

**TSG RAN Meeting #20**  
**Hämeenlinna, Finland, 3 - 6 June, 2003**

**RP-030328**

**Title** CRs (Rel-5 only) to TS 25.423 and 25.433 on Resource handling of HS-DSCH  
Guaranteed Bit Rate  
**Source** TSG RAN WG3  
**Agenda Item** 7.3.6

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030905	25.423	5.5.0	5.6.0	REL-5	838	2	F	Resource handling of HS-DSCH Guaranteed Bit Rate	HSDPA-lublur
R3-030904	25.433	5.4.0	5.5.0	REL-5	859	2	F	Resource handling of HS-DSCH Guaranteed Bit Rate	HSDPA-lublur

## CHANGE REQUEST

# **25.423 CR 838** # rev **2** # Current version: **5.5.0** #

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

<b>Title:</b>	# Resource handling of HS-DSCH Guaranteed Bit Rate		
<b>Source:</b>	# RAN WG3		
<b>Work item code:</b>	# HSDPA-lublur	<b>Date:</b>	# 19/05/2003
<b>Category:</b>	# <b>F</b>	<b>Release:</b>	# REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)
	<b>B</b> (addition of feature),		R97 (Release 1997)
	<b>C</b> (functional modification of feature)		R98 (Release 1998)
	<b>D</b> (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

<b>Reason for change:</b>	# Currently the DRNC can only perform pre-empt at radio link level. If for UEs with established HS-DSCH connections the service (requested Guaranteed Bit Rate) can no longer be fulfilled, the DRNC should have the possibility to pre-empt the HS-DSCH connections seperately from the radio link. Information on which HS-DSCH connections to pre-empt can be obtained from e.g. the HS-DSCH required power measurement proposed in corresponding CR.
<b>Summary of change:</b>	# In the Radio Link Pre-emption procedure the possibility to pre-empt HS-DSCH Connections (HS-DSCH MAC-d Flows) is included.
	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 HSDPA only is affected.
	This CR has an impact under functional point of view.
	The impact can be considered isolated because the change affects one function namely HSDPA.
<b>Consequences if not approved:</b>	# The DRNC will lack to ability to pre-empt HS-DSCH traffic in case of resource critical situations.

**Clauses affected:** # 8.3.18, 9.1.41, 9.3.3, 9.3.6

<b>Other specs affected:</b>		<b>Y</b>	<b>N</b>		
	⌘	<b>X</b>		Other core specifications	⌘ TS 25.433, CR 859r2
			<b>X</b>	Test specifications	
			<b>X</b>	O&M Specifications	
<b>Other comments:</b>	⌘				

**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.

## 8.3.18 Radio Link Pre-emption

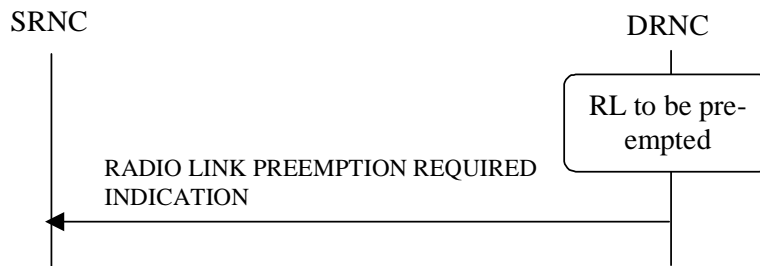
### 8.3.18.1 General

This procedure is started by the DRNS when resources need to be freed.

This procedure shall use the signalling bearer connection for the UE Context associated with the RL to be pre-empted.

The DRNS may initiate the Radio Link Pre-emption procedure at any time after establishing a Radio Link.

### 8.3.18.2 Successful Operation



**Figure 26B: Radio Link Pre-emption procedure, Successful Operation**

When DRNC detects that one or more Radio Link(s) should be pre-empted (see Annex A), it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the SRNC. If all Radio Links for a UE Context should be pre-empted, the *RL Information* IE shall not be included in the message. If one or several but not all Radio Link(s) should be pre-empted for an UE Context, the Radio Link(s) that should be pre-empted shall be indicated in the *RL Information* IE. The Radio Link(s) that should be pre-empted, should be deleted by the SRNC.

[When only the HS-DSCH traffic on a Radio Link should be pre-empted, the DRNC shall indicate the HS-DSCH MAC-d flow\(s\) that should be pre-empted by including the HS-DSCH MAC-d Flow Specific Information IE in the RADIO LINK PREEMPTION REQUIRED INDICATION message.](#)

### 8.3.18.3 Abnormal Conditions

-

### 9.1.41 RADIO LINK PREEMPTION REQUIRED INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
<b>RL Information</b>		<i>0..&lt;maxnoofRLs&gt;</i>			EACH	ignore
>RL ID	M		9.2.1.49		-	
<a href="#">HS-DSCH MAC-d Flow Specific Information</a>		<a href="#">0..&lt;maxnoofMACdFlows&gt;</a>			<a href="#">EACH</a>	<a href="#">ignore</a>
<a href="#">&gt; HS-DSCH MAC-d Flow ID</a>	<a href="#">M</a>		<a href="#">9.2.1.300</a>		<a href="#">=</a>	

Range bound	Explanation
<i>maxnoofRLs</i>	Maximum number of radio links for one UE
<a href="#">maxnoofMACdFlows</a>	<a href="#">Maximum number of HS-DSCH MAC-d flows</a>

\*\*\*\*\* NEXT CHANGE \*\*\*\*\*

### 9.3.3 PDU Definitions

```
-- *****  
--  
-- PDU definitions for RNSAP.  
--  
-- *****
```

\*\*\* PARTLY OMITTED\*\*\*

```
id-HSDSCH-FDD-Information,  
id-HSDSCH-FDD-Information-Response,  
id-HSDSCH-FDD-Information-to-Add,  
id-HSDSCH-FDD-Information-to-Delete,  
id-HSDSCH-FDD-Update-Information,  
id-HSDSCH-TDD-Update-Information,  
id-HSDSCH-Information-to-Modify,  
id-HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd,  
id-HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd,  
id-HSDSCH-RNTI,  
id-HSDSCH-TDD-Information,  
id-HSDSCH-TDD-Information-Response,  
id-HSDSCH-TDD-Information-Response-LCR,  
id-HSDSCH-TDD-Information-to-Add,  
id-HSDSCH-TDD-Information-to-Delete,  
id-HSPDSCH-RL-ID,  
id-HSPDSCH-Timeslot-InformationList-PhyChReconfRqstTDD,  
id-HSPDSCH-Timeslot-InformationListLCR-PhyChReconfRqstTDD,  
id-HSSICH-Info-DM-Rprt,  
id-HSSICH-Info-DM-Rqst,  
id-HSSICH-Info-DM-Rsp,
```

\*\*\* PARTLY OMITTED\*\*\*

```
-- *****  
--  
-- RADIO LINK PREEMPTION REQUIRED INDICATION  
--  
-- *****
```

```

RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkPreemptionRequiredIndication-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}}
    ...
}

RadioLinkPreemptionRequiredIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-PreemptRequiredInd    CRITICALITY ignore  TYPE RL-InformationList-RL-PreemptRequiredInd    PRESENCE optional },
    ...
}

RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-PreemptRequiredInd} }

RL-InformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-PreemptRequiredInd    CRITICALITY ignore  TYPE RL-InformationItem-RL-PreemptRequiredInd    PRESENCE mandatory
    }
}

RL-InformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions         ProtocolExtensionContainer { {RL-Information-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-PreemptRequiredInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkPreemptionRequiredIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd    CRITICALITY ignore  EXTENSION HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd    PRESENCE optional },
    ...
}

HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1.. maxNrOfMACdFlows)) OF ProtocolIE-Single-Container {
    {HSDSCHMacdFlowSpecificInformationItemIEs-RL-PreemptRequiredInd} }

HSDSCHMacdFlowSpecificInformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
    { ID id-HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd    CRITICALITY ignore  TYPE HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd    PRESENCE mandatory
    }
}

HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
    hSDSCH-MACdFlow-ID                HSDSCH-MACdFlow-ID,
    iE-Extensions                     ProtocolExtensionContainer { { HSDSCHMacdFlowSpecificInformation-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
    ...
}

HSDSCHMacdFlowSpecificInformation-RL-PreemptRequiredInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

\*\*\* PARTLY OMITTED\*\*\*\*\*

## 9.3.6 Constant Definitions

\*\*\* PARTLY OMITTED\*\*\*\*\*

```
-- *****  
--  
-- IEs  
--  
-- *****
```

\*\*\* PARTLY OMITTED\*\*\*\*\*

id-HSDSCH-FDD-Information-to-Delete	ProtocolIE-ID ::= 455
id-HSDSCH-FDD-Update-Information	ProtocolIE-ID ::= 466
id-HSDSCH-Information-to-Modify	ProtocolIE-ID ::= 456
<a href="#">id-HSDSCHMacdFlowSpecificInformationList-RL-PreemptRequiredInd</a>	<a href="#">ProtocolIE-ID ::= 516</a>
<a href="#">id-HSDSCHMacdFlowSpecificInformationItem-RL-PreemptRequiredInd</a>	<a href="#">ProtocolIE-ID ::= 517</a>
id-HSDSCH-RNTI	ProtocolIE-ID ::= 457
id-HSDSCH-TDD-Information	ProtocolIE-ID ::= 458
id-HSDSCH-TDD-Information-Response	ProtocolIE-ID ::= 459

\*\*\* PARTLY OMITTED\*\*\*\*\*

END



## CHANGE REQUEST

⌘ **25.433 CR 859** ⌘ rev **2** ⌘ Current version: **5.4.0** ⌘

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

<b>Title:</b>	⌘ Resource handling of HS-DSCH Guaranteed Bit Rate		
<b>Source:</b>	⌘ RAN WG3		
<b>Work item code:</b>	⌘ HSDPA-lublur	<b>Date:</b>	⌘ 22/05/2003
<b>Category:</b>	⌘ <b>F</b> Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	<b>Release:</b>	⌘ <b>REL-5</b> Use <u>one</u> 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)

<b>Reason for change:</b>	<p>⌘ <b>Rev 2:</b></p> <p>Semantics description of HS-DSCH Required Power per UE information modified.</p> <p><b>Rev 1:</b></p> <p>Maximum number of contexts to include in UE list limited to 16</p> <p>Weight per UE added in the list (in percentage of the total required power)</p> <p><b>Rev0.2:</b></p> <p>Indication of most resource consuming Ues within a priority class added.</p> <p>Based on 5.4.0</p> <p><b>Rev0.1:</b></p> <p>Granularity for HSDPA Required Power improved from 1% to 1 per thousand.</p> <p><b>Rev0.0:</b></p> <p>At the RAN2/RAN3 #32 ad hoc session on HSDPA it was agreed that the NodeB should have the means for reporting to CRNC the following parameters:</p> <ul style="list-style-type: none"> <li>• the necessary power per priority class (SPI) to meet the Guaranteed Bit Rate for all the calls of this priority class;</li> <li>• the currently provided bit rate per priority class, calculated over the recent past.</li> </ul>
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In RAN3#33 it was further discussed to use the Common Measurement mechanism as a reporting mechanism for the above two parameters (R3-022479). As a result of the discussion it was decided to send a liaison (R3-022559) to RAN1/RAN4 (with RAN2 in copy) asking them about the feasibility and the definition of these two measurements.

In their reply liaison (LS R3-030027) RAN1 ask for further clarifications on *HSDPA Required Power* and agree that *HSDPA Provided Bit Rate* is related to the MAC-hs (hence, not a Layer 1 measurement).

This CR assumes that the intent of the RAN2/RAN3 agreement was that the two reported values would not be based on measurements and need not be defined in RAN1 specs.

The measurement period for the "HSDPA Provided Bit Rate" measurement might still need be defined in 25.123/25.133.

**Summary of change:** ⌘ Introduction of two new Common Measurement types: "HSDPA Required Power" and "HSDPA Provided Bit Rate".

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 HSDPA only is affected.

This CR has an impact under functional point of view.

The impact can be considered isolated because the change affects one function namely HSDPA.

**Consequences if not approved:** ⌘ The CRNC will lack essential information for RRM purposes related to the HSDPA functionality.

**Clauses affected:** ⌘ 8.2.8.4; 9.2.1.11; 9.2.1.12; 9.2.1.44; 9.2.1.x (new); 9.2.1.y (new); 9.3.4; 9.3.6

<b>Other specs affected:</b>	<input type="checkbox"/>	<input type="checkbox"/>	Other core specifications	⌘ TS 25.423, CR838r2
	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications	

**Other comments:** ⌘

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#### 8.2.8.4 Abnormal Conditions

If the Common Measurement Type received in the *Common Measurement Type* IE, [except for the “HS-DSCH Required Power” and the “HS-DSCH Provided Bit Rate”](#), is not defined in ref. [4] or [5] to be measured on the Common Measurement Object Type received in the COMMON MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Common Measurement Initiation procedure as failed.

[TDD - If the Common Measurement Type requires the Time Slot Information but the [3.84Mcps TDD - *Time Slot* IE] [1.28Mcps TDD - *Time Slot LCR* IE] is not present in the COMMON MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Common Measurement Initiation procedure as failed.]

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *SFN-SFN Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the Node B shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the COMMON MEASUREMENT INITIATION REQUEST message contains the  $T_{UTRAN-GPS}$  *Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the Node B shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", but the *Neighbouring Cell Measurement Information* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Common Measurement Initiation procedure as failed.

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning", but the  $T_{UTRAN-GPS}$  *Measurement Accuracy Class* IE in the *Common Measurement Accuracy* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Common Measurement Initiation procedure as failed.

The allowed combinations of the Common Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the Node B shall regard the Common Measurement Initiation procedure as failed.

Table 4: Allowed Common Measurement Type and Report Characteristics Type combinations

Common Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
Received Total Wide Band Power	X	X	X	X	X	X	X	X	
Transmitted Carrier Power	X	X	X	X	X	X	X	X	
Acknowledged PRACH Preambles	X	X	X	X	X	X	X	X	
UL Timeslot ISCP	X	X	X	X	X	X	X	X	
Acknowledged PCPCH Access Preambles	X	X	X	X	X	X	X	X	
Detected PCPCH Access Preambles	X	X	X	X	X	X	X	X	
UTRAN GPS Timing of Cell Frames for UE Positioning	X	X							X
SFN-SFN Observed Time Difference	X	X							X
Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission	X	X	X	X	X	X	X	X	
<a href="#">HS-DSCH Required Power</a>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>	
<a href="#">HS-DSCH Provided Bit Rate</a>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>			<u>X</u>	<u>X</u>	

### 9.2.1.11 Common Measurement Type

The Common Measurement Type identifies which measurement that shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Common Measurement Type			ENUMERATED ( Received Total Wide Band Power, Transmitted Carrier Power, Acknowledged PRACH Preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, ..., UTRAN GPS Timing of Cell Frames for UE Positioning, SFN-SFN Observed Time Difference, Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission, <a href="#">HS-DSCH Required Power, HS-DSCH Provided Bit Rate</a> )	"UL Timeslot ISCP" is used by TDD only, "Acknowledged PRACH Preambles", 'Acknowledged PCPCH Access Preambles', 'Detected PCPCH Access Preambles', 'Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission' are used by FDD only

9.2.1.12 Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE <i>Common Measurement Value</i>					–	
> <i>Transmitted Carrier Power</i>					–	
>> <i>Transmitted Carrier Power Value</i>	M		INTEGER (0..100)	According to mapping in [22] and [23]	–	
> <i>Received Total Wide Band Power</i>					–	
>> <i>Received Total Wide Band Power Value</i>	M		INTEGER (0..621)	According to mapping in [22] and [23]	–	
> <i>Acknowledged PRACH Preambles</i>				FDD Only	–	
>> <i>Acknowledged PRACH Preamble Value</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>UL Timeslot ISCP</i>				TDD Only	–	
>> <i>UL Timeslot ISCP</i>	M		INTEGER (0..127)	According to mapping in [23]	–	
> <i>Acknowledged PCPCH Access Preambles</i>				FDD Only	–	
>> <i>Acknowledged PCPCH Access Preambles</i>	M		INTEGER (0..15,...)	According to mapping in [22]	–	
> <i>Detected PCPCH Access Preambles</i>				FDD Only	–	
>> <i>Detected PCPCH Access Preambles</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>Additional Common Measurement Values</i>					–	
>> <i>UTRAN GPS Timing of Cell Frames for UE Positioning</i>					–	
>>> <i>T<sub>UTRAN-GPS</sub> Measurement Value Information</i>	M		9.2.1.64A		YES	ignore
>> <i>SFN-SFN Observed Time Difference</i>					–	
>>> <i>SFN-SFN Measurement Value Information</i>	M		9.2.1.53E		YES	ignore
>> <i>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission</i>				FDD Only	–	
>>> <i>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission Value</i>	M		INTEGER (0..100)	According to mapping in [22]	YES	ignore
>> <a href="#">HS-DSCH Required Power</a>						
>>> <a href="#">HS-DSCH Required Power Value Information</a>	<u>M</u>		<a href="#">9.2.1.X</a>		<u>YES</u>	<u>Ignore</u>
>> <a href="#">HS-DSCH Provided Bit Rate</a>						

<a href="#">&gt;&gt;&gt;HS-DSCH Provided Bit Rate</a>	<a href="#">M</a>		<a href="#">9.2.1.Y</a>		<a href="#">YES</a>	<a href="#">Ignore</a>
---	-------------------	--	-------------------------	--	---------------------	------------------------

#### 9.2.1.44 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.



IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE <i>Measurement Threshold</i>					–	
> <i>Received Total Wide Band Power</i>					–	
>> <i>Received Total Wide Band Power</i>	M		INTEGER (0..621)	According to mapping in [22] and [23]	–	
> <i>Transmitted Carrier Power</i>					–	
>> <i>Transmitted Carrier Power</i>	M		INTEGER (0..100)	According to mapping in [22] and [23]	–	
> <i>Acknowledged PRACH Preambles</i>				FDD only	–	
>> <i>Acknowledged PRACH Preambles</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>UL Timeslot ISCP</i>				TDD only	–	
>> <i>UL Timeslot ISCP</i>	M		INTEGER (0..127)	According to mapping in [23]	–	
> <i>SIR</i>					–	
>> <i>SIR</i>	M		INTEGER (0..63)	According to mapping in [22] and [23]	–	
> <i>SIR Error</i>				FDD only	–	
>> <i>SIR Error</i>	M		INTEGER (0..125)	According to mapping in [22]	–	
> <i>Transmitted Code Power</i>					–	
>> <i>Transmitted Code Power</i>	M		INTEGER (0..127)	According to mapping in [22] and [23]	–	
> <i>RSCP</i>				TDD only	–	
>> <i>RSCP</i>	M		INTEGER (0..127)	According to mapping in [23]	–	
> <i>Rx Timing Deviation</i>				Applicable to 3.84Mcps TDD only	–	
>> <i>Rx Timing Deviation</i>	M		INTEGER (0..8191)	According to mapping in [23]	–	
> <i>Round Trip Time</i>				FDD only	–	
>> <i>Round Trip Time</i>	M		INTEGER (0..32767)	According to mapping in [22]	–	
> <i>Acknowledged PCPCH Access Preambles</i>				FDD only	–	
>> <i>Acknowledged PCPCH Access Preambles</i>	M		INTEGER (0..15,...)	According to mapping in [22]	–	
> <i>Detected PCPCH Access Preambles</i>				FDD only	–	
>> <i>Detected PCPCH Access Preambles</i>	M		INTEGER (0..240,...)	According to mapping in [22]	–	
> <i>Additional Measurement Thresholds</i>					–	
>> <i>UTRAN GPS Timing of Cell Frames for UE Positioning</i>					–	
>>> <i>T<sub>UTRAN-GPS</sub> Measurement Threshold Information</i>	M		9.2.1.64B		YES	reject
>> <i>SFN-SFN Observed Time Difference</i>					–	
>>> <i>SFN-SFN Measurement</i>	M		9.2.1.53C		YES	reject

Threshold Information						
>>Rx Timing Deviation LCR				Applicable to 1.28Mcps TDD Only	–	
>>>Rx Timing Deviation LCR	M		INTEGER (0..255)	According to mapping in [23]	YES	reject
>>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission				FDD only	–	
>>>Transmitted carrier power of all codes not used for HS-PDSCH or HS-SCCH transmission	M		INTEGER (0..100)	According to mapping in [22]	YES	reject
>>HS-SICH reception quality				Applicable to TDD Only	–	
>>>HS-SICH reception quality	M		INTEGER (0..20)	According to mapping in [23]	YES	reject
>>HS-DSCH Required Power						
>>>HS-DSCH Required Power Value Information	M		<a href="#">9.2.1.X</a>		<a href="#">YES</a>	<a href="#">Reject</a>
>>HS-DSCH Provided Bit Rate						
>>>HS-DSCH Provided Bit Rate Value Information	M		<a href="#">9.2.1.Y</a>		<a href="#">YES</a>	<a href="#">Reject</a>

### [9.2.1.x HS-DSCH Required Power Value Information](#)

[The HS-DSCH Required Power Value Information IE reports the minimum necessary power per priority class to meet the Guaranteed Bit Rate for all the established HS-DSCH connections belonging to this priority class. For each priority class, a list of UEs requiring a particularly high amount of power to meet the Guaranteed Bit Rate for their established HS-DSCH connections may be included.](#)

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
<u>HS-DSCH Required Power Value Information</u>		<u>1..16</u>			=	
<u>&gt;Scheduling Priority Indicator</u>	<u>M</u>		<u>9.2.1.51A</u>		=	
<u>&gt;HS-DSCH Required Power Value</u>	<u>M</u>		<u>INTEGER (0..1000)</u>	<u>Expressed in thousandths of the max transmission power</u>	=	
<u>&gt; HS-DSCH Required Power per UE information</u>		<u>0..&lt;maxNrOfContextsonUeList</u> <u>&gt;</u>		<u>List of UEs with Guaranteed Bit Rate indicating their required power consumption relative to the HS-DSCH Required Power Value.</u>	=	
<u>&gt;&gt; CRNC Communication Context ID</u>	<u>M</u>		<u>9.2.1.18</u>	<u>The reserved value "All CRNCCC" shall not be used.</u>	=	
<u>&gt;&gt; HS-DSCH Required Power per UE Weight</u>	<u>O</u>		<u>INTEGER (0..100)</u>	<u>Expressed in percentage of the value provided in the HS-DSCH Required Power Value IE</u>	=	

<u>Range Bound</u>	<u>Explanation</u>
<u>maxNrOfContextsonUeList</u>	<u>Maximum number of Communication Contexts to include in the list of UEs</u>

### 9.2.1.y HS-DSCH Provided Bit Rate Value Information

The HS-DSCH Provided Bit Rate Value Information IE reports the total number of MAC-d PDU bits per priority class transmitted over the radio interface during the measurement period, divided by the duration of the measurement period. Only bits from acknowledged MAC-hs PDUs are taken into account.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
<u>HS-DSCH Provided Bit Rate Value Information</u>		<u>1..16</u>			=	
<u>&gt;Scheduling Priority Indicator</u>	<u>M</u>		<u>9.2.1.51A</u>		=	
<u>&gt;HS-DSCH Provided Bit Rate Value</u>	<u>M</u>		<u>INTEGER (0..2^24-1, ...)</u>	<u>Expressed in bit/s. See [32] for the definiton of the measuremen t.</u>	=	

\*\*\*\*\* NEXT CHANGE \*\*\*\*\*

## 9.3.4 Information Elements Definitions

```
--*****
--
-- Information Element Definitions
--
--*****

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfRLs,
    maxNrOfTFCS,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTL-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCellSyncBursts,
    maxNrOfCodeGroups,
    maxNrOfMeasNCell,
    maxNrOfMeasNCell-1,
    maxNrOfReceiptsPerSyncFrame,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,
    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfULTSLCRs,
    maxNrOfDPCHs,
    maxNrOfDPCHLCRs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSs,
    maxNrOfDLTSLCRs,
    maxNrOfDCHs,
    maxNrOfLevels,
    maxNoGPSItems,
    maxNoSat,
    maxNrOfHSSCCHs,
    maxNrOfHSSCCHCodes,
    maxNrOfMACdFlows,
```

```
maxNrOfMACdFlows-1,
maxNrOfMACdPDUIndexes,
maxNrOfMACdPDUIndexes-1,
maxNrOfPriorityQueues,
maxNrOfPriorityQueues-1,
maxNrOfHARQProcesses,
maxNrOfSyncDLCodesLCR,
maxNrOfSyncFramesLCR,
maxNrOfContextsOnUeList,

id-MessageStructure,
id-ReportCharacteristicsType-OnModification,
id-Rx-Timing-Deviation-Value-LCR,
id-SFNsFNMeasurementValueInformation,
id-SFNsFNMeasurementThresholdInformation,
id-TUTRANGPSMeasurementValueInformation,
id-TUTRANGPSMeasurementThresholdInformation,
id-TypeOfError,
id-transportlayeraddress,
id-bindingID,
id-Angle-Of-Arrival-Value-LCR,
id-SyncDLCodeIdThreInfoLCR,
id-neighbouringTDDCellMeasurementInformationLCR,
id-HS-SICH-Reception-Quality,
id-HS-SICH-Reception-Quality-Measurement-Value,
id-Initial-DL-Power-TimeslotLCR-InformationItem,
id-Maximum-DL-Power-TimeslotLCR-InformationItem,
id-Minimum-DL-Power-TimeslotLCR-InformationItem,
id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission,
id-HS-DSCHRequiredPower,
id-HS-DSCHProvidedBitRate,
id-HS-DSCHRequiredPowerValue,
id-HS-DSCHProvidedBitRateValue
FROM NBAP-Constants

Criticality,
ProcedureID,
ProtocolIE-ID,
TransactionID,
TriggeringMessage
FROM NBAP-CommonDataTypes

NBAP-PROTOCOL-IES,
ProtocolExtensionContainer{},
ProtocolIE-Single-Container{},
NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers;
```

```
/* NEXT CHANGE */
```

```
-- =====
-- C
-- =====
```

```
/* partly omitted */
```

```
CommonMeasurementType ::= ENUMERATED {
    received-total-wide-band-power,
    transmitted-carrier-power,
    acknowledged-prach-preambles,
    ul-timeslot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...,
    uTRAN-GPS-Timing-of-Cell-Frames-for-UE-Positioning,
    sFN-SFN-Observed-Time-Difference,
    transmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission,
    hS-DSCH-Required-Power,
    hS-DSCH-Provided-Bit-Rate
}

CommonMeasurementValue ::= CHOICE {
    transmitted-carrier-power           Transmitted-Carrier-Power-Value,
    received-total-wide-band-power      Received-total-wide-band-power-Value,
    acknowledged-prach-preambles       Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                     UL-TimeslotISCP-Value,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles     Detected-PCPCH-access-preambles,
    ...,
    extension-CommonMeasurementValue    Extension-CommonMeasurementValue
}

Extension-CommonMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-CommonMeasurementValueIE }}

Extension-CommonMeasurementValueIE NBAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementValueInformation CRITICALITY ignore TYPE TUTRANGPSMeasurementValueInformation PRESENCE mandatory }|
    { ID id-SFNsFNMeasurementValueInformation CRITICALITY ignore TYPE SFNSFNMeasurementValueInformation PRESENCE mandatory }|
    { ID id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission CRITICALITY ignore TYPE
    TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionValue PRESENCE mandatory }|
    { ID id-HS-DSCHRequiredPower CRITICALITY ignore TYPE HS-DSCHRequiredPower PRESENCE mandatory }|
    { ID id-HS-DSCHProvidedBitRate CRITICALITY ignore TYPE HS-DSCHProvidedBitRate PRESENCE mandatory }
}

CommonMeasurementValueInformation ::= CHOICE {
    measurementAvailable      CommonMeasurementAvailable,
    measurementnotAvailable   CommonMeasurementnotAvailable
}

CommonMeasurementAvailable ::= SEQUENCE {
```

```
commonmeasurementValue      CommonMeasurementValue,  
ie-Extensions                ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs} } OPTIONAL,  
...  
}  
  
CommonMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
...  
}  
CommonMeasurementnotAvailable ::= NULL
```

**/\* NEXT CHANGE \*/**



```

-- =====
-- H
-- =====

HARQMemoryPartitioningFDD ::= SEQUENCE (SIZE (1..maxNrOfHARQProcesses)) OF HARQMemoryPartitioning-ItemFDD

HARQMemoryPartitioning-ItemFDD ::= SEQUENCE {
    process-Memory-Size          INTEGER (0..172800,...),
    iE-Extensions                ProtocolExtensionContainer { { HARQMemoryPartitioning-ItemFDD-ExtIEs } }    OPTIONAL,
    ...
}

HARQMemoryPartitioning-ItemFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HARQMemoryPartitioningTDD ::= SEQUENCE (SIZE (1..maxNrOfHARQProcesses)) OF HARQMemoryPartitioning-ItemTDD

HARQMemoryPartitioning-ItemTDD ::= SEQUENCE {
    process-Memory-Size          INTEGER (0..168960,...),
    iE-Extensions                ProtocolExtensionContainer { { HARQMemoryPartitioning-ItemTDD-ExtIEs } }    OPTIONAL,
    ...
}

HARQMemoryPartitioning-ItemTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCHProvidedBitRate ::= SEQUENCE (SIZE (1..16)) OF HS-DSCHProvidedBitRate-Item

HS-DSCHProvidedBitRate-Item ::= SEQUENCE {
    schedulingPriorityIndicator    SchedulingPriorityIndicator,
    hS-DSCHProvidedBitRateValue    HS-DSCHProvidedBitRateValue,
    iE-Extensions                ProtocolExtensionContainer { { HS-DSCHProvidedBitRate-Item-ExtIEs } }    OPTIONAL,
    ...
}

HS-DSCHProvidedBitRate-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCHProvidedBitRateValue ::= INTEGER(0..2^24-1,...)
-- Unit bit/s, Range 0..2^24-1, Step 1 bit

HS-DSCHRequiredPower ::= SEQUENCE (SIZE (1..16)) OF HS-DSCHRequiredPower-Item

HS-DSCHRequiredPower-Item ::= SEQUENCE {
    schedulingPriorityIndicator    SchedulingPriorityIndicator,
    hS-DSCHRequiredPowerValue    HS-DSCHRequiredPowerValue,
    hS-DSCHRequiredPowerPerUEInformation    HS-DSCHRequiredPowerPerUEInformation,
    iE-Extensions                ProtocolExtensionContainer { { HS-DSCHRequiredPower-Item-ExtIEs } }    OPTIONAL,
    ...
}

```

```

}
HS-DSCHRequiredPower-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
HS-DSCHRequiredPowerValue ::= INTEGER(0..1000)
-- Unit %, Range 0 ..1000, Step 0.1%

HS-DSCHRequiredPowerPerUEInformation ::= SEQUENCE (SIZE (1.. maxNrOfContextsOnUeList)) OF HS-DSCHRequiredPowerPerUEInformation-Item

HS-DSCHRequiredPowerPerUEInformation-Item ::= SEQUENCE {
    cRNC-CommunicationContextID          CRNC-CommunicationContextID,
    hS-DSCHRequiredPowerPerUEWeight     HS-DSCHRequiredPowerPerUEWeight OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { HS-DSCHRequiredPowerPerUEInformation-Item-ExtIEs } } OPTIONAL,
    ...
}

HS-DSCHRequiredPowerPerUEInformation-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HS-DSCHRequiredPowerPerUEWeight ::= INTEGER(0..100)
-- Unit %, Range 0 ..100, Step 1%

```

```

HSDSCH-FDD-Information ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info      HSDSCH-MACdFlow-Specific-InfoList,
    ueCapability-Info                   UE-Capability-InformationFDD,
    harqMemoryPartitioningFDD           HARQMemoryPartitioningFDD,
    cqiFeedback-CycleK                  CQI-Feedback-Cycle,
    cqiRepetitionFactor                  CQI-RepetitionFactor OPTIONAL,
    -- This IE shall be present if the CQI Feedback Cycle k is greater than 0
    ackNackRepetitionFactor              AckNack-RepetitionFactor,
    cqiPowerOffset                       CQI-Power-Offset,
    ackPowerOffset                       Ack-Power-Offset,
    nackPowerOffset                       Nack-Power-Offset,
    hssch-PowerOffset                    HSSCH-PowerOffset OPTIONAL,
    measurement-Power-Offset             Measurement-Power-Offset OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { HSDSCH-FDD-Information-ExtIEs } } OPTIONAL,
    ...
}

```

```

HSDSCH-FDD-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

HSDSCH-TDD-Information ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info      HSDSCH-MACdFlow-Specific-InfoList,
    ueCapability-Info                   UE-Capability-InformationTDD,
    harqMemoryPartitioningTDD           HARQMemoryPartitioningTDD,

```

```

    iE-Extensions          ProtocolExtensionContainer { { HSDSCH-TDD-Information-ExtIEs } }          OPTIONAL,
    ...
}

HSDSCH-TDD-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-Specific-InfoList ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem

HSDSCH-MACdFlow-Specific-InfoItem ::= SEQUENCE {
    hsDSCH-MACdFlow-ID          HSDSCH-MACdFlow-ID,
    allocationRetentionPriority  AllocationRetentionPriority,
    bindingID                    BindingID                    OPTIONAL,
    transportLayerAddress        TransportLayerAddress        OPTIONAL,
    priorityQueueInfo            PriorityQueue-InfoList,
    iE-Extensions                ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs } }  OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-Information-to-Modify ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info-to-Modify  HSDSCH-MACdFlow-Specific-InfoList-to-Modify          OPTIONAL,
    cqiFeedback-CycleK                        CQI-Feedback-Cycle          OPTIONAL, -- For FDD only
    cqiRepetitionFactor                       CQI-RepetitionFactor        OPTIONAL, -- For FDD only
    ackNackRepetitionFactor                   AckNack-RepetitionFactor    OPTIONAL, -- For FDD only
    cqiPowerOffset                            CQI-Power-Offset           OPTIONAL, -- For FDD only
    ackPowerOffset                            Ack-Power-Offset           OPTIONAL, -- For FDD only
    nackPowerOffset                           Nack-Power-Offset          OPTIONAL, -- For FDD only
    hsscch-PowerOffset                        HSSCCH-PowerOffset         OPTIONAL, -- only for FDD
    measurement-Power-Offset                  Measurement-Power-Offset    OPTIONAL, -- For FDD only
    iE-Extensions                             ProtocolExtensionContainer { { HSDSCH-Information-to-Modify-ExtIEs } }  OPTIONAL,
    ...
}

HSDSCH-Information-to-Modify-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-Specific-InfoList-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InfoItem-to-Modify

HSDSCH-MACdFlow-Specific-InfoItem-to-Modify ::= SEQUENCE {
    hsDSCH-MACdFlow-ID          HSDSCH-MACdFlow-ID,
    allocationRetentionPriority  AllocationRetentionPriority          OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    bindingID                    BindingID                    OPTIONAL,
    transportLayerAddress        TransportLayerAddress        OPTIONAL,
    priorityQueueInfo            PriorityQueue-InfoList-to-Modify    OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs } }  OPTIONAL,
    ...
}

```

```

}

HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-FDD-Information-Response ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-InformationResp          HSDSCH-MACdFlow-Specific-InformationResp,
    hsSCCH-Specific-Information-ResponseFDD          HSSCCH-Specific-InformationRespListFDD,
    iE-Extensions                                     ProtocolExtensionContainer { { HSDSCH-FDD-Information-Response-ExtIEs } }    OPTIONAL,
    ...
}

HSDSCH-FDD-Information-Response-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-TDD-Information-Response ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-InformationResp          HSDSCH-MACdFlow-Specific-InformationResp,
    hsSCCH-Specific-Information-ResponseTDD          HSSCCH-Specific-InformationRespListTDD    OPTIONAL, -- Mandatory for 3.84Mcps TDD, Not
Applicable to 1.28Mcps TDD
    hsSCCH-Specific-Information-ResponseTDDLRCR      HSSCCH-Specific-InformationRespListTDDLRCR    OPTIONAL, -- Mandatory for 1.28Mcps TDD, Not
Applicable to 3.84Mcps TDD
    iE-Extensions                                     ProtocolExtensionContainer { { HSDSCH-TDD-Information-Response-ExtIEs } }    OPTIONAL,
    ...
}

HSDSCH-TDD-Information-Response-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-Specific-InformationResp ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-MACdFlow-Specific-InformationResp-Item

HSDSCH-MACdFlow-Specific-InformationResp-Item ::= SEQUENCE {
    hsDSCHMacdFlow-Id                                HSDSCH-MACdFlow-ID,
    bindingID                                         BindingID                                OPTIONAL,
    transportLayerAddress                            TransportLayerAddress                    OPTIONAL,
    hSDSCH-Initial-Capacity-Allocation                HSDSCH-Initial-Capacity-Allocation    OPTIONAL,
    iE-Extensions                                     ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InformationRespItem-ExtIEs } }
    OPTIONAL,
    ...
}

HSDSCH-MACdFlow-Specific-InformationRespItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-PowerOffset ::= INTEGER (0..255)
-- PowerOffset = -32 + offset * 0.25
-- Unit dB, Range -32dB .. +31.75dB, Step +0.25dB

HSDSCH-Initial-Capacity-Allocation ::= SEQUENCE (SIZE (1..16)) OF HSDSCH-Initial-Capacity-AllocationItem

```

```

HSDSCH-Initial-Capacity-AllocationItem ::= SEQUENCE {
    schedulingPriorityIndicator    SchedulingPriorityIndicator,
    maximum-MACdPDU-Size          MACdPDU-Size,
    hSDSCH-InitialWindowSize      HSDSCH-InitialWindowSize,
    iE-Extensions                 ProtocolExtensionContainer { { HSDSCH-Initial-Capacity-AllocationItem-ExtIEs } } OPTIONAL,
    ...
}

HSDSCH-Initial-Capacity-AllocationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-InitialWindowSize          ::= INTEGER (1..2047)
-- Number of MAC-d PDUs.
-- 2047 = Unlimited number of MAC-d PDUs

HSSCCH-Specific-InformationRespListFDD ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-Codes

HSSCCH-Codes ::= SEQUENCE {
    codeNumber                    INTEGER (1..127),
    iE-Extensions                 ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemFDD-ExtIEs } } OPTIONAL,
    ...
}

HSSCCH-Specific-InformationRespItemFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-Specific-InformationRespListTDD ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-Specific-InformationRespItemTDD

HSSCCH-Specific-InformationRespItemTDD ::= SEQUENCE {
    timeslot                      TimeSlot,
    midambleShiftAndBurstType     MidambleShiftAndBurstType,
    tDD-ChannelisationCode        TDD-ChannelisationCode,
    hSSICH-Info                   HSSICH-Info,
    iE-Extensions                 ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemTDD-ExtIEs } } OPTIONAL,
    ...
}

HSSCCH-Specific-InformationRespItemTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSCCH-Specific-InformationRespListTDDLRCR ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-Specific-InformationRespItemTDDLRCR

HSSCCH-Specific-InformationRespItemTDDLRCR ::= SEQUENCE {
    timeslotLCR                   TimeSlotLCR,
    midambleShiftLCR              MidambleShiftLCR,
    first-TDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    second-TDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    hSSICH-InfoLCR                HSSICH-InfoLCR,
    iE-Extensions                 ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemTDDLRCR-ExtIEs } } OPTIONAL,
    ...
}

```

```
}  
HSSCH-Specific-InformationRespItemTDDLRCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

**/\* NEXT CHANGE \*/**

```
-- =====
-- R
-- =====
```

```
/* NEXT CHANGE */
```

```
ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power          Received-total-wide-band-power-Value-IncrDecrThres,
    transmitted-carrier-power               Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles           Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                         UL-TimeslotISCP-Value-IncrDecrThres,
    sir                                      SIR-Value-IncrDecrThres,
    sir-error                               SIR-Error-Value-IncrDecrThres,
    transmitted-code-power                 Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                                    RSCP-Value-IncrDecrThres,
    round-trip-time                        Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles        Detected-PCPCH-access-preambles,
    ...,
    extension-ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold      Extension-ReportCharacteristicsType-
MeasurementIncreaseDecreaseThreshold
}

Extension-ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsType-
MeasurementIncreaseDecreaseThresholdIE }}

Extension-ReportCharacteristicsType-MeasurementIncreaseDecreaseThresholdIE NBAP-PROTOCOL-IES ::= {
{ ID id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission CRITICALITY reject TYPE
TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionValue PRESENCE mandatory}
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    transmitted-carrier-power               Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles           Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                         UL-TimeslotISCP-Value,
    sir                                      SIR-Value,
    sir-error                               SIR-Error-Value,
    transmitted-code-power                 Transmitted-Code-Power-Value,
    rscp                                    RSCP-Value,
    rx-timing-deviation                    Rx-Timing-Deviation-Value,
    round-trip-time                        Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles        Detected-PCPCH-access-preambles,
    ...,
    extension-ReportCharacteristicsType-MeasurementThreshold      Extension-ReportCharacteristicsType-MeasurementThreshold
}

Extension-ReportCharacteristicsType-MeasurementThreshold ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsType-
MeasurementThresholdIE }}
```

```

Extension-ReportCharacteristicsType-MeasurementThresholdIE NBAP-PROTOCOL-IES ::= {
  { ID id-TUTRANGPSMeasurementThresholdInformation CRITICALITY reject TYPE TUTRANGPSMeasurementThresholdInformation PRESENCE mandatory }|
  { ID id-SFNFSNMeasurementThresholdInformation CRITICALITY reject TYPE SFNFSNMeasurementThresholdInformation PRESENCE mandatory }|
  { ID id-Rx-Timing-Deviation-Value-LCR CRITICALITY reject TYPE Rx-Timing-Deviation-Value-LCR PRESENCE mandatory}|
  { ID id-HS-SICH-Reception-Quality-Measurement-Value CRITICALITY reject TYPE HS-SICH-Reception-Quality-Measurement-Value PRESENCE mandatory}|
  { ID id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission CRITICALITY reject TYPE
TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionValue PRESENCE mandatory}|
  { ID id-HS-DSCHRequiredPowerValue CRITICALITY reject TYPE HS-DSCHRequiredPowerValue PRESENCE mandatory}|
  { ID id-HS-DSCHProvidedBitRateValue CRITICALITY reject TYPE HS-DSCHrovidedBitRateValue PRESENCE mandatory}
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
  msec MeasurementChangeTime-Scaledmsec,
  ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
  msec MeasurementHysteresisTime-Scaledmsec,
  ...
}

MeasurementHysteresisTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementHysteresisTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
  msec ReportPeriodicity-Scaledmsec,
  min ReportPeriodicity-Scaledmin,
  ...
}

ReportPeriodicity-Scaledmsec ::= INTEGER (1..6000,...)
-- ReportPeriodicity-msec = ReportPeriodicity * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportPeriodicity-Scaledmin ::= INTEGER (1..60,...)
-- Unit min, Range 1min .. 60min(hour), Step 1min

ReportPeriodicity-Scaledhour ::= INTEGER (1..24,...)
-- Unit hour, Range 1hour .. 24hours(day), Step 1hour

```

```

/* NEXT CHANGE */

```





## 9.3.6 Constant Definitions

```
-- *****  
--  
-- Lists  
--  
-- *****  
/* partly omitted */  
  
| maxNrOfContextsOnUeList      INTEGER ::= 16  
  
-- *****  
--  
-- IEs  
--  
-- *****  
  
| id-HS-DSCHProvidedBitRate      ProtocolIE-ID ::= 583  
| id-HS-DSCHProvidedBitRateValue ProtocolIE-ID ::= 584  
| id-HS-DSCHRequiredPower      ProtocolIE-ID ::= 585  
| id-HS-DSCHRequiredPowerValue ProtocolIE-ID ::= 586  
  
END
```