4 and 6.3.3.11.5

		Y	N			
Other specs affected:	⌘	X		Other core specifications	⌘	CR058 on TS25.425v5.3.0
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

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6.3.3.11 HS-DSCH CAPACITY ALLOCATION

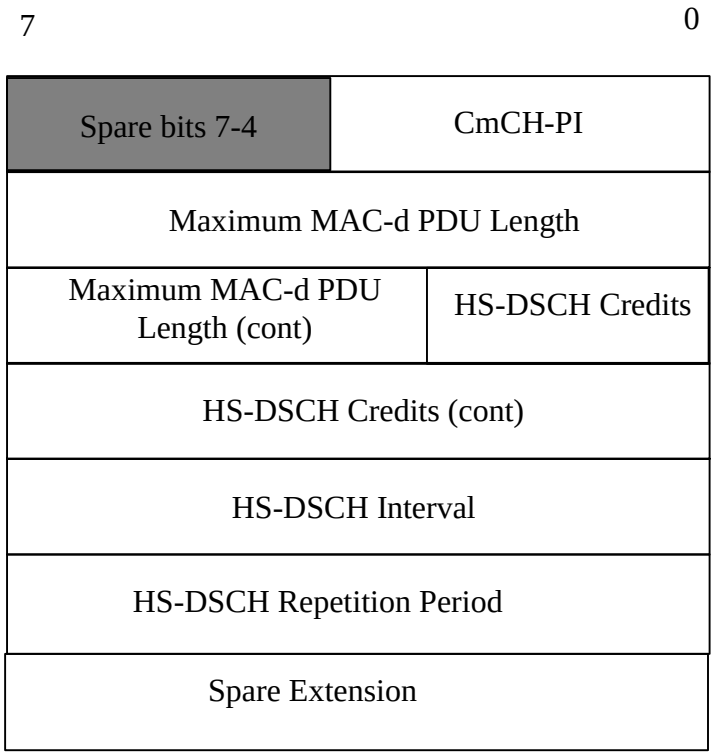

Figure 36: CAPACITY ALLOCATION payload structure

The CAPACITY ALLOCATION Control Frame describes an allocation that the SRNC may use. When the *HS-DSCH Credits* IE has a value of 0 it signifies that there is no resources allocated for transmission and to thus stop transmission. When the *HS-DSCH Credits* IE has a value of 2047, it signifies unlimited capacity for transmission of PDUs. When the *HS-DSCH Repetition Period* IE has a value of 0, it signifies that the allocation (*Maximum MAC-d PDU Length, HS-DSCH Credits* and *HS-DSCH Interval* IEs) can be repeated without limit.

6.3.3.11.1 Common Transport Channel Priority Indicator (CmCH-PI)

Refer to subclause 6.2.7.21.

6.3.3.11.2 Maximum MAC-d PDU Length

Description: The value indicates the maximum allowable PDU size among the MAC-d PDU sizes configured via NBAP [6].

Value range: Refer to subclause 6.2.7.23.

Field length: Refer to subclause 6.2.7.23.

6.3.3.11.3 HS-DSCH Credits

Description: The *HS-DSCH Credits* IE indicates the number of MAC-d PDUs that a CRNC~~user~~ may transmit during one HS-DSCH Interval granted in the HS-DSCH CAPACITY ALLOCATION Control Frame.

Value range: {0-2047, where 0=stop transmission, 2047=unlimited}.

Field length: 11 bits.

6.3.3.11.4 HS-DSCH Interval

Description: The value of this field indicates the time interval during which the *HS-DSCH Credits* IE granted in the HS-DSCH CAPACITY ALLOCATION Control Frame may be used~~transmitted~~. This value is only applied to the HS-DSCH transport channel.

Value range: {0-2550 ms}.

Granularity: 10ms.

Field Length: 8 bits.

6.3.3.11.5 HS-DSCH Repetition Period

Description: The value of this field indicates the number of subsequent intervals that the *HS-DSCH Credits* IE granted in the HS-DSCH CAPACITY ALLOCATION Control Frame may be used~~transmitted~~. These values represent an integer number of Intervals (see subclause 6.3.3.11~~3~~.4). This field is only applied to the HS-DSCH transport channel.

Value range: {0-255, where 0= unlimited repetition period}.

Field Length: 8 bits.