TSG-RAN Meeting #26 Athen, Greece, 08-10 December 2004 RP-040487 Agenda item 7.3.2

Source: TSG-RAN WG2.

Title: CRs on TR 25.309 (on Enhanced Uplink)

The following CRs are in RP-040487:

Spec	CF	R Rev	Phase	Subject	Cat	Version- Current	Version- New	Doc-2nd- Level	Workitem	Status-2nd-Level
25.309	00	22	Rel-6	Scheduling Grants as E-DPDCH/DPCCH power ratio	F	6.0.0	6.1.0	R2-042733	EDCH- Stage2	(Technically endorsed)
25.309	00)4 -		Scheduling Grants as (E-DPDCH+DPDCH/DPCCH) power ratio	F	6.0.0	6.1.0	R2-042731		(Technically endorsed)

1

R99

Rel-4

(Release 1999)

(Release 4)

Tdoc жR2-042733 3GPP TSG-RAN2 Meeting #45 Shin-Yokohama, Japan, November 15th-19th, 2004 CR-Form-v7.1 CHANGE REQUEST ж Current version: 25.309 CR 002 ж ж жrev 2 6.0.0 For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the *x* symbols. ME X Radio Access Network X Core Network Proposed change affects: UICC apps₩ Title: Scheduling Grants as E-DPDCH/DPCCH power ratio ж Source: ж RAN WG2 Work item code: # EDCH-Stage2 Date: # 29 November 2004 F Ж Release: X Rel-6 Category: Use one of the following categories: Use one of the following releases: **F** (correction) Ph2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996) **B** (addition of feature), R97 (Release 1997) **C** (functional modification of feature) R98 (Release 1998)

be fo	und in 3GPP <u>TR 21.900</u> . <i>Rel-5</i> (<i>Release 5</i>) <i>Rel-6</i> (<i>Release 6</i>) <i>Rel-7</i> (<i>Release 7</i>)
Reason for change: ೫	With text captured in CR 001, it is FFS whether the <u>Absolute Scheduling</u> Grants contains the maximum allowed (E-DPDCH+DPDCH)/DPCCH power ratio or E-DPDCH/DPCCH power ratio.
Summary of change:	It is defined that the <u>Absolute-Scheduling</u> Grants contains the maximum allowed (E-DPDCH)/DPCCH power ratio. Note: The basis of this CR is CR001 <u>rev3</u> , the changes are highligthed in yellow.
Consequences if % not approved:	It will remain FFS whether the <u>Absolute-Scheduling</u> Grants contains the maximum allowed (E-DPDCH+DPDCH)/DPCCH power ratio or E-DPDCH/DPCCH power ratio.

D (editorial modification)

Detailed explanations of the above categories can

Clauses affected:	ж	9	.1			
		Y	Ν			
Other specs	ж		Χ	Other core specifications	ж	
affected:			Χ	Test specifications		
		-	X	O&M Specifications		
Other comments:	ж					

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <u>http://www.3gpp.org/specs/CR.htm</u>. 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

9 Node B controlled scheduling

9.1 General Principle

The Node B controlled scheduling is based on uplink and downlink control together with a set of rules on how the UE shall behave with respect to this signaling.

In the downlink, a resource indication (<u>Scheduling Grantscheduling grant</u>) is required to indicate to the UE the maximum amount of uplink resources it may use. <u>When issuing Scheduling Grants, the Node B may use QoS-related</u> information provided by the SRNC (see Section 10.1.1) and from the UE in a Scheduling Request (see Section 9.3.1)

The <u>Scheduling Grants</u>scheduling grants have the following characteristics:

- Scheduling <u>Grantsgrants</u> are only to be used for the E-DCH TF<u>C</u> selection algorithm (i.e. they do not to influence the TFC selection for the DCHs);
- <u>Scheduling Grants control the maximum allowed E-DPDCH/DPCCH power ratio</u>; <u>The Scheduling Grants</u>
 <u>control</u> It is FFS whether the scheduling grant controls the maximum allowed in terms of E DPDCH/DPCCH power ratio. <u>Its exact definition is FFS</u>; E DCH TF index, E DPDCH+DPDCH/DPCCH power ratio, other...
- All grants are deterministic;
- Scheduling Grantsgrants can be sent once per TTI or slower;
- There are two types of grants:
 - The <u>Absolute Grants</u>absolute grants provide an absolute limitation of the maximum amount of UL resources the UE may use;
 - The <u>Relative Grants</u>relative grants increase or decrease the resource limitation compared to the previously used value;
- Absolute <u>Grants</u>scheduling grants are <u>sent by the Serving E-DCH cell</u>supported:
 - They are valid for one UE, for a group of UEs or for all UEs;
 - They can have an associated duration;
 - <u>The Absolute Grant</u> <u>Except if sent to all UEs</u>, the absolute scheduling grant contains at least the identity (<u>E-RNTI</u>) of the UE (or group of UEs) for which the grant is intended and the maximum resources the UE(s) may use;
 - Group identities or dedicated identities are not distinguished by the UE. It is up to the UTRAN to allocate the same identity to a group of UEs;
 - One identity (E-RNTI) is allocated to a UE at a time. The allocation is done by the Node-B and sent by the SRNC in RRC.
 - The identity consists of 16 bits (16 bits CRC at layer 1);
- Relative Grants (updates) are sent by the Serving and Non-Serving Node-Bs as a complement to Absolute Grants:
 - The Relative Grant from the Serving E-DCH RLS can take one of the three values: "UP", "HOLD" or <u>"DOWN":</u>
 - <u>The Relative Grant from the Non-serving E-DCH RLS can take one of the two values: "HOLD" or</u> "DOWN". The "HOLD" command is sent as DTX. The "DOWN" command corresponds to an "overload indicator";
- For each UE, the non-serving Node-B operation is as follows:

- If the Node-B could not decode the E-DPCCH/E-DPDCH for the last n₁ TTIs (where n₁ is TBD) because of processing issue, it shall notify the SRNC;
- The non-serving Node-B is allowed to send a "DOWN" command only for RoT reasons (maximum allocated uplink RoT in the cell is exceeded) and not because of lack of internal processing resources.

1

Tdoc #R2-042731 3GPP TSG-RAN2 Meeting #45 Shin-Yokohama, Japan, November 15th-19th, 2004 CR-Form-v7.1 CHANGE REQUEST ж ж Current version: 25.309 CR 004 ж жrev 6.0.0 For **HELP** on using this form, see bottom of this page or look at the pop-up text over the *#* symbols. ME X Radio Access Network X Core Network Proposed change affects: UICC apps # Title: Scheduling Grants as (E-DPDCH+DPDCH/DPCCH) power ratio ж Source: ж RAN WG2 Work item code: # EDCH-Stage2 Date: # 29 November 2004 F Ж Category: Release: # Rel-6 Use one of the following categories: Use one of the following releases: F (correction) Ph2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996) B (addition of feature), (Release 1997) R97 **C** (functional modification of feature) R98 (Release 1998) **D** (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can Rel-4 (Release 4) be found in 3GPP TR 21.900. Rel-5 (Release 5) (Release 6) Rel-6 (Release 7) Rel-7

Reason for change:	With text captured in CR 001, it is FFS whether the Scheduling Grants contains the maximum allowed (E-DPDCH+DPDCH)/DPCCH power ratio or E-DPDCH/DPCCH power ratio.
Summary of change:	It is defined that the Scheduling Grants contains the maximum allowed (E- DPDCH + DPDCH)/DPCCH power ratio. Note: The basis of this CR is CR001 rev3, the changes are highligthed in yellow.
Consequences if not approved:	It will remain FFS whether the Scheduling Grants contains the maximum allowed (E-DPDCH+DPDCH)/DPCCH power ratio or E-DPDCH/DPCCH power ratio.
Clauses affected:	発 9.1
Other specs affected:	Y N # 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 <u>http://www.3gpp.org/specs/CR.htm</u>. 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

9 Node B controlled scheduling

9.1 General Principle

The Node B controlled scheduling is based on uplink and downlink control together with a set of rules on how the UE shall behave with respect to this signaling.

In the downlink, a resource indication (<u>Scheduling Grantscheduling grant</u>) is required to indicate to the UE the maximum amount of uplink resources it may use. <u>When issuing Scheduling Grants</u>, the Node B may use QoS-related information provided by the SRNC (see Section 10.1.1) and from the UE in a Scheduling Request (see Section 9.3.1)

The <u>Scheduling Grants</u>scheduling grants have the following characteristics:

- Scheduling <u>Grantsgrants</u> are only to be used for the E-DCH TF<u>C</u> selection algorithm (i.e. they do not to influence the TFC selection for the DCHs);
- <u>Scheduling Grants control the maximum allowed (E-DPDCH+DPDCH)/DPCCH power ratio</u>; <u>The Scheduling</u>
 <u>Grants control</u> It is FFS whether the scheduling grant controls the maximum allowed in terms of E <u>DPDCH/DPCCH power ratio</u>. <u>Its exact definition is FFS</u>; <u>E DCH TF index</u>, <u>E DPDCH+DPDCH/DPCCH</u>
 <u>power ratio</u>, other...
- All grants are deterministic;
- Scheduling Grantsgrants can be sent once per TTI or slower;
- There are two types of grants:
 - The <u>Absolute Grantsabsolute grants</u> provide an absolute limitation of the maximum amount of UL resources the UE may use;
 - The <u>Relative Grants</u>relative grants increase or decrease the resource limitation compared to the previously used value;
- Absolute <u>Grantsscheduling grants</u> are <u>sent by the Serving E-DCH cellsupported</u>:
 - They are valid for one UE, for a group of UEs or for all UEs;
 - They can have an associated duration;
 - <u>The Absolute Grant</u> <u>Except if sent to all UEs, the absolute scheduling grant</u> contains at least the identity (<u>E-RNTI</u>) of the UE (or group of UEs) for which the grant is intended and the maximum resources the UE(s) may use;
 - Group identities or dedicated identities are not distinguished by the UE. It is up to the UTRAN to allocate the same identity to a group of UEs;
 - One identity (E-RNTI) is allocated to a UE at a time. The allocation is done by the Node-B and sent by the SRNC in RRC.
 - The identity consists of 16 bits (16 bits CRC at layer 1);
- Relative Grants (updates) are sent by the Serving and Non-Serving Node-Bs as a complement to Absolute Grants:
 - The Relative Grant from the Serving E-DCH RLS can take one of the three values: "UP", "HOLD" or "DOWN";
 - <u>The Relative Grant from the Non-serving E-DCH RLS can take one of the two values: "HOLD" or</u> "DOWN". The "HOLD" command is sent as DTX. The "DOWN" command corresponds to an "overload indicator";

- For each UE, the non-serving Node-B operation is as follows:
 - If the Node-B could not decode the E-DPCCH/E-DPDCH for the last n₁ TTIs (where n₁ is TBD) because of processing issue, it shall notify the SRNC;
 - The non-serving Node-B is allowed to send a "DOWN" command only for RoT reasons (maximum allocated uplink RoT in the cell is exceeded) and not because of lack of internal processing resources.