

TSG RAN Meeting #17
Biarritz, France, 3 - 6 September, 2002

RP-020619

Title CRs (Rel-5 only) for Removal of BLER for HS-DSCH
Source TSG RAN WG3
Agenda Item 7.3.5

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-021857	25.423	5.2.0	5.3.0	REL-5	688	-	F	Removal of BLER for HS-DSCH	HSDPA-lubtur
R3-021875	25.433	5.1.0	5.2.0	REL-5	716	-	F	Removal of BLER for HS-DSCH	HSDPA-lubtur

CR-Form-v7

CHANGE REQUEST

25.423 CR 688 # rev **-** # Current version: **5.2.0**

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:	# Removal of BLER for HS-DSCH		
Source:	# RAN WG3		
Work item code:	# HSDPA-lublur	Date:	# 13/08/2002
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (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)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# According to RAN1 response (R3-021708 = R1-020827) to RAN3 liaison R3-021120, Node B does not need a BLER parameter for interpreting CQI reports. This CR proposes to delete the <i>BLER IE</i> parameter from <i>HS-DSCH Information IE</i> and <i>HS-DSCH Information To Modify IE</i> .
Summary of change:	# Clause 9.2.1.30Q: <i>BLER IE</i> is deleted from <i>HS-DSCH Information To Modify IE</i> . Clause 9.2.2.19a: <i>BLER IE</i> is deleted from <i>HS-DSCH Information IE</i> [FDD]. Clause 9.2.3.3aa: <i>BLER IE</i> is deleted from <i>HS-DSCH Information IE</i> [TDD]. Clause 9.3.4: BLER removal from ASN.1.
Consequences if not approved:	# The HSDPA functionality will be implemented incorrectly. <u>Impact Analysis:</u> This CR has isolated impact to previous version of this spec (same release). The change is limited to the HSDPA functionality. <u>Compatibility Analysis towards previous release:</u> No impact to previous releases since HSDPA is a REL-5 feature.

Clauses affected:	# 9.2.1.30Q; 9.2.2.19a; 9.2.3.3aa; 9.3.4										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	# CR716 (25.433 V5.1.0)
Y	N										
X											
	X										
	X										
		Test specifications									
		O&M Specifications									
Other comments:	#										

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Below is a brief summary:

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- 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.

9.2.1.30Q HS-DSCH Information To Modify

The *HS-DSCH Information To Modify* IE provides information for HS-DSCH to be modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
HS-DSCH MAC-d Flow Specific Information		<i>0..<maxno ofMACdFlows></i>			–	
>HS-DSCH MAC-d Flow ID	M		9.2.1.30O		–	
>BLER	⊖		9.2.1.4		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	–	
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	–	
>Priority Queue Information		<i>0..<maxno ofPrioQueues></i>			–	
>>Priority Queue ID	M		9.2.1.45A		–	
>>Scheduling Priority Indicator	O		9.2.1.51A		–	
>>MAC-d PDU Size Index		<i>0..<maxno ofMACdPDUindexes></i>			–	
>>>SID	M		9.2.1.52D		–	
>>>MAC-d PDU Size	O		9.2.1.34A		–	
Measurement Reporting Cycle	O		ENUMERATED(k1,k2)	For FDD only	–	

Range bound	Explanation
<i>maxnoofMACdFlows</i>	Maximum number of MAC-d flows.
<i>maxnoofPrioQueues</i>	Maximum number of Priority Queues.
<i>maxnoofMACdPDUindexes</i>	Maximum number of MAC-d PDU Size Indexes (SIDs).

***** NEXT CHANGE *****

9.2.2.19a HS-DSCH FDD Information

The *HS-DSCH FDD Information* IE provides information for HS-DSCH MAC-d flows to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
HS-DSCH MAC-d Flow Specific Information		1..<maxno ofMACdFlows>			–	
>HS-DSCH MAC-d Flow ID	M		9.2.1.300		–	
>BLER	M		9.2.1.4		–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	–	
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	–	
>Priority Queue Information		1..<maxno ofPrioQueues>				
>>Priority Queue ID	M		9.2.1.45A			
>>Scheduling Priority Indicator	M		9.2.1.51A			
>>MAC-d PDU Size Index		1..<maxno ofMACdPDUindexes>				
>>>SID	M		9.2.1.52D			
>>>MAC-d PDU Size	M		9.2.1.34A			
UE Capabilities information		1				
>HS-DSCH TrCh Bits per HS-DSCH TTI	M		ENUMERATED (7300, 14600, 20456, 28800,...)			
>HS-DSCH multi-code capability	M		ENUMERATED (5, 10, 15,...)			
>Min Inter-TTI Interval	M		INTEGER (1..3,...)			
>MAC-hs reordering buffer size	M		INTEGER (1..300,...)	The total buffer size defined in UE capability minus the RLC AM buffer		
HARQ Information		1..<maxno ofHARQprocesses>			–	
>Process memory size	M		INTEGER (1..172800,...)	Number of soft channel bits per process.		
Measurement feedback offset	M		INTEGER (0..79,...)			

Range bound	Explanation
<i>maxnoofMACdFlows</i>	Maximum number of MAC-d flows.
<i>maxnoofPrioQueues</i>	Maximum number of Priority Queues.
<i>maxnoofMACdPDUindexes</i>	Maximum number of MAC-d PDU Size Indexes (SIDs).
<i>maxnoofHARQprocesses</i>	Maximum number of HARQ processes.

***** NEXT CHANGE *****

9.2.3.3aa HS-DSCH TDD Information

The *HS-DSCH TDD Information* IE provides information for HS-DSCH to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
HS-DSCH MAC-d Flow Specific Information		1..<maxno ofMACdFlows>			-	
>HS-DSCH MAC-d Flow ID	M		9.2.1.30O		-	
>BLER	M		9.2.1.4		-	
>Allocation/Retention Priority	M		9.2.1.1A		-	
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	-	
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	-	
>Priority Queue Information		1..<maxno ofPrioQueues>			-	
>>Priority Queue ID	M		9.2.1.45A		-	
>>Scheduling Priority Indicator	M		9.2.1.51A			
>>MAC-d PDU Size Index		1..<maxno ofMACdPDUindexes>				
>>>SID	M		9.2.1.52D		-	
>>>MAC-d PDU Size	M		9.2.1.34A		-	
UE Capabilities information		1			-	
>HS-DSCH TrCh Bits per HS-DSCH TTI	M		ENUMERATED (7040, 10228, 14080,...)		-	
>HS-DSCH multi-code capability	M		ENUMERATED (8, 12, 16,...)		-	
>MAC-hs reordering buffer size	M		INTEGER (1..300,...)	The total buffer size defined in UE capability minus the RLC AM buffer		
HARQ Information		1..<maxno ofHARQprocesses>			-	
>Process memory size	M		INTEGER (1..168960, ...)	Number of soft channel bits per process.	-	

Range bound	Explanation
<i>maxnoofMACdFlows</i>	Maximum number of MAC-d flows.
<i>maxnoofPrioQueues</i>	Maximum number of Priority Queues.
<i>maxnoofMACdPDUindexes</i>	Maximum number of MAC-d PDU Size Indexes (SIDs).
<i>maxnoofHARQprocesses</i>	Maximum number of HARQ processes.

***** NEXT CHANGE *****

9.3.4 Information Element Definitions

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

```
***** UNAFFECTED PARTS OMITTED *****
HSDSCH-FDD-Information ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-Info          HSDSCH-MACdFlow-Specific-InfoList,
    uE-Capabilities-InfoFDD                UE-Capabilities-InfoFDD,
    hARQ-FDD-Info                          HARQ-FDD-InfoList,
    measurement-Feedback-Offset            Measurement-Feedback-Offset,
    iE-Extensions                           ProtocolExtensionContainer { { HSDSCH-FDD-Information-ExtIEs } }    OPTIONAL,
    ...
}

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

HSDSCH-FDD-Information-Response ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-InfoList-Response    HSDSCH-MACdFlow-Specific-InfoList-Response,
    hSSCCH-Specific-InfoList-Response             HSSCCH-FDD-Specific-InfoList-Response,
    measurement-Feedback-Reporting-Cycle-k1       Measurement-Feedback-Reporting-Cycle,
    measurement-Feedback-Reporting-Cycle-k2       Measurement-Feedback-Reporting-Cycle,
    iE-Extensions                                 ProtocolExtensionContainer { { HSDSCH-FDD-Information-Response-ExtIEs } }    OPTIONAL,
    ...
}

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

HSDSCH-Information-to-Modify ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-InfoList-to-Modify    HSDSCH-MACdFlow-Specific-InfoList-to-Modify    OPTIONAL,
    measurement-Reporting-Cycle                     ENUMERATED {k1, k2}                               OPTIONAL,
    -- Only for FDD
    iE-Extensions                                   ProtocolExtensionContainer { { HSDSCH-Information-to-Modify-ExtIEs } }    OPTIONAL,
    ...
}

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

HSDSCH-MACdFlow-ID ::= INTEGER (0..maxNrOfMACdFlows-1)

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

```
HSDSCH-MACdFlow-Specific-InfoItem ::= SEQUENCE {
  hSDSCH-MACdFlow-ID      HSDSCH-MACdFlow-ID,
  BLER                 BLER,
  allocationRetentionPriority AllocationRetentionPriority,
  bindingID                BindingID                OPTIONAL,
  transportLayerAddress    TransportLayerAddress    OPTIONAL,
  priorityQueue-Info      PriorityQueue-InfoList,
  iE-Extensions           ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-ExtIEs } } OPTIONAL,
  ...
}
```

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

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

```
HSDSCH-MACdFlow-Specific-InfoItem-Response ::= SEQUENCE {
  hSDSCH-MACdFlow-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-InfoItem-Response-ExtIEs } } OPTIONAL,
  ...
}
```

```
HSDSCH-MACdFlow-Specific-InfoItem-Response-ExtIEs RNSAP-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,
  BLER                 BLER                 OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority    OPTIONAL,
  transportBearerRequestIndicator TransportBearerRequestIndicator,
  bindingID                BindingID                OPTIONAL,
  transportLayerAddress    TransportLayerAddress    OPTIONAL,
  priorityQueue-Info-to-Modify PriorityQueue-InfoList-to-Modify    OPTIONAL,
  iE-Extensions           ProtocolExtensionContainer { { HSDSCH-MACdFlow-Specific-InfoItem-to-Modify-ExtIEs } } OPTIONAL,
  ...
}
```

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

```

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 RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

HSDSCH-RNTI ::= INTEGER (0..65535)

HSDSCH-TDD-Information ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-Info      HSDSCH-MACdFlow-Specific-InfoList,
    uE-Capabilities-InfoTDD            UE-Capabilities-InfoTDD,
    hARQ-TDD-InfoList                  HARQ-TDD-InfoList,
    iE-Extensions                      ProtocolExtensionContainer { { HSDSCH-TDD-Information-ExtIEs } } OPTIONAL,
    ...
}

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

HSDSCH-TDD-Information-Response ::= SEQUENCE {
    hSDSCH-MACdFlow-Specific-InfoList-Response      HSDSCH-MACdFlow-Specific-InfoList-Response,
    hSSCCH-TDD-Specific-InfoList-Response           HSSCCH-TDD-Specific-InfoList-Response OPTIONAL,
    hSSCCH-TDD-Specific-InfoList-Response-LCR      HSSCCH-TDD-Specific-InfoList-Response-LCR OPTIONAL,
    iE-Extensions                                  ProtocolExtensionContainer { { HSDSCH-TDD-Information-Response-ExtIEs } } OPTIONAL,
    ...
}

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

HSSCCH-FDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-FDD-Specific-InfoItem-Response

HSSCCH-FDD-Specific-InfoItem-Response ::= SEQUENCE {
    code-Number      INTEGER (0..127),
    iE-Extensions    ProtocolExtensionContainer { { HSSCCH-FDD-Specific-InfoItem-Response-ExtIEs } } OPTIONAL,
    ...
}

HSSCCH-FDD-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
HSSCCH-TDD-Specific-InfoList-Response ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-TDD-Specific-InfoItem-Response
HSSCCH-TDD-Specific-InfoItem-Response ::= SEQUENCE {
    timeslot                TimeSlot,
    midambleShiftAndBurstType  MidambleShiftAndBurstType,
    tDD-ChannelisationCode    TDD-ChannelisationCode,
    hSSICH-Info              HSSICH-Info,
    iE-Extensions            ProtocolExtensionContainer { { HSSCCH-TDD-Specific-InfoItem-Response-ExtIEs } }    OPTIONAL,
    ...
}
HSSCCH-TDD-Specific-InfoItem-Response-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSSCCH-TDD-Specific-InfoList-Response-LCR ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHCodes)) OF HSSCCH-TDD-Specific-InfoItem-Response-LCR
HSSCCH-TDD-Specific-InfoItem-Response-LCR ::= SEQUENCE {
    timeslotLCR              TimeSlotLCR,
    midambleShiftLCR        MidambleShiftLCR,
    tDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    hSSICH-InfoLCR          HSSICH-InfoLCR,
    iE-Extensions            ProtocolExtensionContainer { { HSSCCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs } }    OPTIONAL,
    ...
}
HSSCCH-TDD-Specific-InfoItem-Response-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSSICH-Info ::= SEQUENCE {
    timeslot                TimeSlot,
    midambleShiftAndBurstType  MidambleShiftAndBurstType,
    tDD-ChannelisationCode    TDD-ChannelisationCode,
    iE-Extensions            ProtocolExtensionContainer { { HSSICH-Info-ExtIEs } }    OPTIONAL,
    ...
}
HSSICH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
HSSICH-InfoLCR ::= SEQUENCE {
    timeslotLCR              TimeSlotLCR,
    midambleShiftLCR        MidambleShiftLCR,
    tDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR,
    iE-Extensions            ProtocolExtensionContainer { { HSSICH-Info-LCR-ExtIEs } }    OPTIONAL,
    ...
}

```

```
HSSICH-Info-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
  ...  
}  
-- I
```

CR-Form-v7

CHANGE REQUEST

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Consequences if not approved:	# The HSDPA functionality will be implemented incorrectly. <u>Impact Analysis:</u> This CR has isolated impact to previous version of this spec (same release). The change is limited to the HSDPA functionality. <u>Compatibility Analysis towards previous release:</u> No impact to previous releases because HSDPA is a REL-5 feature.

Clauses affected:	# 9.2.1.31H; 9.2.2.18D; 9.2.3.5F; 9.2.14A (deleted); 9.3.4									
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Y	N									
X										
	X									
	X									

Other comments: ☹

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>BLER	O		9.2.1.4A		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	–	
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	–	
>Priority Queue Information		<i>0..<maxn oofPrioQueues></i>			–	
>>Priority Queue ID	M		9.2.1.49C		–	
>>Scheduling Priority Indicator	O		9.2.1.53H		–	
>>MAC-d PDU Size Index		<i>0..<maxn oofMACd PDUindexes></i>			–	
>>>SID	M		9.2.1.53I		–	
>>>MAC-d PDU Size	O		9.2.1.38A		–	
Measurement Reporting Cycle	O		ENUMERATED (k1, k2)	For FDD only	–	

***** NEXT CHANGE *****

9.2.2.18D HS-DSCH FDD Information

The HS-DSCH Information provides information for HS-DSCH MAC-d flows to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
HS-DSCH MAC-d Flow Specific Information		1..<maxno ofMACdFlows>		
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>BLER	M		9.2.1.4A	
>Allocation/Retention Priority	M		9.2.1.1A	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.
>Priority Queue Information	M	1..<maxno ofPrioQueues>		
>>Priority Queue ID	M		9.2.1.49C	
>>Scheduling Priority Indicator	M		9.2.1.53H	
>>MAC-d PDU Size Index		1..<maxno ofMACdPDUindexes>		
>>>SID	M		9.2.1.53I	
>>>MAC-d PDU Size	M		9.2.1.38A	
UE Capabilities Information		1		
>Max TrCH Bits Per HS-DSCH TTI	M		ENUMERATED (7300, 14600, 20456, 28800,...)	
>HS-DSCH Multi-Code Capability	M		ENUMERATED (5, 10, 15,...)	
>Min Inter-TTI Interval	M		INTEGER (1..3,...)	
>MAC-hs Reordering Buffer Size	M		INTEGER (1..300,...)	Total combined receiving buffer capability in RLC and MAC-hs in kBytes
HARQ Memory Partitioning		1..<maxno ofHARQprocesses>		
>Process Memory Size	M		INTEGER (1..172800,...)	
Measurement Feedback Offset	M		INTEGER (0..79,...)	

Range Bound	Explanation
maxnoofMACdFlows	Maximum number of HS-DSCH MAC-d flows
maxnoofPrioQueues	Maximum number of Priority Queues
maxnoofHARQprocesses	Maximum number of HARQ processes for one UE
maxnoofMACdPDUindexes	Maximum number of different MAC-d PDU SIDs
maxAllowedinterTTI	Maximum Inter-TTI Interval that should be supported by any UE
maxRecordBuffSize	Maximum MAC-hs re-ordering buffer size
maxProcessMemSize	Maximum HARQ process memory size

***** NEXT CHANGE *****

9.2.3.5F HS-DSCH TDD Information

The HS-DSCH TDD Information provides information for HS-DSCH MAC-d flows to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
HS-DSCH MAC-d Flow Specific Information		1..<maxno ofMACdFlows>			-	
>HS-DSCH MAC-d Flow ID	M		9.2.1.31I		-	
>BLER	M		9.2.1.4A		-	
>Allocation/Retention Priority	M		9.2.1.1A		-	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	-	
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	-	
>Priority Queue Information	M	1..<maxno ofPrioQueues>			-	
>>Priority Queue ID	M		9.2.1.49C		-	
>>Scheduling Priority Indicator	M		9.2.1.53H		-	
>>MAC-d PDU Size Index		1..<maxno ofMACdPDUindexes>			-	
>>>SID	M		9.2.1.53I		-	
>>>MAC-d PDU Size	M		9.2.1.38A		-	
UE Capabilities Information		1			-	-
>HS-DSCH TrCh Bits Per TTI	M		ENUMERATED (7040, 10228, 14080,...)		-	
>HS-DSCH Multi-Code Capability	M		ENUMERATED (8, 12, 16,...)		-	
>MAC-hs Reordering Buffer Size	M		INTEGER (1..300,...)	Total combined receiving buffer capability in RLC and MAC-hs in kBytes	-	
HARQ Memory Partitioning		1..<maxno ofHARQprocesses>			-	
>Process Memory Size	M		INTEGER (1..168960,..)		-	

Range Bound	Explanation
maxnoofMACdFlows	Maximum number of HS-DSCH MAC-d flows
maxnoofPrioQueues	Maximum number of Priority Queues
maxnoofHARQprocesses	Maximum number of HARQ processes for one UE
maxnoofMACdPDUindexes	Maximum number of different MAC-d PDU SIDs
maxNoOfHSDSCHTrChBitsPerTTI	Maximum Number of HS-DSCH Transport Channel Bits per TTI

***** NEXT CHANGE *****

9.2.1.4A — BLER

This Block Error Rate defines the target radio interface Transport Block Error Rate of the transport channel. BLER is used by the Node B to determine the needed SIR targets, for admission control and power management reasons.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
BLER			INTEGER (-63..0)	Range: -6.3 .. 0 Step: 0.1 It is the Log10 of the BLER

***** 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,
    maxNrOfReceptsPerSyncFrame,
    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,

id-MessageStructure,
id-ReportCharacteristicsType-OnModification,
id-Rx-Timing-Deviation-Value-LCR,
id-SFNMeasurementValueInformation,
id-SFNMeasurementThresholdInformation,
id-TUTRANGPSMeasurementValueInformation,
id-TUTRANGPSMeasurementThresholdInformation,
id-TypeOfError,
id-transportlayeraddress,
id-bindingID,
id-Angle-Of-Arrival-Value-LCR,
id-SyncDLCodeIdThreInfoLCR,
id-neighbouringTDDCellMeasurementInformationLCR
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;

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)
-- According to mapping in [22].

Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- According to mapping in [22].

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete
}

Active-Pattern-Sequence-Information ::= SEQUENCE {

```

```

    cMConfigurationChangeCFN                CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGPRC           TGPRC,
        tGCFN           GCFN,
        iE-Extensions   ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AICH-Power ::= INTEGER (-22..5)
-- Offset in dB.

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel          PriorityLevel,
    pre-emptionCapability  Pre-emptionCapability,
    pre-emptionVulnerability  Pre-emptionVulnerability,
    iE-Extensions         ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

AllocationRetentionPriority-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Angle-Of-Arrival-Value-LCR ::= SEQUENCE {
    aOA-LCR                AOA-LCR,
    aOA-LCR-Accuracy-Class  AOA-LCR-Accuracy-Class,
    iE-Extensions          ProtocolExtensionContainer { {Angle-Of-Arrival-Value-LCR-ExtIEs} } OPTIONAL,

```

```

...
}

Angle-Of-Arrival-Value-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AOA-LCR ::= INTEGER (0..719)
-- Angle Of Arrival for 1.28Mcps TDD

AOA-LCR-Accuracy-Class ::= ENUMERATED {a,b,c,d,e,f,g,h,...}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))
-- If the Binding ID includes a UDP port, the UDP port is included in octet 1 and 2.The first octet of
-- the UDP port field is included in the first octet of the Binding ID.

BetaCD ::= INTEGER (0..15)

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}

```



```
}  
-- High priority: Block resource immediately.  
-- Normal priority: Block resource when idle or upon timer expiry.  
-- Low priority: Block resource when idle.
```

```
SCTD-Indicator ::= ENUMERATED {  
    active,  
    inactive  
}
```

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

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

```

HSDSCH-FDD-Information ::= SEQUENCE {
    hsDSCH-MACdFlow-Specific-Info      HSDSCH-MACdFlow-Specific-InfoList,
    ueCapability-Info                   UE-Capability-InformationFDD,
    harqMemoryPartitioningFDD           HARQMemoryPartitioningFDD,
    measFeedbackOffset                  INTEGER (0..79,...),
    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,
    bler                               BLER,
    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,
    measFeedbackRepCycleK                         ENUMERATED { measurement-Feedback-Reporting-Cycle-K1, measurement-Feedback-Reporting-Cycle-K2 }
    OPTIONAL,
    -- only for FDD
    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,
  bler                    BLER                                OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority          OPTIONAL,
  transportBearerRequestIndicator TransportBearerRequestIndicator,
  bindingID                   BindingID                        OPTIONAL,
  transportLayerAddress       TransportLayerAddress              OPTIONAL,
  priorityQueueInfoToModify   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,
  measFeedback-CycleK1                    Measurement-Feedback-Reporting-Cycle,
  measFeedback-CycleK2                    Measurement-Feedback-Reporting-Cycle,
  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,
  hsSCCH-Specific-Information-ResponseTDDLRCR HSSCCH-Specific-InformationRespListTDDLRCR    OPTIONAL,
  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 ::= {
    ...
}

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,
    tDD-ChannelisationCodeLCR                 TDD-ChannelisationCodeLCR,
    hSSICH-InfoLCR                            HSSICH-InfoLCR,
    iE-Extensions                             ProtocolExtensionContainer { { HSSCCH-Specific-InformationRespItemTDDLRCR-ExtIEs } } OPTIONAL,
    ...
}

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

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

HSSICH-Info-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSSICH-InfoLCR ::= SEQUENCE {
    timeslotLCR                              TimeSlotLCR,
    midambleShiftLCR                          MidambleShiftLCR,
    tDD-ChannelisationCodeLCR                 TDD-ChannelisationCodeLCR,
    iE-Extensions                             ProtocolExtensionContainer { { HSSICH-Info-LCR-ExtIEs } } OPTIONAL,
    ...
}

HSSICH-Info-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

HSDSCH-MACdFlow-ID ::= INTEGER (0..maxNrOfMACdFlows-1)

HSDSCH-RNTI ::= INTEGER (0..65535)

HS-PDSCH-FDD-Code-Information ::= SEQUENCE {
    number-of-HS-PDSCH-codes                 INTEGER (0..maxCodeNrComp-1),
    hS-PDSCH-Start-code-number               HS-PDSCH-Start-code-number OPTIONAL,
    -- Only included when number of HS-DSCH codes > 0
    ...
}

HS-PDSCH-Start-code-number ::= INTEGER (0..maxCodeNrComp-1)

```

```
HS-SCCH-ID ::= INTEGER (0..31)
```

```
HS-SCCH-FDD-Code-Information ::= SEQUENCE {  
    hS-SCCH-FDD-Code-List          HS-SCCH-FDD-Code-List          OPTIONAL,  
    ...  
}
```

```
HS-SCCH-FDD-Code-List ::= SEQUENCE (SIZE (1..maxNrOfHSSCCHs)) OF HS-SCCH-FDD-Code-Information-Item
```

```
HS-SCCH-FDD-Code-Information-Item ::= INTEGER (0..maxCodeNrComp-1)
```

```
-- =====  
-- I
```