TSG-RAN Meeting #14
Kyoto, Japan, 11 - 14 December 2001

RP-010765

Title: **Agreed CRs (Release '99 and Rel-4 category A) to TS 25.331 (3)**
Source: **TSG-RAN WG2**
Agenda item: **8.2.3**

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Version	Versio
R2-012697	agreed	25.331	1143	1	R99	Handling of the number of FBI bits sent in Uplink DPCH info	F	3.8.0	3.9.0
R2-012698	agreed	25.331	1144		Rel-4	Handling of the number of FBI bits sent in Uplink DPCH info	A	4.2.1	4.3.0
R2-012527	agreed	25.331	1145		R99	Bit string order when using PER	F	3.8.0	3.9.0
R2-012699	agreed	25.331	1146		Rel-4	Bit string order when using PER	A	4.2.1	4.3.0
R2-012528	agreed	25.331	1147		R99	Clarification on DRX cycle length in connected mode	F	3.8.0	3.9.0
R2-012701	agreed	25.331	1148		Rel-4	Clarification on DRX cycle length in connected mode	A	4.2.1	4.3.0
R2-012703	agreed	25.331	1151	1	R99	Correction to error condition on downlink information for each radio link	F	3.8.0	3.9.0
R2-012748	agreed	25.331	1152		Rel-4	Correction to error condition on downlink information for each radio link	A	4.2.1	4.3.0
R2-012706	agreed	25.331	1153	1	R99	Correction of inconsistencies between tabular and ASN.1	F	3.8.0	3.9.0
R2-012707	agreed	25.331	1154		Rel-4	Correction of inconsistencies between tabular and ASN.1	A	4.2.1	4.3.0
R2-012708	agreed	25.331	1155	1	R99	Measurement related corrections	F	3.8.0	3.9.0
R2-012710	agreed	25.331	1156		Rel-4	Measurement related corrections	A	4.2.1	4.3.0
R2-012533	agreed	25.331	1157		R99	Inconsistency between hard-coded preconfigurations parameters and procedure text	F	3.8.0	3.9.0
R2-012711	agreed	25.331	1158		Rel-4	Inconsistency between hard-coded preconfigurations parameters and procedure text	A	4.2.1	4.3.0
R2-012548	agreed	25.331	1165		R99	PLMN search in CELL_PCH/URA_PCH states with 80ms DRX cycle	F	3.8.0	3.9.0
R2-012712	agreed	25.331	1166		Rel-4	PLMN search in CELL_PCH/URA_PCH states with 80ms DRX cycle	A	4.2.1	4.3.0
R2-012549	agreed	25.331	1167		R99	Correction to CFN calculation for FDD	F	3.8.0	3.9.0
R2-012713	agreed	25.331	1168		Rel-4	Correction to CFN calculation for FDD	A	4.2.1	4.3.0
R2-012550	agreed	25.331	1169		R99	Correction to radio bearer control	F	3.8.0	3.9.0
R2-012714	agreed	25.331	1170		Rel-4	Correction to radio bearer control	A	4.2.1	4.3.0

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, 26- 30 November, 2001

R2-012697

CR-Form-v4

CHANGE REQUEST

⌘ **25.331** **CR** **1143** ⌘ ev **r1** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Handling of the number of FBI bits sent in Uplink DPCH info
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	November 26, 2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	The IE “Number of FBI bits” is currently defined as CH and the description states that Number of FBI bits is needed if SSDT or FB Mode Transmit Signalling is supported. Actually, UTRAN may not assign FBI bits to the UE even if the UE supports SSDT or FB Mode Transmit Signalling.
Summary of change:	⌘	CH is replaced by OP, and the procedure description is clarified, i.e., when the IE “Number of FBI bits” is not included, 0 FBI bits shall be used in the Uplink DPCH. **Isolated Impact Change Analysis.** This change affetcs the SSDT and FB Mode Transmit Signalling. It would not affect implementations behaving like indicated in the CR, it would affect implementations supporting the corrected functionality otherwise.
Consequences if not approved:	⌘	Due to the current use of the IE “Number of FBI bits”, it may seem that if the UE supports SSDT or FB Mode Transmit Signalling UTRAN is forced to support it as well in order to provide service to that UE. Therefore SSDT would be a mandatory feature in UTRAN.

Clauses affected:	⌘	8.6.6.6, 10.3.6.88		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v4.2.1, CR 1144
Other comments:	⌘	Changes to the previous revision are highlighted.		

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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.

[…]

8.6.6.6 Uplink DPCH info

If the IE "Uplink DPCH info" is included, the UE shall:

- release any active uplink physical channels and activate the given physical channels;
- if the IE "Number of FBI bits" is not included, use 0 FBI bits in the Uplink DPCH.

[…]

10.3.6.88 Uplink DPCH info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Uplink DPCH power control info	OP		Uplink DPCH power control info 10.3.6.91	
CHOICE *mode*	MP			
>FDD				
>>Scrambling code type	MP		Enumerated(short, long)	
>>Scrambling code number	MP		Integer(0..16 777215)	
>>Number of DPDCH	MD		Integer(2..maxDPDCH)	Default value is 1. Number of DPDCH is 1 in HANDOVER TO UTRAN COMMAND
>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256)	Minimum allowed SF of the channelisation code for data part
>>TFCI existence	MD		Boolean	TRUE means existence. Default value is "TRUE"
>>Number of FBI bits	~~CH~~OP		Integer (1, 2)	In bits. ~~Number of FBI bits is needed if SSDT or FB Mode Transmit Signalling is supported.~~
>>Puncturing Limit	MP		Real(0.40 ..1 by step of 0.04)	
>TDD				
>>Uplink Timing Advance Control	OP		Uplink Timing Advance Control 10.3.6.96	
>>UL CCTrCH List	MP	1 to <maxCCTrCH>		
>>>TFCS ID	MD		Integer(1..8)	Default value is 1.
>>>UL target SIR	MP		Real (-11 .. 20 by step of 0.5dB)	In dB
>>>Time info	MP		Time info 10.3.6.83	
>>>Common timeslot info	MD		Common timeslot info 10.3.6.10	Default is the current Common timeslot info
>>>Uplink DPCH timeslots and codes	MD		Uplink Timeslots and Codes 10.3.6.94	Default is to use the old timeslots and codes.

~~Condition~~	~~Explanation~~
~~*Single*~~	~~This IE is mandatory present if the IE "Number of DPDCH" is "1" and not needed otherwise.~~

[…]

3GPP TSG-RAN WG2 Meeting #25 ***R2-012698***
Makuhari, Japan, 26- 30 November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331** **CR** **1144** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Handling of the number of FBI bits sent in Uplink DPCH info
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	November 26, 2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	The IE “Number of FBI bits” is currently defined as CH and the description states that Number of FBI bits is needed if SSDT or FB Mode Transmit Signalling is supported. Actually, UTRAN may not assign FBI bits to the UE even if the UE supports SSDT or FB Mode Transmit Signalling.
Summary of change:	⌘	CH is replaced by OP, and the procedure description is clarified, i.e., when the IE “Number of FBI bits” is not included, 0 FBI bits shall be used in the Uplink DPCH. **Isolated Impact Change Analysis.** This change affetcs the SSDT and FB Mode Transmit Signalling. It would not affect implementations behaving like indicated in the CR, it would affect implementations supporting the corrected functionality otherwise.
Consequences if not approved:	⌘	Due to the current use of the IE “Number of FBI bits”, it may seem that if the UE supports SSDT or FB Mode Transmit Signalling UTRAN is forced to support it as well in order to provide service to that UE. Therefore SSDT would be a mandatory feature in UTRAN.

Clauses affected:	⌘	8.6.6.6, 10.3.6.88		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v3.8.0, CR 1143r1
Other comments:	⌘			

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[…]

8.6.6.6 Uplink DPCH info

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- if the IE "Number of FBI bits" is not included, use 0 FBI bits in the Uplink DPCH.

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10.3.6.88 Uplink DPCH info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
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>>Scrambling code number	MP		Integer(0..16 777215)	
>>Number of DPDCH	MD		Integer(2..maxDPDCH)	Default value is 1. Number of DPDCH is 1 in HANDOVER TO UTRAN COMMAND
>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256)	Minimum allowed SF of the channelisation code for data part
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>>Puncturing Limit	MP		Real(0.40 ..1 by step of 0.04)	
>TDD				
>>Uplink Timing Advance Control	OP		Uplink Timing Advance Control 10.3.6.96	
>>UL CCTrCH List	MP	1 to <maxCCTrCH>		
>>>TFCS ID	MD		Integer(1..8)	Default value is 1.
>>>UL target SIR	MP		Real (-11 .. 20 by step of 0.5dB)	In dB
>>>Time info	MP		Time info 10.3.6.83	
>>>Common timeslot info	MD		Common timeslot info 10.3.6.10	Default is the current Common timeslot info
>>>Uplink DPCH timeslots and codes	MD		Uplink Timeslots and Codes 10.3.6.94	Default is to use the old timeslots and codes.

~~Condition~~	~~Explanation~~
~~*Single*~~	~~This IE is mandatory present if the IE "Number of DPDCH" is "1" and not needed otherwise.~~

[…]

3GPP TSG-RAN WG 2, Meeting #25 ***Tdoc R2-012527***
Makuhari, Japan, 26th – 30th November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1145** ⌘ ev **-** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Bit string order when using PER
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	21-11-2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘ The changes included in this CR are proposed for the following reasons:
- The bit order of PER encoded bit string is currently not specified

Summary of change: ⌘ The original revision of this CR introduces the following changes
- Bit order PER encoded bit string: Clarification is added concerning the bit order of a PER encoded bit string. The clarification is in accordance with proposals ITU-T that will be reflected in the 2002 version of X.691

Isolated impact
- The CR includes clarifications that have no impact for implementations that have assumed the (likely) behaviour as proposed in this CR
- This CR may affect several different functions since it impacts all messages that include bit strings

Consequences if not approved: ⌘ The bit order of a PER encoded bit string is not specified, which may result in interoperability problems

Clauses affected: ⌘ 12, 14.12.0

Other specs Affected: ⌘
- ☐ Other core specifications ⌘ 25.331 v4.2.1, CR 1146
- ☐ Test specifications
- ☐ O&M Specifications

Other comments: ⌘ A similar clarification is proposed to be included in R3 specifications

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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.

12 Message transfer syntax

Transfer syntax for RRC PDUs is derived from their ASN.1 definitions by use of Packed Encoding Rules, unaligned as specified in X.691 [49], and with adapted final padding. If special encoding is used, it is indicated in the ECN module defined for each ASN.1 module. The use of special encoding is defined in [14].

The following encoding rules apply in addition to what has been specified in X.691 [49]:

- When a bitstring value is placed in a bit-field as specified in 15.6 to 15.11 in [11], the leading bit of the bitstring value shall be placed in the leading bit of the bit-field, and the trailing bit of the bitstring value shall be placed in the trailing bit of the bit-field

NOTE: The terms "leading bit" and "trailing bit" are defined in ITU-T Rec. X.680 | ISO/IEC 8824-1. When using the "bstring" notation, the leading bit of the bitstring value is on the left, and the trailing bit of the bitstring value is on the right

14.12 Provision and reception of RRC information between network nodes

14.12.0 General

In certain cases, e.g., when performing handover to UTRAN or when performing SRNC relocation, RRC information may need to be transferred between other RATs and UTRAN or between UTRAN nodes within UTRAN. In the following, the details of the RRC information to be transferred are specified per direction.

In the following the RRC information exchanged between network nodes is sometimes referred to as RRC information containers. This term is used for information which handling resembles that of RRC messages rather than of RRC information elements.

In future versions of this specification, it is possible to extend the RRC information transferred between network nodes. For RRC information containers the same extension mechanism applies as defined for RRC messages, which is specified in subclause 10.1. For RRC information containers specified in the following, both critical and non-critical extensions may be added.

Like for the Uu interface, the transfer syntax for RRC transferred between UTRAN network nodes and/or between UTRAN and other RATs is derived from their ASN.1 definitions by use of Packed Encoding Rules, unaligned (X.691). It should be noted that the encoder adds final padding to achieve octet alignment. The resulting octet string is, carried in a container, transferred between the network nodes.

The following encoding rules apply in addition to what has been specified in X.691 [49]:

- When a bitstring value is placed in a bit-field as specified in 15.6 to 15.11 in [11], the leading bit of the bitstring value shall be placed in the leading bit of the bit-field, and the trailing bit of the bitstring value shall be placed in the trailing bit of the bit-field

NOTE: The terms "leading bit" and "trailing bit" are defined in ITU-T Rec. X.680 | ISO/IEC 8824-1. When using the "bstring" notation, the leading bit of the bitstring value is on the left, and the trailing bit of the bitstring value is on the right

3GPP TSG-RAN WG 2, Meeting #25 ***Tdoc R2-012699***
Makuhari, Japan, 26th – 30th November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1146** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Bit string order when using PER
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	29-11-2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘ The changes included in this CR are proposed for the following reasons:
- The bit order of PER encoded bit string is currently not specified

Summary of change: ⌘ The original revision of this CR introduces the following changes
- Bit order PER encoded bit string: Clarification is added concerning the bit order of a PER encoded bit string. The clarification is in accordance with proposals ITU-T that will be reflected in the 2002 version of X.691

Isolated impact
- The CR includes clarifications that have no impact for implementations that have assumed the (likely) behaviour as proposed in this CR
- This CR may affect several different functions since it impacts all messages that include bit strings

Consequences if not approved: ⌘ The bit order of a PER encoded bit string is not specified, which may result in interoperability problems

Clauses affected: ⌘ 12, 14.12.0

Other specs Affected: ⌘
- ☐ Other core specifications ⌘ 25.331 v3.8.0, CR 1145
- ☐ Test specifications
- ☐ O&M Specifications

Other comments: ⌘ A similar clarification is proposed to be included in RAN WG3 specifications

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12 Message transfer syntax

Transfer syntax for RRC PDUs is derived from their ASN.1 definitions by use of Packed Encoding Rules, unaligned as specified in X.691 [49], and with adapted final padding. If special encoding is used, it is indicated in the ECN module defined for each ASN.1 module. The use of special encoding is defined in [14].

The following encoding rules apply in addition to what has been specified in X.691 [49]:

- When a bitstring value is placed in a bit-field as specified in 15.6 to 15.11 in [11], the leading bit of the bitstring value shall be placed in the leading bit of the bit-field, and the trailing bit of the bitstring value shall be placed in the trailing bit of the bit-field

NOTE - The terms "leading bit" and "trailing bit" are defined in ITU-T Rec. X.680 | ISO/IEC 8824-1. When using the "bstring" notation, the leading bit of the bitstring value is on the left, and the trailing bit of the bitstring value is on the right

14.12 Provision and reception of RRC information between network nodes

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14.12.0 General

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In the following the RRC information exchanged between network nodes is sometimes referred to as RRC information containers. This term is used for information which handling resembles that of RRC messages rather than of RRC information elements.

In future versions of this specification, it is possible to extend the RRC information transferred between network nodes. For RRC information containers the same extension mechanism applies as defined for RRC messages, which is specified in subclause 10.1. For RRC information containers specified in the following, both critical and non-critical extensions may be added.

Like for the Uu interface, the transfer syntax for RRC transferred between UTRAN network nodes and/or between UTRAN and other RATs is derived from their ASN.1 definitions by use of Packed Encoding Rules, unaligned (X.691). It should be noted that the encoder adds final padding to achieve octet alignment. The resulting octet string is, carried in a container, transferred between the network nodes.

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3GPP TSG-RAN WG2 Meeting #25 **R2-012528**
Makuhari, Japan, 26- 30 November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1147** ⌘ ev **-** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Clarification on DRX cycle length in connected mode
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	November 26, 2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
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Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘ The use of DRX cycle length is specified both in TS 25.304 and in TS 25.331. This leads to inconsistencies and it is a potential source of implementation errors.
As example, the current text in section 8.6.3.2 of TS 25.331 assumes that there is always at least one signalling connection when the UE is in connected mode. This may not always be the case. The text in 25.304 is correct with this respect. In fact, if the UE is in connected mode and is attached to both core networks without having a signalling connection (e.g. the last signalling connection was just released, but UTRAN has not yet released the RRC connection due to some Position Location activity) the UE should consider the shorter of 3 parameters: the UTRAN DRX cycle length and both CN domain specific DRX cycle lengths. This is correctly allowed in the description in TS 25.304, but not in TS 25.331.

Summary of change: ⌘ A reference to TS 25.304 replaces the definition of DRX cycle length to use in connected mode.

Isolated Impact Change Analysis.

This change clarifies the DRX cycle length to use in connected mode.

It would not affect implementations behaving like indicated in the CR, it would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘ Inconsistent specifications.

Clauses affected: ⌘ 8.6.3.2

Other specs affected: ⌘
X Other core specifications ⌘ CR 091 to TS 25.304
25.331 v4.2.1, CR 1148
☐ Test specifications
☐ O&M Specifications

Other comments:	⌘ This subject was presented in R2-012348 at RAN WG2 #24

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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.

[…]

8.6.3.2 UTRAN DRX Cycle length coefficient

If the IE "UTRAN DRX cycle length coefficient" is present, the UE shall use it to calculate the UTRAN DRX cycle length, according to the following:

- set k to the value of the IE "UTRAN DRX cycle length coefficient";
- store the result of MAX(2^k,PBP), where PBP is the Paging Block Periodicity, as the DRX cycle length.

The UE shall determine its connected mode paging occasions and PICH monitoring occasions in the same way as for idle mode, according to [4].

The DRX cycle length to use in connected mode is defined in [4].~~the shorter of the following two parameters:~~

- ~~UTRAN DRX cycle length;~~
- ~~CN domain specific DRX cycle length stored for any CN domain, when using Discontinuous Reception (DRX) in CELL_PCH and URA_PCH state.~~

~~The CN domain specific DRX cycle length stored for any CN domain is only used in Cell_PCH state and URA_PCH state if the UE is registered to that CN domain and no signalling connection stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS exists to that CN domain.~~

[…]

3GPP TSG-RAN WG2 Meeting #25 **R2-012701**
Makuhari, Japan, 26- 30 November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1147** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Clarification on DRX cycle length in connected mode
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	November 26, 2001
Category:	⌘	**F**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘ The use of DRX cycle length is specified both in TS 25.304 and in TS 25.331. This leads to inconsistencies and it is a potential source of implementation errors.
As example, the current text in section 8.6.3.2 of TS 25.331 assumes that there is always at least one signalling connection when the UE is in connected mode. This may not always be the case. The text in 25.304 is correct with this respect. In fact, if the UE is in connected mode and is attached to both core networks without having a signalling connection (e.g. the last signalling connection was just released, but UTRAN has not yet released the RRC connection due to some Position Location activity) the UE should consider the shorter of 3 parameters: the UTRAN DRX cycle length and both CN domain specific DRX cycle lengths. This is correctly allowed in the description in TS 25.304, but not in TS 25.331.

Summary of change: ⌘ A reference to TS 25.304 replaces the definition of DRX cycle length to use in connected mode.

Isolated Impact Change Analysis.

This change clarifies the DRX cycle length to use in connected mode.

It would not affect implementations behaving like indicated in the CR, it would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘ Inconsistent specifications.

Clauses affected: ⌘ 8.6.3.2

Other specs affected: ⌘
☒ Other core specifications ⌘ CR 091 to TS 25.304
25.331 v3.8.0, CR 1147
☐ Test specifications
☐ O&M Specifications

Other comments:	⌘ This subject was presented in R2-012348 at RAN WG2 #24

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. 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.

[…]

8.6.3.2 UTRAN DRX Cycle length coefficient

If the IE "UTRAN DRX cycle length coefficient" is present, the UE shall use it to calculate the UTRAN DRX cycle length, according to the following:

- set k to the value of the IE "UTRAN DRX cycle length coefficient";
- store the result of MAX(2^{k},PBP), where PBP is the Paging Block Periodicity, as the DRX cycle length.

The UE shall determine its connected mode paging occasions and PICH monitoring occasions in the same way as for idle mode, according to [4].

The DRX cycle length to use in connected mode is defined in [4].~~the shorter of the following two parameters:~~

- ~~UTRAN DRX cycle length;~~
- ~~CN domain specific DRX cycle length stored for any CN domain, when using Discontinuous Reception (DRX) in CELL_PCH and URA_PCH state.~~

~~The CN domain specific DRX cycle length stored for any CN domain is only used in Cell_PCH state and URA_PCH state if the UE is registered to that CN domain and no signalling connection stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS exists to that CN domain.~~

[…]

3GPP TSG-RAN WG2 Meeting #25 **R2-012703**
Makuhari, Japan, 26- 30 November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1151** ⌘ ev **r1** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction to error condition on downlink information for each radio link
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	November 26, 2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘

In section 8.6.3.3 it is stated:
"The UE shall enter the state indicated by the IE "RRC State Indicator" even if the received message includes other IEs relevant only for states other than indicated by the IE "RRC State Indicator". E.g. if the RRC state indicator is set to CELL_FACH while other IEs provide information about a configuration including dedicated channels, the UE shall enter CELL_FACH state. If, however, the UE has no information about the configuration corresponding to the state indicated by the IE "RRC State Indicator", it shall consider the requested configuration as invalid"
However, in section 8.6.6.4 a special provision is made for the CELL UPDATE CONFIRM message. In this case the IE "Downlink information for each radio link" is not ignored, as it should according to 8.6.3.3, but the variable INVALID_CONFIGURATION is set to TRUE. This will lead to a new cell update procedure.
The condition in which the UE should not ignore the irrelevant IEs (the UE has no information about the configuration corresponding to the state indicated by the IE "RRC State Indicator") does not apply to the case of the CELL UPDATE CONFIRM message that sends the UE to CELL_FACH, CELL_PCH or URA_PCH. In fact, in these case, the needed information would be deduced by the SIBs.

Summary of change: ⌘

The CELL UPDATE CONFIRM message shall be treated as any other message if irrelevant IEs are included, i.e., the irrelevant IEs shall be ignored.
An editorial correction is roposed to section 8.6.3.3.

Isolated Impact Change Analysis.

This change clarifies the case of a CELL UPDATE CONFIRM message containing irrelevant IEs.

It would not affect implementations behaving like indicated in the CR, it would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved:	⌘	The UE would treat the CELL UPDATE CONFIRM message differently than all the other messages with respect to the presence of irrelevant IEs. This would lead to unnecessary UE complexity. In addition, the UE would start unnecessary cell update procedures, so wasting RACH/FACH resources.

Clauses affected:	⌘	8.6.3.3, 8.6.6.4		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v4.2.1, CR 1152
Other comments:	⌘			

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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.

[…]

8.6.3.3 Generic state transition rules depending on received information elements

The IE "RRC State Indicator" indicates the state the UE shall enter. The UE shall enter the state indicated by the IE "RRC State Indicator" even if the received message includes other IEs relevant only for states other than indicated by the IE "RRC State Indicator". E.g. if the RRC state indicator is set to CELL_FACH while other IEs provide information about a configuration including dedicated channels, the UE shall enter CELL_FACH state. If however the UE has no information about the configuration corresponding to the state indicated by the IE "RRC State Indicator", it shall consider the requested configuration as invalid.

The UE shall, if the IE "RRC State Indicator" in the received message has the value:

- "CELL_FACH":
  - enter CELL_FACH state as dictated by the procedure governing the message received;
- "CELL_DCH":
  - if neither DPCH is assigned in the message nor is the UE ~~is~~ in CELL_DCH:
    - set the variable INVALID_CONFIGURATION to TRUE;
  - else:
    - enter CELL_DCH state as dictated by the procedure governing the message received;
- "CELL_PCH":
  - if the received message is RRC CONNECTION SETUP and IE "RRC State Indicator" is set to CELL_PCH:
    - set the variable INVALID_CONFIGURATION to TRUE;
  - else:
    - enter CELL_PCH state as dictated by the procedure governing the message received;
- "URA_PCH":
  - if the received message is RRC CONNECTION SETUP and IE "RRC State Indicator" is set to URA_PCH:
    - set the variable INVALID_CONFIGURATION to TRUE;
  - else:
    - enter URA_PCH state as dictated by the procedure governing the message received.

[…]

8.6.6.4 Downlink information for each radio link

If the IE "Downlink information for each radio link" is included in a received message, the UE shall:

- if the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message:
  - if the IE "SCCPCH Information for FACH" is included; and
  - if the UE is in FDD mode and is not capable of simultaneous reception of DPCH and Secondary CCPCH:
    - set the variable UNSUPPORTED_CONFIGURATION to TRUE;
    - if the UE is in FDD mode and is capable of simultaneous reception of DPCH and SCCPCH:
      - start to receive the indicated Secondary CCPCH;
    - if the UE is in TDD mode and shared transport channels are assigned to the UE:

- start to receive the indicated Secondary CCPCH;

- if the UE is in TDD mode and no shared transport channels are assigned to the UE:

  - set the variable UNSUPPORTED_CONFIGURATION to TRUE;

- act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link;

- if the UE would enter either the CELL_FACH, CELL_PCH or URA_PCH state according to subclause 8.6.3.3 applied on the received message:

  - if the received message is CELL UPDATE CONFIRM:

    ~~- set the variable INVALID_CONFIGURATION to TRUE;~~

    - ignore the IE "Downlink information for each radio link";

  - if the received message is any other message than CELL UPDATE CONFIRM; and

  - if IEs other than the IE "Primary CPICH info" (for FDD) or the IE "Primary CCPCH info" (for TDD) are included in the IE "Downlink information for each radio link":

    - ignore these IEs;

  - act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

[…]

3GPP TSG-RAN WG2 Meeting #25 **R2-012748**
Makuhari, Japan, 26- 30 November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1152** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Correction to error condition on downlink information for each radio link
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	November 26, 2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘

In section 8.6.3.3 it is stated:
"The UE shall enter the state indicated by the IE "RRC State Indicator" even if the received message includes other IEs relevant only for states other than indicated by the IE "RRC State Indicator". E.g. if the RRC state indicator is set to CELL_FACH while other IEs provide information about a configuration including dedicated channels, the UE shall enter CELL_FACH state. If, however, the UE has no information about the configuration corresponding to the state indicated by the IE "RRC State Indicator", it shall consider the requested configuration as invalid"
However, in section 8.6.6.4 a special provision is made for the CELL UPDATE CONFIRM message. In this case the IE "Downlink information for each radio link" is not ignored, as it should according to 8.6.3.3, but the variable INVALID_CONFIGURATION is set to TRUE. This will lead to a new cell update procedure.
The condition in which the UE should not ignore the irrelevant IEs (the UE has no information about the configuration corresponding to the state indicated by the IE "RRC State Indicator") does not apply to the case of the CELL UPDATE CONFIRM message that sends the UE to CELL_FACH, CELL_PCH or URA_PCH. In fact, in these case, the needed information would be deduced by the SIBs.

Summary of change: ⌘

The CELL UPDATE CONFIRM message shall be treated as any other message if irrelevant IEs are included, i.e., the irrelevant IEs shall be ignored.
An editorial correction is roposed to section 8.6.3.3.

Isolated Impact Change Analysis.

This change clarifies the case of a CELL UPDATE CONFIRM message containing irrelevant IEs.

It would not affect implementations behaving like indicated in the CR, it would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved:	⌘	The UE would treat the CELL UPDATE CONFIRM message differently than all the other messages with respect to the presence of irrelevant IEs. This would lead to unnecessary UE complexity. In addition, the UE would start unnecessary cell update procedures, so wasting RACH/FACH resources.

Clauses affected:	⌘	8.6.3.3, 8.6.6.4		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v3.8.0, CR 1151r1
Other comments:	⌘			

How to create CRs using this form:
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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.

[…]

8.6.3.3 Generic state transition rules depending on received information elements

The IE "RRC State Indicator" indicates the state the UE shall enter. The UE shall enter the state indicated by the IE "RRC State Indicator" even if the received message includes other IEs relevant only for states other than indicated by the IE "RRC State Indicator". E.g. if the RRC state indicator is set to CELL_FACH while other IEs provide information about a configuration including dedicated channels, the UE shall enter CELL_FACH state. If however the UE has no information about the configuration corresponding to the state indicated by the IE "RRC State Indicator", it shall consider the requested configuration as invalid.

The UE shall, if the IE "RRC State Indicator" in the received message has the value:

- "CELL_FACH":
  - enter CELL_FACH state as dictated by the procedure governing the message received;
- "CELL_DCH":
  - if neither DPCH is assigned in the message nor is the UE ~~is~~ in CELL_DCH:
    - set the variable INVALID_CONFIGURATION to TRUE;
  - else:
    - enter CELL_DCH state as dictated by the procedure governing the message received;
- "CELL_PCH":
  - if the received message is RRC CONNECTION SETUP and IE "RRC State Indicator" is set to CELL_PCH:
    - set the variable INVALID_CONFIGURATION to TRUE;
  - else:
    - enter CELL_PCH state as dictated by the procedure governing the message received;
- "URA_PCH":
  - if the received message is RRC CONNECTION SETUP and IE "RRC State Indicator" is set to URA_PCH:
    - set the variable INVALID_CONFIGURATION to TRUE;
  - else:
    - enter URA_PCH state as dictated by the procedure governing the message received.

[…]

8.6.6.4 Downlink information for each radio link

If the IE "Downlink information for each radio link" is included in a received message, the UE shall:

- if the UE would enter CELL_DCH state according to subclause 8.6.3.3 applied on the received message:
  - if the IE "SCCPCH Information for FACH" is included; and
  - if the UE is in FDD mode and is not capable of simultaneous reception of DPCH and Secondary CCPCH:
    - set the variable UNSUPPORTED_CONFIGURATION to TRUE;
    - if the UE is in FDD mode and is capable of simultaneous reception of DPCH and SCCPCH:
      - start to receive the indicated Secondary CCPCH;
    - if the UE is in TDD mode and shared transport channels are assigned to the UE:

- start to receive the indicated Secondary CCPCH;

- if the UE is in TDD mode and no shared transport channels are assigned to the UE:

  - set the variable UNSUPPORTED_CONFIGURATION to TRUE;

- act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link;

- if the UE would enter either the CELL_FACH, CELL_PCH or URA_PCH state according to subclause 8.6.3.3 applied on the received message:

  - if the received message is CELL UPDATE CONFIRM:

    ~~- set the variable INVALID_CONFIGURATION to TRUE;~~

    - ignore the IE "Downlink information for each radio link";

  - if the received message is any other message than CELL UPDATE CONFIRM; and

  - if IEs other than the IE "Primary CPICH info" (for FDD) or the IE "Primary CCPCH info" (for TDD) are included in the IE "Downlink information for each radio link":

    - ignore these IEs;

  - act on the other IEs contained in the IE "Downlink information for each radio link" as specified in subclause 8.6 applied on this radio link.

[…]

3GPP TSG-RAN WG 2, Meeting #25 ***Tdoc R2-012706***
Makuhari, Japan, 26th – 30th November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1153** ⌘ ev **r1** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction of inconsistencies between tabular and ASN.1
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	29-11-2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘ The changes proposed in this CR concern the following

- Correction of inconsistencies between the tabular and ASN.1 message specifications

Summary of change: ⌘ The original revision of this CR introduces the following changes

- Measurement capability: the tabular description is aligned with the ASN.1, meaning that if GSM is supported, the UE shall include the measurement abilities for all bands (including not supported bands)
- Inter-RAT cell info list: To specify that the UE shall consider cells with the IE "New inter-RAT cells" as absent if the IE RAT choice is set to the value "none"
- Inter-RAT cell info list: The need for IE "System specific measurement info" used in case choice "Radio Access Technology" is set to "IS-2000" was missing and proposed to be MP which is in line with ASN.1

Isolated impact

- This CR only affects the measurement of inter RAT neighbouring cells. The CR has isolated impact; only the function to be corrected is affected.
- The CR includes clarifications that have no impact for implementations that have assumed the behaviour as proposed in this CR

Consequences if not approved: ⌘ UTRAN may not be able to remove inter RAT cells from the UE's measurement configuration

Clauses affected: ⌘ 8.6.7.3, 10.3.3.21, 10.3.7.23, 11.3

Other specs ⌘ ☐ Other core specifications ⌘ 25.331 v4.2.1, CR 1154

affected:	☐ Test specifications ☐ O&M Specifications	
Other comments: ⌘		

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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.

8.6.7.3 Intra-frequency/Inter-frequency/Inter-RAT cell info list

If the IE "Intra-frequency cell info list" is received in System Information Block Type 11, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Intra-frequency cells" is received:
  - ignore the IE;
- if the IE "Remove all intra-frequency cells" is received:
  - ignore the IE;
- if the IE "New Intra-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Intra-frequency cell id" is received:
      - store received cell information at this position in the Intra-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Intra-frequency cell id" is not received:
      - store the received cell information at the first vacant position in ascending order in the Intra-frequency cell info list in the variable CELL_INFO_LIST; and
      - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE.

If the IE "Intra-frequency cell info list" is received in System Information Block Type 12, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Intra-frequency cells" is received:
  - at the position indicated by the IE "Intra-frequency cell id" clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all intra-frequency cells" is received:
  - for each position referring to an intra frequency cell in the variable CELL_INFO_LIST:
    - mark the position "vacant";
- if the IE "New Intra-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Intra-frequency cell id" is received:

            - store received cell information at this position in the Intra-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

            - mark the position "occupied";

        - if the IE "Intra-frequency cell id" is not received:

            - store the received cell information at the first vacant position in ascending order in the Intra-frequency cell info list in the variable CELL_INFO_LIST; and

            - mark the position as "occupied";

- if the IE "Cells for measurement" is received:

    - ignore the IE.

If the IE "Intra-frequency cell info list" is received in a MEASUREMENT CONTROL message, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Intra-frequency cells" is received, at the position indicated by the IE "Intra-frequency cell id":

    - clear the cell information stored in the variable CELL_INFO_LIST; and

    - mark the position "vacant";

- if the IE "Remove all intra-frequency cells" is received:

    - for each position referring to an intra frequency cell in the variable CELL_INFO_LIST:

        - mark the position "vacant";

- if the IE "New Intra-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:

    - update the variable CELL_INFO_LIST as follows:

        - if the IE "Intra-frequency cell id" is received:

            - store received cell information at this position in the Intra-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

            - mark the position "occupied";

        - if the IE "Intra-frequency cell id" is not received:

            - store the received cell information at the first vacant position in ascending order in the Intra-frequency cell info list in the variable CELL_INFO_LIST; and

            - mark the position as "occupied";

- if the IE "Cells for measurement" is received, in the measurement configured by this message only:

    - consider Intra-frequency cells whose cell information is stored at the position indicated by the IE "Intra-frequency cell id" in the variable CELL_INFO_LIST;

- if the IE "Cells for measurement" is not received, in the measurement configured by this message:

    - consider all Intra-frequency cells whose cell information is stored in CELL_INFO_LIST.

If the IE "Inter-frequency cell info list" is received in System Information Block Type 11 update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-frequency cells" is received:
  - ignore the IE;
- if the IE "Remove all inter-frequency cells" is received:
  - ignore the IE;
- if the IE "New Inter-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-frequency cell id" is received:
      - store received cell information at this position in the Inter-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Inter-frequency cell id" is not received:
      - store the received cell information at the first vacant position in ascending order in the Inter-frequency cell info list in the variable CELL_INFO_LIST; and
      - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE.

If the IE "Inter-frequency cell info list" is received in System Information Block Type 12, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-frequency cells" is received, at the position indicated by the IE "Inter-frequency cell id":
  - clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all inter-frequency cells" is received:
  - for each position referring to an inter-frequency cell in the variable CELL_INFO_LIST:
    - clear the cell information stored in the variable CELL_INFO_LIST; and
    - mark the position "vacant";
- if the IE "New Inter-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-frequency cell id" is received:

        - store received cell information at this position in the Inter-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

        - mark the position "occupied";

    - if the IE "Inter-frequency cell id" is not received:

        - store the received cell information at the first vacant position in ascending order in the Inter-frequency cell info list in the variable CELL_INFO_LIST; and

        - mark the position as "occupied";

- if the IE "Cells for measurement" is received:

    - ignore the IE.

If the IE "Inter-frequency cell info list" is received in a MEASUREMENT CONTROL message, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order:

- if the IE "Removed Inter-frequency cells" is received, at the position indicated by the IE "Inter-frequency cell id":

    - clear the cell information stored in the variable CELL_INFO_LIST; and

    - mark the position "vacant";

- if the IE "Remove all inter-frequency cells" is received:

    - for each position referring to an inter-frequency cell in the variable CELL_INFO_LIST:

        - clear the cell information stored in the variable CELL_INFO_LIST; and

        - mark the position "vacant";

- if the IE "New Inter-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:

    - update the variable CELL_INFO_LIST as follows:

        - if the IE "Inter-frequency cell id" is received:

            - store received cell information at this position in the Inter-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

            - mark the position "occupied";

        - if the IE "Inter-frequency cell id" is not received:

            - store the received cell information at the first vacant position in ascending order in the Inter-frequency cell info list in the variable CELL_INFO_LIST; and

            - mark the position as "occupied";

- if the IE "Cells for measurement" is received, in the measurement configured by this message only:

    - consider Inter-frequency cells whose cell information is stored at the position indicated by the IE "Inter-frequency cell id" in the variable CELL_INFO_LIST;

- if the IE "Cells for measurement" is not received, in the measurement configured by this message:

- consider all Inter-frequency cells whose cell information is stored in CELL_INFO_LIST.

If the IE "Inter-RAT cell info list" is received in System Information Block Type 11, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-RAT cells" is received:
  - ignore the IE;
- if the IE "Remove all inter-RAT cells" is received:
  - ignore the IE;
- if the IE "New Inter-RAT cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - if the IE "Radio Access Technology" is set to “None”:
    - ignore the ~~IE "New Inter-RAT cells";~~
  - otherwise update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-RAT cell id" is received:
      - store received cell information at this position in the Inter-RAT cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Inter-RAT cell id" is not received:
      - store the received cell information at the first vacant position in ascending order in the Inter-RAT cell info list in the variable CELL_INFO_LIST; and
      - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE;

If the IE "Inter-RAT cell info list" is received in System Information Block Type 12, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-RAT cells" is received, at the position indicated by the IE "Inter-RAT cell id":
  - clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all inter-RAT cells" is received:
  - for each position referring to an inter-RAT cell in the variable CELL_INFO_LIST:
    - clear the cell information stored in the variable CELL_INFO_LIST; and
    - mark the position "vacant";
- if the IE "New Inter-RAT cells" is received, for each cell, and in the same order as the cells appear in the IE:

- if the IE "Radio Access Technology" is set to “None”:
  - ignore the ~~IE “New Inter-RAT cells”~~;
- otherwise update the variable CELL_INFO_LIST as follows:
  - if the IE "Inter-RAT cell id" is received:
    - store received cell information at this position in the Inter-RAT cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
    - mark the position "occupied";
  - if the IE "Inter-RAT cell id" is not received:
    - store the received cell information at the first vacant position in ascending order in the Inter-RAT cell info list in the variable CELL_INFO_LIST; and
    - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE.

If the IE "Inter-RAT cell info list" is received in a MEASUREMENT CONTROL message, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-RAT cells" is received, at the position indicated by the IE "Inter-RAT cell id":
  - clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all inter-RAT cells" is received:
  - for each position referring to an inter-RAT cell in the variable CELL_INFO_LIST:
    - clear the cell information stored in the variable CELL_INFO_LIST; and
    - mark the position "vacant";
- if the IE "New Inter-RAT cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - if the IE "Radio Access Technology" is set to “None”:
    - ignore the ~~IE “New Inter-RAT cells”~~;
  - otherwise update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-RAT cell id" is received:
      - store received cell information at this position in the Inter-RAT cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Inter-RAT cell id" is not received:

        - store the received cell information at the first vacant position in ascending order in the Inter-RAT cell info list in the variable CELL_INFO_LIST; and

        - mark the position as "occupied";

- if the IE "Cells for measurement" is received, in the measurement configured by this message only:

    - consider Inter-RAT cells whose cell information is stored at the position indicated by the IE "Inter-RAT cell id" in the variable CELL_INFO_LIST;

- if the IE "Cells for measurement" is not received, in the measurement configured by this message:

    - consider all Inter-RAT cells whose cell information is stored in CELL_INFO_LIST;

- if the IE "Cell selection and re-selection info for SIB11/12" is present:

    - ignore the IE.

10.3.3.21 Measurement capability

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Need for downlink compressed mode				
FDD measurements	MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on FDD
TDD measurements	CV-*tdd_sup*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on TDD
GSM measurements	CV-gsm_*sup*			
>GSM 900	~~CV-*Gsm900_supM*~~MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on GSM 900
>DCS 1800	~~CV-*Gsm1800_sup*~~*MP*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on DCS 1800
>GSM 1900	~~CV-*Gsm1900_sup*~~*MP*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on GSM 1900
Multi-carrier measurement	CV-*mc_sup*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on multi-carrier
Need for uplink compressed mode				
FDD measurements	MP		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on FDD
TDD measurements	CV-*tdd_sup*		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on TDD
GSM measurements	CV-gsm_*sup*			
>GSM 900	MP~~CV-*Gsm900_sup*~~		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on GSM 900
>DCS 1800	MP~~CV-*Gsm1800_sup*~~		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on DCS 1800
>GSM 1900	MP~~CV-*Gsm1900_sup*~~		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on GSM 1900
Multi-carrier measurement	CV-*mc_sup*		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on multi-carrier

Condition	Explanation
tdd_sup	The IE is mandatory present if the IE "Multi-mode capability" has the value "TDD" or "FDD/TDD". Otherwise this field is not needed in the message.
gsm_sup	The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM900, GSM1800 and/ or GSM1900. Otherwise this field is not needed in the message.
~~*Gsm900_sup*~~	~~The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM900 and not needed otherwise.~~
~~*Gsm1800_sup*~~	~~The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM1800 and not needed otherwise.~~
~~*Gsm1900_sup*~~	~~The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM1900 and not needed otherwise.~~
mc_sup	The IE is mandatory present if the IE "Support of multi-carrier" has the value TRUE. Otherwise this field is not needed in the message.

10.3.7.23 Inter-RAT cell info list

Contains the information for the list of measurement objects for an inter-RAT measurement.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *Inter-RAT cell removal*	MP			
>Remove all inter-RAT cells				No data
>Remove some inter-RAT cells				
>>Removed inter-RAT cells	MP	1 to <maxCellMeas>		
>>>Inter-RAT cell id	MP		Integer(0 .. <maxCellMeas> - 1)	
>Remove no inter-RAT cells				
New inter-RAT cells	~~OP~~MP	1 to <maxCellMeas>		Although this IE is not always required, need is MP to align with ASN.1
>Inter-RAT cell id	OP		Integer(0 .. <maxCellMeas> - 1)	
>CHOICE *Radio Access Technology*	MP			
>>GSM				
>>>Cell individual offset	MP		Integer (-50..50)	In dB Used to offset measured quantity value
>>>Cell selection and re-selection info	OP		Cell selection and re-selection info for SIB11/12 10.3.2.4	See 8.6.7.3 If HCS is not used and all the parameters in cell selection and re-selection info are default values, this IE is absent.
>>>BSIC	MP		BSIC 10.3.8.2	
>>>Band indicator	MP		Enumerated (DCS 1800 band used, PCS 1900 band used)	Indicates how to interpret the BCCH ARFCN
>>>BCCH ARFCN	MP		Integer (0..1023)	[45]
>>IS-2000				
>>>System specific measurement info	MP		enumerated (frequency, timeslot, colour code, output power, PN offset)	For IS-2000, use fields from TIA/EIA/IS-2000.5, Subclause 3. 7.3.3.2.27, *Candidate Frequency Neighbour List Message*
>>None			(no data)	This value has been introduced to handle the case when IE "New inter-RAT cells" is not required
Cell for measurement	OP	1 to <maxCellMeas>		
>Inter-RAT cell id	MP		Integer(0 .. <maxCellMeas>-1)	

11.3 Information element definitions

```
-- **************************************************
--
--     MEASUREMENT INFORMATION ELEMENTS (10.3.7)
--
-- **************************************************

<Cut until the next modified section>

InterRATCellInfoList ::=            SEQUENCE {
    removedInterRATCellList         RemovedInterRATCellList,
    newInterRATCellList             NewInterRATCellList,
    -- NOTE: IE newInterRATCellList should be optional.
    -- This error should be corrected in a future revision of the dedicated
    -- Future revisions of dedicated message(s) ~~versions~~including IE newInterRATCellList
    -- should use a corrected version of this IE
    cellsForInterRATMeasList            CellsForInterRATMeasList            OPTIONAL
}

InterRATCellInfoList-B ::=          SEQUENCE {
    removedInterRATCellList         RemovedInterRATCellList,
    newInterRATCellList             NewInterRATCellList-B
    -- NOTE: IE newInterRATCellList should be optional.
    -- However, system information does not support message versions
    -- Hence, this can not be corrected
}

<Cut until the next modified section>

NewInterRATCell ::=             SEQUENCE {
    interRATCellID                      InterRATCellID          OPTIONAL,
    technologySpecificInfo              CHOICE {
        gsm                                 SEQUENCE {
            cellSelectionReselectionInfo        CellSelectReselectInfoSIB-11-12
    OPTIONAL,
            interRATCellIndividualOffset        InterRATCellIndividualOffset,
            bsic                                BSIC,
            frequency-band                      Frequency-Band,
            bcch-ARFCN                          BCCH-ARFCN,
            dummy                               NULL                OPTIONAL
        },
        is-2000                             SEQUENCE {
            is-2000SpecificMeasInfo             IS-2000SpecificMeasInfo
        },
        ~~spare1~~none                          NULL,
        -- ASN.1 inconsistency: NewInterRATCellList should be optional within
        -- InterRATCellInfoList. The UE shall consider IE NewInterRATCell with
        -- technologySpecificInfo is set to "none" ~~-~~as valid and handle the
        -- ~~remainder of~~ the message as if the IE NewInterRATCell was absent
        ~~spare2~~spare1                            NULL
    }
}

NewInterRATCell-B ::=               SEQUENCE {
    interRATCellID                      InterRATCellID              OPTIONAL,
    technologySpecificInfo              CHOICE {
        gsm                                 SEQUENCE {
            cellSelectionReselectionInfo        CellSelectReselectInfoSIB-11-12
    OPTIONAL,
            interRATCellIndividualOffset        InterRATCellIndividualOffset,
            bsic                                BSIC,
            frequency-band                      Frequency-Band,
            bcch-ARFCN                          BCCH-ARFCN,
            dummy                               NULL                OPTIONAL
        },
        is-2000                             SEQUENCE {
            is-2000SpecificMeasInfo             IS-2000SpecificMeasInfo
        },
```

```
        nonespare1                                  NULL,
        -- ASN.1 inconsistency: NewInterRATCellList should be optional within
        -- InterRATCellInfoList. UE shall consider NewInterRATCell with
        -- technologySpecificInfo set to “none” as valid and handle the
        -- remainder of the message as if the IE NewInterRATCell-B was absent
        spare21                                     NULL
    }
}

NewInterRATCellList ::=         SEQUENCE (SIZE (1..maxCellMeas)) OF
                                        NewInterRATCell

NewInterRATCellList-B ::=           SEQUENCE (SIZE (1..maxCellMeas)) OF
                                        NewInterRATCell-B
```

3GPP TSG-RAN WG 2, Meeting #25 ***Tdoc R2-012707***
Makuhari, Japan, 26th – 30th November, 2001

CR-Form-v4

CHANGE REQUEST

⌘ **25.331** **CR** **1154** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction of inconsistencies between tabular and ASN.1
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	29-11-2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
REL-4 *(Release 4)*
REL-5 *(Release 5)*

Reason for change: ⌘

The changes proposed in this CR concern the following

- Correction of inconsistencies between the tabular and ASN.1 message specifications

Summary of change: ⌘

The original revision of this CR introduces the following changes

- Measurement capability: the tabular description is aligned with the ASN.1, meaning that if GSM is supported, the UE shall include the measurement abilities for all bands (including not supported bands)
- Inter-RAT cell info list: To specify that the UE shall consider cells with the IE "New inter-RAT cells" as absent if the IE RAT choice is set to the value "none"
- Inter-RAT cell info list: The need for IE "System specific measurement info" used in case choice "Radio Access Technology" is set to "IS-2000" was missing and proposed to be MP which is in line with ASN.1

Isolated impact

- This CR only affects the measurement of inter RAT neighbouring cells. The CR has isolated impact; only the function to be corrected is affected.
- The CR includes clarifications that have no impact for implementations that have assumed the behaviour as proposed in this CR

Consequences if not approved: ⌘

UTRAN may not be able to remove inter RAT cells from the UE's measurement configuration

Clauses affected: ⌘ 8.6.7.3, 10.3.3.21, 10.3.7.23, 11.3

Other specs ⌘ ☐ Other core specifications ⌘ 25.331 v3.8.0, CR 1153r1

affected:	☐ Test specifications ☐ O&M Specifications	
Other comments: ⌘		

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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.

8.6.7.3 Intra-frequency/Inter-frequency/Inter-RAT cell info list

If the IE "Intra-frequency cell info list" is received in System Information Block Type 11, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Intra-frequency cells" is received:
  - ignore the IE;
- if the IE "Remove all intra-frequency cells" is received:
  - ignore the IE;
- if the IE "New Intra-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Intra-frequency cell id" is received:
      - store received cell information at this position in the Intra-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Intra-frequency cell id" is not received:
      - store the received cell information at the first vacant position in ascending order in the Intra-frequency cell info list in the variable CELL_INFO_LIST; and
      - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE.

If the IE "Intra-frequency cell info list" is received in System Information Block Type 12, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Intra-frequency cells" is received:
  - at the position indicated by the IE "Intra-frequency cell id" clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all intra-frequency cells" is received:
  - for each position referring to an intra frequency cell in the variable CELL_INFO_LIST:
    - mark the position "vacant";
- if the IE "New Intra-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Intra-frequency cell id" is received:

            - store received cell information at this position in the Intra-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

            - mark the position "occupied";

        - if the IE "Intra-frequency cell id" is not received:

            - store the received cell information at the first vacant position in ascending order in the Intra-frequency cell info list in the variable CELL_INFO_LIST; and

            - mark the position as "occupied";

- if the IE "Cells for measurement" is received:

    - ignore the IE.

If the IE "Intra-frequency cell info list" is received in a MEASUREMENT CONTROL message, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Intra-frequency cells" is received, at the position indicated by the IE "Intra-frequency cell id":

    - clear the cell information stored in the variable CELL_INFO_LIST; and

    - mark the position "vacant";

- if the IE "Remove all intra-frequency cells" is received:

    - for each position referring to an intra frequency cell in the variable CELL_INFO_LIST:

        - mark the position "vacant";

- if the IE "New Intra-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:

    - update the variable CELL_INFO_LIST as follows:

        - if the IE "Intra-frequency cell id" is received:

            - store received cell information at this position in the Intra-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

            - mark the position "occupied";

        - if the IE "Intra-frequency cell id" is not received:

            - store the received cell information at the first vacant position in ascending order in the Intra-frequency cell info list in the variable CELL_INFO_LIST; and

            - mark the position as "occupied";

- if the IE "Cells for measurement" is received, in the measurement configured by this message only:

    - consider Intra-frequency cells whose cell information is stored at the position indicated by the IE "Intra-frequency cell id" in the variable CELL_INFO_LIST;

- if the IE "Cells for measurement" is not received, in the measurement configured by this message:

    - consider all Intra-frequency cells whose cell information is stored in CELL_INFO_LIST.

If the IE "Inter-frequency cell info list" is received in System Information Block Type 11 update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-frequency cells" is received:
  - ignore the IE;
- if the IE "Remove all inter-frequency cells" is received:
  - ignore the IE;
- if the IE "New Inter-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-frequency cell id" is received:
      - store received cell information at this position in the Inter-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Inter-frequency cell id" is not received:
      - store the received cell information at the first vacant position in ascending order in the Inter-frequency cell info list in the variable CELL_INFO_LIST; and
      - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE.

If the IE "Inter-frequency cell info list" is received in System Information Block Type 12, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-frequency cells" is received, at the position indicated by the IE "Inter-frequency cell id":
  - clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all inter-frequency cells" is received:
  - for each position referring to an inter-frequency cell in the variable CELL_INFO_LIST:
    - clear the cell information stored in the variable CELL_INFO_LIST; and
    - mark the position "vacant";
- if the IE "New Inter-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-frequency cell id" is received:

        - store received cell information at this position in the Inter-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

        - mark the position "occupied";

    - if the IE "Inter-frequency cell id" is not received:

        - store the received cell information at the first vacant position in ascending order in the Inter-frequency cell info list in the variable CELL_INFO_LIST; and

        - mark the position as "occupied";

- if the IE "Cells for measurement" is received:

    - ignore the IE.

If the IE "Inter-frequency cell info list" is received in a MEASUREMENT CONTROL message, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order:

- if the IE "Removed Inter-frequency cells" is received, at the position indicated by the IE "Inter-frequency cell id":

    - clear the cell information stored in the variable CELL_INFO_LIST; and

    - mark the position "vacant";

- if the IE "Remove all inter-frequency cells" is received:

    - for each position referring to an inter-frequency cell in the variable CELL_INFO_LIST:

        - clear the cell information stored in the variable CELL_INFO_LIST; and

        - mark the position "vacant";

- if the IE "New Inter-frequency cells" is received, for each cell, and in the same order as the cells appear in the IE:

    - update the variable CELL_INFO_LIST as follows:

        - if the IE "Inter-frequency cell id" is received:

            - store received cell information at this position in the Inter-frequency cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and

            - mark the position "occupied";

        - if the IE "Inter-frequency cell id" is not received:

            - store the received cell information at the first vacant position in ascending order in the Inter-frequency cell info list in the variable CELL_INFO_LIST; and

            - mark the position as "occupied";

- if the IE "Cells for measurement" is received, in the measurement configured by this message only:

    - consider Inter-frequency cells whose cell information is stored at the position indicated by the IE "Inter-frequency cell id" in the variable CELL_INFO_LIST;

- if the IE "Cells for measurement" is not received, in the measurement configured by this message:

- consider all Inter-frequency cells whose cell information is stored in CELL_INFO_LIST.

If the IE "Inter-RAT cell info list" is received in System Information Block Type 11, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-RAT cells" is received:
  - ignore the IE;
- if the IE "Remove all inter-RAT cells" is received:
  - ignore the IE;
- if the IE "New Inter-RAT cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - if IE "Radio Access Technology" set to “None”:
    - ignore the cell
  - otherwise update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-RAT cell id" is received:
      - store received cell information at this position in the Inter-RAT cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Inter-RAT cell id" is not received:
      - store the received cell information at the first vacant position in ascending order in the Inter-RAT cell info list in the variable CELL_INFO_LIST; and
      - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE;

If the IE "Inter-RAT cell info list" is received in System Information Block Type 12, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-RAT cells" is received, at the position indicated by the IE "Inter-RAT cell id":
  - clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all inter-RAT cells" is received:
  - for each position referring to an inter-RAT cell in the variable CELL_INFO_LIST:
    - clear the cell information stored in the variable CELL_INFO_LIST; and
    - mark the position "vacant";
- if the IE "New Inter-RAT cells" is received, for each cell, and in the same order as the cells appear in the IE:

- if IE "Radio Access Technology" set to “None”:
  - ignore the cell
- otherwise update the variable CELL_INFO_LIST as follows:
  - if the IE "Inter-RAT cell id" is received:
    - store received cell information at this position in the Inter-RAT cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
    - mark the position "occupied";
  - if the IE "Inter-RAT cell id" is not received:
    - store the received cell information at the first vacant position in ascending order in the Inter-RAT cell info list in the variable CELL_INFO_LIST; and
    - mark the position as "occupied";
- if the IE "Cells for measurement" is received:
  - ignore the IE.

If the IE "Inter-RAT cell info list" is received in a MEASUREMENT CONTROL message, the UE shall update the variable CELL_INFO_LIST accordingly and in the following order. The UE shall:

- if the IE "Removed Inter-RAT cells" is received, at the position indicated by the IE "Inter-RAT cell id":
  - clear the cell information stored in the variable CELL_INFO_LIST; and
  - mark the position "vacant";
- if the IE "Remove all inter-RAT cells" is received:
  - for each position referring to an inter-RAT cell in the variable CELL_INFO_LIST:
    - clear the cell information stored in the variable CELL_INFO_LIST; and
    - mark the position "vacant";
- if the IE "New Inter-RAT cells" is received, for each cell, and in the same order as the cells appear in the IE:
  - if IE "Radio Access Technology" set to “None”:
    - ignore the cell
  - otherwise update the variable CELL_INFO_LIST as follows:
    - if the IE "Inter-RAT cell id" is received:
      - store received cell information at this position in the Inter-RAT cell info list in the variable CELL_INFO_LIST, possibly overwriting any existing information in this position; and
      - mark the position "occupied";
    - if the IE "Inter-RAT cell id" is not received:

        - store the received cell information at the first vacant position in ascending order in the Inter-RAT cell info list in the variable CELL_INFO_LIST; and

        - mark the position as "occupied";

- if the IE "Cells for measurement" is received, in the measurement configured by this message only:

    - consider Inter-RAT cells whose cell information is stored at the position indicated by the IE "Inter-RAT cell id" in the variable CELL_INFO_LIST;

- if the IE "Cells for measurement" is not received, in the measurement configured by this message:

    - consider all Inter-RAT cells whose cell information is stored in CELL_INFO_LIST;

- if the IE "Cell selection and re-selection info for SIB11/12" is present:

    - ignore the IE.

10.3.3.21 Measurement capability

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Need for downlink compressed mode					
FDD measurements	MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on FDD	
3.84 Mcps TDD measurements	CV-*3.84_Mcps_tdd_sup*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on 3.84 Mcps TDD	Name changed in REL-4
1.28 Mcps TDD measurements	CV-*1.28_Mcps_tdd_sup*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on 1.28 Mcps TDD	REL-4
GSM measurements	CV-gsm_*sup*				
>GSM 900	~~CV-*Gsm900_supM*~~MP		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on GSM 900	
>DCS 1800	~~CV-*Gsm1800_sup*~~*MP*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on DCS 1800	
>GSM 1900	~~CV-*Gsm1900_sup*~~*MP*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on GSM 1900	
Multi-carrier measurement	CV-*mc_sup*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on multi-carrier	
Need for uplink compressed mode					
FDD measurements	MP		Boolean	TRUE means that the UE requires	

				UL compressed mode in order to perform measurements on FDD	
3.84 Mcps TDD measurements	CV-*3.84_Mcps_tdd_sup*		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on 3.84 Mcps TDD	Name changed in REL-4
1.28 Mcps TDD measurements	CV-*1.28_Mcps_tdd_sup*		Boolean	TRUE means that the UE requires DL compressed mode in order to perform measurements on 1.28 Mcps TDD	REL-4
GSM measurements	CV-gsm_*sup*				
>GSM 900	~~CV-*Gsm900_sup*~~*MP*		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on GSM 900	
>DCS 1800	~~CV-*Gsm1800_sup*~~*MP*		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on DCS 1800	
>GSM 1900	~~CV-*Gsm1900_sup*~~*MP*		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on GSM 1900	
Multi-carrier measurement	CV-*mc_sup*		Boolean	TRUE means that the UE requires UL compressed mode in order to perform measurements on multi-carrier	

Condition	Explanation
3.84_Mcps_tdd_sup	The IE is mandatory present if an IE "TDD RF capability" is present with the IE "Chip rate capability" set to "3.84 Mcps". Otherwise this field is not needed in the message.
1.28_Mcps_tdd_sup	The IE is mandatory present if an IE "TDD RF capability" is present with the IE "Chip rate capability" set to "1.28 Mcps". Otherwise this field is not needed in the message.
gsm_sup	The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM900, GSM1800 and/ or GSM1900. Otherwise this field is not needed in the message.
~~*Gsm900_sup*~~	~~The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM900 and not needed otherwise.~~
~~*Gsm1800_sup*~~	~~The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM1800 and not needed otherwise.~~
~~*Gsm1900_sup*~~	~~The IE is mandatory present if the IE "Inter-RAT UE radio access capability" indicates support for GSM1900 and not needed otherwise.~~
mc_sup	The IE is mandatory present if the IE "Support of multi-carrier" has the value TRUE. Otherwise this field is not needed in the message.

10.3.7.23 Inter-RAT cell info list

Contains the information for the list of measurement objects for an inter-RAT measurement.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE *Inter-RAT cell removal*	MP			
>Remove all inter-RAT cells				No data
>Remove some inter-RAT cells				
>>Removed inter-RAT cells	MP	1 to <maxCellMeas>		
>>>Inter-RAT cell id	MP		Integer(0 .. <maxCellMeas> - 1)	
>Remove no inter-RAT cells				
New inter-RAT cells	~~OP~~MP	1 to <maxCellMeas>		Although this IE is not always required, need is MP to align with ASN.1
>Inter-RAT cell id	OP		Integer(0 .. <maxCellMeas> - 1)	
>CHOICE *Radio Access Technology*	MP			
>>GSM				
>>>Cell individual offset	MP		Integer (-50..50)	In dB Used to offset measured quantity value
>>>Cell selection and re-selection info	OP		Cell selection and re-selection info for SIB11/12 10.3.2.4	see 8.6.7.3 If HCS is not used and all the parameters in cell selection and re-selection info are default values, this IE is absent.
>>>BSIC	MP		BSIC 10.3.8.2	
>>>Band indicator	MP		Enumerated (DCS 1800 band used, PCS 1900 band used)	Indicates how to interpret the BCCH ARFCN
>>>BCCH ARFCN	MP		Integer (0..1023)	[45]
>>IS-2000				
>>>System specific measurement info	MP		enumerated (frequency, timeslot, colour code, output power, PN offset)	For IS-2000, use fields from TIA/EIA/IS-2000.5, Subclause 3. 7.3.3.2.27, *Candidate Frequency Neighbour List Message*
>>None			(no data)	This value has been introduced to handle the case when IE "New inter-RAT cells" is not required
Cell for measurement	OP	1 to <maxCellMeas>		
>Inter-RAT cell id	MP		Integer(0 .. <maxCellMeas>-1)	

11.3 Information element definitions

```
-- **************************************************
--
--     MEASUREMENT INFORMATION ELEMENTS (10.3.7)
--
-- **************************************************

<Cut until the next modified section>


InterRATCellInfoList ::=            SEQUENCE {
    removedInterRATCellList         RemovedInterRATCellList,
    newInterRATCellList             NewInterRATCellList,
    -- NOTE: IE newInterRATCellList should be optional.
    -- This error should be corrected in a future revision of the dedicated
    -- Future revisions of dedicated message(s) including IE newInterRATCellList
    -- should use a corrected version of this IE
    cellsForInterRATMeasList            CellsForInterRATMeasList            OPTIONAL
}

InterRATCellInfoList-B ::=          SEQUENCE {
    removedInterRATCellList         RemovedInterRATCellList,
    newInterRATCellList             NewInterRATCellList-B
    -- NOTE: IE newInterRATCellList should be optional.
    -- However, system information does not support message versions
    -- Hence, this can not be corrected
}

InterRATCellInfoList-r4 ::=         SEQUENCE {
    removedInterRATCellList                 RemovedInterRATCellList,
    newInterRATCellList                     NewInterRATCellList                 OPTIONAL,
    cellsForInterRATMeasList                CellsForInterRATMeasList            OPTIONAL
}


<Cut until the next modified section>

InterRATMeasuredResultsList ::= SEQUENCE (SIZE (1..maxOtherRAT)) OF
                                    InterRATMeasuredResults

InterRATMeasurement ::=         SEQUENCE {
    interRATCellInfoList                InterRATCellInfoList                OPTIONAL,
    interRATMeasQuantity                InterRATMeasQuantity                OPTIONAL,
    interRATReportingQuantity           InterRATReportingQuantity       OPTIONAL,
    reportCriteria                      InterRATReportCriteria
}

InterRATMeasurement-r4 ::=          SEQUENCE {
    interRATCellInfoList                InterRATCellInfoList-r4             OPTIONAL,
    interRATMeasQuantity                InterRATMeasQuantity                OPTIONAL,
    interRATReportingQuantity           InterRATReportingQuantity       OPTIONAL,
    reportCriteria                      InterRATReportCriteria
}

InterRATMeasurementSysInfo ::=  SEQUENCE {
    interRATCellInfoList                InterRATCellInfoList                OPTIONAL
}

InterRATMeasurementSysInfo-B ::=    SEQUENCE {
    interRATCellInfoList                InterRATCellInfoList-B          OPTIONAL
}

<Cut until the next modified section>

MeasurementType ::=                 CHOICE {
    intraFrequencyMeasurement           IntraFrequencyMeasurement,
    interFrequencyMeasurement           InterFrequencyMeasurement,
    interRATMeasurement             InterRATMeasurement,
```

```
    ue-positioning-Measurement                  UE-Positioning-Measurement,
    trafficVolumeMeasurement            TrafficVolumeMeasurement,
    qualityMeasurement                  QualityMeasurement,
    ue-InternalMeasurement              UE-InternalMeasurement
}

MeasurementType-r4 ::=              CHOICE {
    intraFrequencyMeasurement           IntraFrequencyMeasurement-r4,
    interFrequencyMeasurement           InterFrequencyMeasurement-r4,
    interRATMeasurement             InterRATMeasurement-r4,
    up-Measurement                      UE-Positioning-Measurement-r4,
    trafficVolumeMeasurement            TrafficVolumeMeasurement,
    qualityMeasurement                  QualityMeasurement,
    ue-InternalMeasurement              UE-InternalMeasurement-r4
}
```

```
<Cut until the next modified section>

NewInterRATCell ::=             SEQUENCE {
    interRATCellID                      InterRATCellID          OPTIONAL,
    technologySpecificInfo              CHOICE {
        gsm                                 SEQUENCE {
            cellSelectionReselectionInfo        CellSelectReselectInfoSIB-11-12
    OPTIONAL,
            interRATCellIndividualOffset        InterRATCellIndividualOffset,
            bsic                                BSIC,
            frequency-band                      Frequency-Band,
            bcch-ARFCN                          BCCH-ARFCN,
            dummy                               NULL                OPTIONAL
        },
        is-2000                             SEQUENCE {
            is-2000SpecificMeasInfo             IS-2000SpecificMeasInfo
        },
        spare1none                          NULL,
        -- ASN.1 inconsistency: NewInterRATCellList should be optional within
        -- InterRATCellInfoList. The UE shall consider IE NewInterRATCell with
        -- technologySpecificInfo is set to "none"as valid and handle the
        -- the message as if the IE NewInterRATCell was absent
        spare2spare1                            NULL
    }
}

NewInterRATCell-B ::=           SEQUENCE {
    interRATCellID                      InterRATCellID              OPTIONAL,
    technologySpecificInfo              CHOICE {
        gsm                                 SEQUENCE {
            cellSelectionReselectionInfo        CellSelectReselectInfoSIB-11-12
    OPTIONAL,
            interRATCellIndividualOffset        InterRATCellIndividualOffset,
            bsic                                BSIC,
            frequency-band                      Frequency-Band,
            bcch-ARFCN                          BCCH-ARFCN,
            dummy                               NULL                OPTIONAL
        },
        is-2000                             SEQUENCE {
            is-2000SpecificMeasInfo             IS-2000SpecificMeasInfo
        },
        spare1none                          NULL,
        -- ASN.1 inconsistency: NewInterRATCellList should be optional within
        -- InterRATCellInfoList. The UE shall consider IE NewInterRATCell with
        -- technologySpecificInfo is set to "none"as valid and handle the
        -- the message as if the IE NewInterRATCell was absent
        spare2spare1                            NULL
    }
}

NewInterRATCellList ::=         SEQUENCE (SIZE (1..maxCellMeas)) OF
                                    NewInterRATCell

NewInterRATCellList-B ::=       SEQUENCE (SIZE (1..maxCellMeas)) OF
                                    NewInterRATCell-B

NewIntraFreqCell ::=            SEQUENCE {
    intraFreqCellID                 IntraFreqCellID                     OPTIONAL,
    cellInfo                        CellInfo
}
```

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, November 26th-30th, 2001

Tdoc R2-012708

CR-Form-v4

CHANGE REQUEST

⌘ **25.331** **CR** **1155** ⌘ ev **r1** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE [X] Radio Access Network [X] Core Network ☐

Title:	⌘	Measurement related corrections
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-11-20
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘ Ambiguous measurement handling need to be corrected.

Summary of change: ⌘

1. Sections 8.1.1.6.12, 8.1.1.6.12: SIB11 shall also be read and is also valid for UEs in CELL_FACH, CELL_PCH and URA_PCH states, and even if SIB12 is broadcast since the list of cells broadcast in SIB11 shall be stored by a UE in those states. The text in sections 8.1.1.6.11 and 8.1.1.6.12 is clarified to make it clearer since:
   - The IEs "Intra-frequency/inter-frequency/inter-RAT Cell info list" shall be read from SIB 11, and then some cells can be added/removed in SIB 12. As the text is writen now, it could understood that the UE in connected mode shall first read SIB 12, and then proceed with the remaining text for SIB 11, which would result in that the cells that were included in SIB 12 are removed from the CELL_INFO_LIST variable. The second possible interpretation of the current text would be that the UE does not need to proceed with the remaining text which is also wrong.
   - Some parts of the text in those section refers to non-existing IEs in SIB 11/12: "Inter-frequency measurement quantity"/ "Inter-RAT measurement quantity".
   - The handling of traffic volume measurements is also clarified, since according to the text in section 8.4.1, the UE shall not update the variable MEASUREMENT_IDENTITY with what is received in the IE "Traffic volume measurement system information" if a measurement control has been received that set up a measurement with the same id as the one that is broadcast in "Traffic volume measurement system information".
2. 8.3.5: Intra- and inter-frequency measurements after hard-handover: it is proposed to have the UE stopping measurements on the monitored cells until it receives a MEASUREMENT CONTROL message.
3. Clarification in 8.4.0 regarding the "Monitored set": the definition is rephrased in order not to refer to "neighbouring cells", as this notion does not exist when in

CELL_DCH.

4. 8.4.1.3:
   - when a measurement control message is received, it is stated that the UE shall possibly "overwrite" a measurement that is already stored with that identity. The word "overwriting" shall be understood as that the measurement that was previously stored with that identity shall be released (which also implies that all variables related to that measurement, such as TRIGGERED_1A_EVENT, shall be deleted).
   - The current text is unclear at two occasions, and some clarification is proposed.
5. 8.4.1.6.1: in 8.4.1.6.1, it is stated that the UE shall "stop intra-frequency type measurement reporting assigned in a MEASUREMENT CONTROL" while this holds also for the measurement reporting that was assigned to the UE through SIB11/12.
6. 8.4.1.6.3: since the IE "Measurement validity" cannot be set for inter-RAT measurements, the UE shall always delete the inter-RAT measurements stored in the variable MEASUREMENT_VALIDITY when moving from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH.
7. 8.4.1.6.6, 8.4.1.6a: with the current text, if traffic volume type measurements set up valid in CELL_FACH or CELL_PCH or URA_PCH states are stored in the variable MEASUREMENT_IDENTITY, the UE shall not take into account the traffic volume measurement information broadcast in SIB11/12. However, those measurements could have been configured through system information broadcast in another cell, and in that case, the information related to traffic volume measurement that is broadcast in the new cell shall be taken into account. It is proposed that UE shall skip the traffic volume measurements broadcast in SIB11/12 only if traffic volume measurements with the same identity have been set up or modified through a dedicated message. The same reasoning leads to the change that is proposed in 8.4.1.6a: the traffic volume measurements that were configured through system information shall be removed when a cell reselection is performed. The ones that have been configured or modified through a dedicated message shall be kept.
8. 8.4.1.7.2, 8.4.1.7.3: the current text says that the UE shall stop monitoring the cells in SIB11/12 when moving from CELL_FACH to CELL_DCH. A note clarifies that this does not mean that the UE shall remove those cells from the CELL_INFO_LIST variable. In 8.4.1.7.3, the part related to the IE "Measurement Validity" is removed since this IE cannot be included for inter-RAT measurements.
9. 8.4.1.7.4: a part of this section is removed since it is not related to what happens to the transition from CELL_FACH to CELL_DCH, and that text does not bring any additional information compared to section 8.4.1.3.
10. 8.6.7.1: the behaviour of the UE with regards to measurements when performing cell re-selection is already specified in section 8.4.1.6a, and is not related to the IE "Measurement validity", since this IE specifies what the UE shall do with a measurement at state change. It is thus proposed to remove the text that is related to cell reselection in 8.6.7.1.
11. Since the transmitting power is not available for the detected cells, those cannot be used for intra-frequency measurements when the measurement quantity is pathloss. If detected cells are included in IEs "Triggering condition 1" or "Triggering condition 2" while the measurement quantity is pathloss, it is proposed that the UE set the variable INVALID_CONFIGURATION to TRUE.
12. In chapter 10.3.7.19: for release 99, the W parameters shall be the same for all non-used frequencies included in an inter-frequency measurement, to avoid any ambiguity in the signaling (which threshold/W should correspond to which non-used frequency?)
13. In chapter 10.3.7.32: "Observed time difference to GSM cell" is a the name of the IE whose reporting shall be done according to the boolean included in this "Inter-RAT reporting quantity" IE. It is therefore proposed to change the name of the boolean to "Observed time difference to GSM cell reporting indicator". The same applies for the

	IE “GSM carrier RSSI”. 14. Initiation/Clearing of the variables TRIGGERED_1X_EVENT (chapter 14.1.2): those variables shall be created when a measurement is set up and cleared when the measurement is released. 15. In chapter 14.1.2: the time required for the different reporting quantities to be measured (e.g. measuring the Ec/No of a cell will typically be much quicker than measuring the CellSyncInfo). A cell can then potentially trigger an event even though not all the quantities required to be reported are available for that cell. Since in most cases, UTRAN wants to get the reporting quantities for the cell that triggered the event, it is clarified that only cells for which all reporting quantities are available can trigger an event. 16. Handling of the “Cell individual offsets” in the formula given in chapter 14.1.2: the formulas in 14.1.2 are updated to include the cell individual offset described in section 10.1.5.3. The cell individual offset shall only be applied to cells on the left side of the inequality, and not be added to the measured value of the active set cells when computing the quality estimate of the active set. The same changes are needed in the description of the other events and will be provided in the final version of the CR if the principle of the change is agreed. Impact analysis: This CR has isolated impact. The change would not affect implementations behaving as indicated in the CR, would affect implementations supporting the corrected functionality otherwise. Updates in rev 1 are highlighted in yellow.
Consequences if not approved: ⌘	Ambiguous handling of the measurements can result in unexpected UE behaviour, and cause unreliable measurements reports.

Clauses affected:	⌘	8.1.1.6.11, 8.1.1.6.12, 8.3.5, 8.4.0, 8.4.1.3, 8.4.1.6.1, 8.4.1.6.3, 8.4.1.6.6, 8.4.1.6a, 8.4.1.7.3, 8.4.1.7.4, 8.6.7.1, 8.6.7.16, 10.3.7.19, 10.3.7.32, 14.1.2.1		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v4.2.1, CR 1156
Other comments:	⌘			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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.

8.1.1.6.11 System Information Block type 11

The UE should store all relevant IEs included in this system information block. The UE shall:

- if IE "FACH measurement occasion info" is included:
  - act as specified in subclause 8.6.7.
- else:
  - may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell;
- ~~if in connected mode, and System Information Block type 12 is indicated as used in the cell:~~
  - ~~read and act on information sent in System Information Block type 12;~~
- Clear the variable CELL_INFO_LIST;
- Act upon the received IE "Intra-frequency/Inter-frequency/Inter-RAT cell info list" as described in subclause 8.6.7.3;
- ~~for each measurement type:~~
  - ~~start a measurement using the set of IEs specified for that measurement type;~~
- ~~associate each measurement with the identity number given by the IE "Measurement identity";~~
- ~~clear the variable CELL_INFO_LIST;~~
- ~~act upon the received IE "Intra-frequency/Inter-frequency/Inter-RAT cell info list" as described in subclause 8.6.7.3;~~
- If in idle mode or
- If in connected mode and if system information block type 12 is not broadcast in the cell:
  - if included, store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered; [indent increased one step]
- If in connected mode and if system information block type 12 is not broadcast in the cell:
  - Read the IE “Traffic volume measurement information”
  - If no traffic volume measurement with the measurement identity indicated in the IE “Traffic volume measurement” was set up or modified through a MEASUREMENT CONTROL message,
    - update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.
- if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:
  - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":
    - use the default values specified for the IE "HCS neighbouring cell information" for that cell;

- if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":
  - for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list";
- if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":
  - use the default values specified for the IE "HCS neighbouring cell information" for that cell;
- if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":
  - for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list";
- if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT Cell info list":
  - use the default values specified for the IE "HCS neighbouring cell information" for that cell;
- if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":
  - for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list";

- if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:
  - use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

- if in connected mode, and System Information Block type 12 is indicated as used in the cell:
  - read and act on information sent in System Information Block type 12 as indicated in section 8.1.1.6.12;

8.1.1.6.12 System Information Block type 12

If in connected mode, the UE should store all relevant IEs included in this system information block. The UE shall:

- if IE "FACH measurement occasion info" is included:
  - act as specified in subclause 8.6.7.
- else:
  - perform neither inter-frequency/inter-RAT measurements nor inter-frequency/inter-RAT cell re-selection evaluation, independent of UE measurement capabilities;

- ~~for each measurement type:~~
  - ~~start (or continue) a measurement using the set of IEs specified for that measurement type~~;

- act upon the received IE "Intra-frequency/Inter-frequency/Inter-RAT cell info list" as described in subclause 8.6.7.3;

- if any of the IEs "Intra-frequency measurement quantity", "Intra-frequency reporting quantity for RACH reporting", "Maximum number of reported cells on RACH" or "Reporting information for state CELL_DCH" are not included in the system information block:
  - read the corresponding IE(s) in system information block type 11 and use that information for the intra-frequency measurement;
- if included in this system information block or in System Information Block type 11
  - store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered;

~~- if the IE "Inter-frequency measurement quantity" is not included in the system information block:~~
  ~~- read the corresponding IE in System Information Block type 11 and use that information for the inter-frequency measurement;~~
~~- if the IE "Inter-RAT measurement quantity" is not included in the system information block:~~
  ~~- read the corresponding IE in System Information Block type 11 and use that information for the inter-RAT measurement;~~

- If the IE “Traffic volume measurement information” is not included in this system information block:
  - Read the corresponding IE in system information block type 11.
- If the IE “Traffic volume measurement information” was received either in this system information block or in system information block type 11:
  - If no traffic volume measurement with the measurement identity indicated in the IE “Traffic volume measurement” was set up or modified through a MEASUREMENT CONTROL message,
    - update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.
- If in CELL_FACH state:
  - Start or continue the traffic volume measurements stored in the variable MEASUREMENT_IDENTITY that are valid in CELL_FACH state.

~~- if in state CELL_FACH:~~
  ~~- start traffic volume measurement reporting as specified in the IE "Traffic volume reporting quantity";~~
~~- associate each measurement with the identity number given by the IE "Measurement identity";~~

- if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:
  - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":
    - use the default values specified for the IE "HCS neighbouring cell information" for that cell;
  - if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

        - for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list";

    - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

        - use the default values specified for the IE "HCS neighbouring cell information" for that cell;

    - if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

        - for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list";

    - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT cell info list":

        - use the default values specified for the IE "HCS neighbouring cell information" for that cell;

    - if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

        - for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

- if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

    - use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

If in idle mode, the UE shall not use the values of the IEs in this system information block.

8.3.5 Hard handover

When performing hard handover with change of frequency, the UE shall:

- Stop all intra-frequency and inter-frequency measurements on the cells listed in the variable CELL_INFO_LIST until a MEASUREMENT CONTROL message is received from UTRAN.

8.3.5.1 Timing re-initialised hard handover

8.4 Measurement procedures

8.4.0 Measurement related definitions

UTRAN may control a measurement in the UE either by broadcast of SYSTEM INFORMATION and/or by transmitting a MEASUREMENT CONTROL message.
The following information is used to control the UE measurements and the measurement results reporting:

1. **Measurement identity**: A reference number that should be used by the UTRAN when setting up, modifying or releasing the measurement and by the UE in the measurement report.

2. **Measurement command**: One out of three different measurement commands.
    - Setup: Setup a new measurement.
    - Modify: Modify a previously defined measurement, e.g. to change the reporting criteria.
    - Release: Stop a measurement and clear all information in the UE that are related to that measurement.
3. **Measurement type**: One of the types listed below describing what the UE shall measure.

Presence or absence of the following control information depends on the measurement type

4. **Measurement objects:** The objects on which the UE shall measure measurement quantities, and corresponding object information.
5. **Measurement quantity:** The quantity the UE shall measure on the measurement object. This also includes the filtering of the measurements.
6. **Reporting quantities:** The quantities the UE shall include in the report in addition to the quantities that are mandatory to report for the specific event.
7. **Measurement reporting criteria**: The triggering of the measurement report, e.g. periodical or event-triggered reporting.
8. **Measurement Validity**: Defines in which UE states the measurement is valid.
9. **Measurement reporting mode**: This specifies whether the UE shall transmit the measurement report using AM or UM RLC.
10. **Additional measurement identities**: A list of references to other measurements. When this measurement triggers a measurement report, the UE shall also include the reporting quantities for the measurements referenced by the additional measurement identities.

All these measurement parameters depend on the measurement type and are described in more detail in clause 14.
The different types of measurements are:

- **Intra-frequency measurements**: measurements on downlink physical channels at the same frequency as the active set. A measurement object corresponds to one cell. Detailed description is found in subclause 14.1.
- **Inter-frequency measurements**: measurements on downlink physical channels at frequencies that differ from the frequency of the active set. A measurement object corresponds to one cell. Detailed description is found in subclause 14.2.
- **Inter-RAT measurements**: measurements on downlink physical channels belonging to another radio access technology than UTRAN, e.g. GSM. A measurement object corresponds to one cell. Detailed description is found in subclause 14.3.
- **Traffic volume measurements**: measurements on uplink traffic volume. A measurement object corresponds to one cell. Detailed description is found in subclause 14.4.
- **Quality measurements**: Measurements of downlink quality parameters, e.g. downlink transport block error rate. A measurement object corresponds to one transport channel in case of BLER. A measurement object corresponds to one timeslot in case of SIR (TDD only). Detailed description is found in subclause 14.5.
- **UE-internal measurements**: Measurements of UE transmission power and UE received signal level. Detailed description is found in subclause 14.6.

- **UE positioning measurements:** Measurements of UE position. Detailed description is found in subclause 14.7.

The UE shall support a number of measurements running in parallel as specified in [19] and [20]. The UE shall also support that each measurement is controlled and reported independently of every other measurement.
Cells that the UE is monitoring are grouped in the UE into three different categories:

1. Cells, which belong to the **active set.** User information is sent from all these cells. In FDD, the cells in the active set are involved in soft handover. In TDD the active set always comprises one cell only.

2. Cells, which are not included in the active set, but are ~~monitored according to a neighbour list assigned by the UTRAN~~ explicitly indicated to be measured by UTRAN belong to the **monitored set.**

   NOTE: The cells explicitly indicated to be measured by UTRAN for a given intra-frequency (resp. inter-frequency, inter-RAT) measurement are:

   - If the IE "Cells for measurement" has been received for this intra-frequency (resp. inter-frequency, inter-RAT) measurement, the intra-frequency (resp. inter-frequency, inter-RAT) cells stored in the variable CELL_INFO_LIST and pointed at in the IE "Cells for measurement".

   - Otherwise any of the intra-frequency (resp. inter-frequency, inter-RAT) cells stored in the variable CELL_INFO_LIST.

3. Cells detected by the UE, which are neither included in the active set nor in the monitored set belong to the **detected set.** Reporting of measurements of the detected set is only applicable to intra-frequency measurements made by UEs in CELL_DCH state.

8.4.1 Measurement control

Figure 56: Measurement Control, normal case

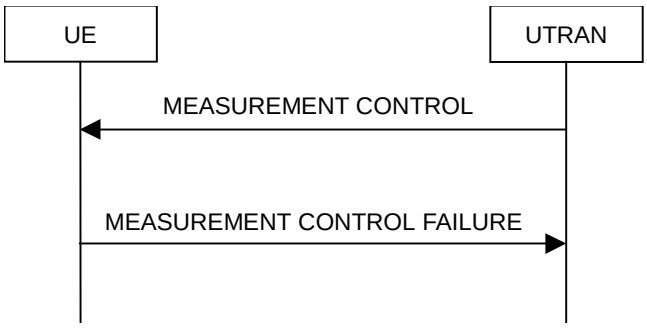

Figure 57: Measurement Control, failure case

8.4.1.1 General

The purpose of the measurement control procedure is to setup, modify or release a measurement in the UE.

8.4.1.2 Initiation

The UTRAN may request a measurement by the UE to be setup, modified or released with a MEASUREMENT CONTROL message, which is transmitted on the downlink DCCH using AM RLC.
The UTRAN should take the UE capabilities into account when a measurement is requested from the UE.
When a new measurement is created, UTRAN should set the IE "Measurement identity" to a value, which is not used for other measurements. UTRAN may use several "Measurement identity" for the same "Measurement type". In case of setting several "Measurement identity" within a same "Measurement type", the measurement object or the list of measurement objects can be set differently for each measurement with different "Measurement identity ".
When a current measurement is modified or released, UTRAN should set the IE "Measurement identity" to the value, which is used for the measurement being modified or released. In case of modifying IEs within a "Measurement identity", it is not needed for UTRAN to indicate the IEs other than modified IEs, and the UE continues to use the current values of the IEs that are not modified.

8.4.1.3 Reception of MEASUREMENT CONTROL by the UE

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.
The UE shall:

- read the IE "Measurement command";
- if the IE "Measurement command" has the value "setup":
  - store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", ~~possibly overwriting~~ ~~releasing first~~first releasing any ~~the~~ ~~measurement~~ previously stored measurement with that identity if that exists;
  - for measurement types "inter-RAT measurement" or "inter-frequency measurement":
    - if, according to its measurement capabilities, the UE requires compressed mode to perform the measurements and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or
    - if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
      - if the measurement is valid in the current RRC state of the UE:
        - begin measurements according to the stored control information for this measurement identity;
  - for measurement type "UE positioning measurement":
    - if the IE "Positioning method" is set to "GPS" and UE has neither received nor stored sufficient assistance data in variable UE_POSITIONING_GPS_DATA to perform the requested measurements:
      - send a MEASUREMENT REPORT message to UTRAN, indicating the kind of assistance data which is necessary to fulfil the measurement request in the IE "UE positioning error";
  - for any other measurement type:

- if the measurement is valid in the current RRC state of the UE:
  - begin measurements according to the stored control information for this measurement identity.

- if the IE "Measurement command" has the value "modify":
  - for all ~~measurement control~~ IEs present in the MEASUREMENT CONTROL message:
    - if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":
      - replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;
      - resume the measurements according to the new stored measurement control information.
    - otherwise:
      - set the variable CONFIGURATION_INCOMPLETE to TRUE;
- if the IE "measurement command" has the value "release":
  - terminate the measurement associated with the identity given in the IE "measurement identity";
  - clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.
- if the IE "DPCH Compressed Mode Status Info" is present,:
  - and if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IE 'TGMP' in variable TGPS_IDENTITY):
    - set the variable CONFIGURATION_INCOMPLETE to TRUE;
  - if pattern sequence corresponding to IE "TGPSI" is already active (according to "TGPS Status Flag"):
    - deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message;
  - after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:
    - activate the pattern sequence stored in the variable TGPS_IDENTITY corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "active" at the time indicated by IE "TGCFN"; and
    - begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
    - if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:
      - start the concerned pattern sequence immediately at that CFN;
  - not alter pattern sequences stored in variable TGPS_IDENTITY, but not identitifed in IE "TGPSI"
- if the UE in CELL_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT_IDENTITY:

- update the stored information with the traffic volume measurement control information in variable MEASUREMENT_IDENTITY; and

- refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message;

- if the IE "Read SFN indicator" included in the IE "Cell info" of an inter-frequency cell is set to TRUE and the variable UE_CAPABILITY_TRANSFERRED has the DL "Measurement capability" for "FDD measurements" set to TRUE (the UE requires DL compressed mode in order to perform measurements on FDD):

  - set the variable CONFIGURATION_INCOMPLETE to TRUE;

- clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;

- and the procedure ends.

8.4.1.6 Measurements after transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state

The UE shall apply the following rules for different measurement types after transiting from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state:

8.4.1.6.1 Intra-frequency measurement

Upon transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state, the UE shall:

- stop intra-frequency type measurement reporting ~~assigned in a MEASUREMENT CONTROL message;~~

- if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

- if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or

- if the transition is not due to a reconfiguration message:

  - delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY;

- begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);

- if the UE receives the IE "Intra-frequency reporting quantity for RACH Reporting" and the IE "Maximum number of Reported cells on RACH" IEs from System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):

  - use this information for reporting measured results in RACH messages.

8.4.1.6.3 Inter-RAT measurement

Upon transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state, the UE shall:

- stop the inter-RAT type measurement reporting assigned in a MEASUREMENT CONTROL message;

~~- if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE; or~~

~~- if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or~~

~~- if the transition is not due to a reconfiguration message:~~

- delete the measurements of type inter-RAT associated with the variable MEASUREMENT_IDENTITY; [indent decreased one level]

- begin monitoring cells listed in the IE "inter-RAT cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);

- in CELL_FACH state:

  - perform measurements on other systems according to the IE "FACH measurement occasion info".

8.4.1.6.6 Traffic volume measurement

Upon transition from CELL_DCH to CELL_FACH or CELL_PCH or URA_PCH state, the UE shall:

- retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT_IDENTITY; and

  - if the optional IE "measurement validity" for this measurement has not been included:

    - delete the measurement associated with the variable MEASUREMENT_IDENTITY;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL_DCH":

    - stop measurement reporting;

    - store the measurement associated with the variable MEASUREMENT_IDENTITY to be used after the next transition to CELL_DCH state;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":

    - continue measurement reporting;

  - if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL_DCH":

    - resume this measurement and associated reporting;

- if no traffic volume type measurements set up or modified through a MEASUREMENT CONTROL message and valid in CELL_FACH or CELL_PCH or URA_PCH states are stored in the variable MEASUREMENT_IDENTITY with the same identity as the one indicated in the IE “Traffic volume measurement system information”:

- store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT_IDENTITY;

- begin traffic volume measurement reporting according to the assigned information.

8.4.1.6a Actions in CELL_FACH/CELL_PCH/URA/PCH state upon cell re-selection

Upon cell reselection while in CELL_FACH/CELL_PCH/URA/PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

- delete ~~the~~ all the measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY.

- Delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

8.4.1.7.3 Inter-RAT measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- stop monitoring the list of cells assigned in the IE "inter-RAT cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);

- ~~retrieve each set of measurement control information of measurement type "inter-RAT" stored in the variable MEASUREMENT_IDENTITY; and~~

~~if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":~~

~~resume the measurement reporting.~~

8.4.1.7.4 Traffic volume measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT_IDENTITY;

  - if the optional IE "measurement validity" for this measurement has not been included:

    - delete the measurement associated with the variable MEASUREMENT_IDENTITY;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL_DCH":

    - stop measurement reporting; and

    - save the measurement associated with the variable MEASUREMENT_IDENTITY to be used after the next transition to CELL_FACH/CELL_PCH/URA_PCH state;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":

    - continue measurement reporting;

  - if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL_DCH":

- resume this measurement and associated reporting;

- if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message when transiting to CELL_DCH state:

  - continue an ongoing traffic volume type measurement, assigned in System Information Block type 11 (or System Information Block type 12, according to subclause 8.1.1.6.11);

~~- if the UE in CELL_DCH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in variable MEASUREMENT_IDENTITY:~~

  ~~- update the stored information with the traffic volume measurement control information in variable MEASUREMENT_IDENTITY.~~

8.6.7.1 Measurement validity

If the optional IE "measurement validity" for a given measurement has not been included in measurement control information, the UE shall delete the measurement associated with the variable MEASUREMENT_IDENTITY after the UE makes a transition to a new state.
If the IE "measurement validity" for this measurement has been included in measurement control information, the UE shall save the measurement associated with the variable MEASUREMENT_IDENTITY. The IE "UE state" defines the scope of resuming the measurement.
If the "UE state" is defined as "all states", the UE shall continue the measurement after making a transition to a new state. This scope is assigned only for traffic volume type measurements and can only be applied by the UE if the IE " traffic volume measurement object" has been included in measurement control information. If the IE " traffic volume measurement object" has not been included in measurement control information, the UE shall not save the measurement control information in variable MEASUREMENT_IDENTITY, but shall send a MEASUREMENT CONTROL FAILURE message to the UTRAN with failure cause "Configuration incomplete".
If the "UE state" is defined as "all states except CELL_DCH", the UE shall store the measurement to be resumed after a subsequent transition from CELL_DCH state to any of the other states in connected mode. This scope is assigned only for traffic volume type measurements.
If the "UE state" is defined as "CELL_DCH", the UE shall store the measurement to be resumed after a subsequent transition to CELL_DCH state. ~~After cell re-selection, the UE shall delete any ongoing intra-frequency or inter-frequency and inter-RAT type measurement associated with the variable MEASUREMENT_IDENTITY. Other measurement types shall, however, be continued regardless of cell reselection.~~

8.6.7.16 Intra-frequency measurement

If IE "Intra-frequency measurement" is received by the UE in a MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", but IE "Intra-frequency measurement quantity", IE "Intra-frequency reporting quantity" or "CHOICE Report criteria" is not received, the UE shall:

- clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY;

- set the variable CONFIGURATION_INCOMPLETE to TRUE.

In case of 1a or 1c (resp. 1b or 1f) event-triggered reporting:

- if the IE “Intra-frequency measurement criteria” is set to “pathloss”, the UE shall:

  - if detected cells are indicated as possibly triggering the event within the IEs “Triggering condition 2” (resp. “Triggering condition 1”):

- set the variable ~~INVALID_CONFIGURATION~~ CONFIGURATION_INCOMPLETE to TRUE

10.3.7.19 Inter-frequency measurement reporting criteria

The triggering of the event-triggered reporting for an inter-frequency measurements. All events concerning inter-frequency measurements are labelled 2x where x is a,b,c..
Event 2a: Change of best frequency.
Event 2b: The estimated quality of the currently used frequency is below a certain threshold **and** the estimated quality of a non-used frequency is above a certain threshold.
Event 2c: The estimated quality of a non-used frequency is above a certain threshold.
Event 2d: The estimated quality of the currently used frequency is below a certain threshold.
Event 2e: The estimated quality of a non-used frequency is below a certain threshold.
Event 2f: The estimated quality of the currently used frequency is above a certain threshold.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Parameters required for each event	OP	1 to <maxMeasEvent>		
>Inter-frequency event identity	MP		Inter-frequency event identity 10.3.7.14	
>Threshold used frequency	CV–*clause 0*		Integer(-115..0)	Ranges used depend on measurement quantity. CPICH Ec/No -24..0dB CPICH/Primary CCPCH RSCP -115..-25dBm
>W used frequency	CV–*clause 2*		Real(0, 0.1..2.0 by step of 0.1)	
>Hysteresis	MP		Real(0, 0.5..14.5 by step of 0.5)	In event 2a, 2b, 2c, 2d, 2e, 2f
>Time to trigger	MP		Time to trigger 10.3.7.64	Indicates the period of time between the timing of event detection and the timing of sending Measurement Report. Time in ms.
>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>Parameters required for each non-used frequency	OP	1 to <maxFreq>		In this release, the first listed threshold and W parameter shall apply to all non-used frequencies.
>>Threshold non used frequency	CV–*clause 1*		Integer(-115..0)	Ranges used depend on measurement quantity. CPICH Ec/No -24..0dB CPICH/Primary CCPCH RSCP -115..-25dBm. This IE is not needed if the IE "Inter-frequency event identity" is set to 2a. However, it is specified to be mandatory to align with the ASN.1.
>>W non-used frequency	CV-*clause 1*		Real(0, 0.1..2.0 by step of 0.1)	

10.3.7.32 Inter-RAT reporting quantity

For all boolean types TRUE means inclusion in the report is requested.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
UTRAN estimated quality	MP		Boolean	This parameter is not used in this release and should be set to FALSE.
CHOICE *system*	MP			
>GSM				
>>Observed time difference to GSM cell Reporting indicator	MP		Boolean	
>>GSM Carrier RSSI Reporting indicator	MP		Boolean	

14.1 Intra-frequency measurements

14.1.1 Intra-frequency measurement quantities

A measurement quantity is used to evaluate whether an intra-frequency event has occurred or not. It can be:

1 Downlink E_c/N_0.

2 Downlink path loss.

For FDD:
Pathloss in dB = Primary CPICH Tx power - CPICH RSCP.

For Primary CPICH Tx power the IE "Primary CPICH Tx power" shall be used. The unit is dBm.

CPICH RSCP is the result of the CPICH RSCP measurement. The unit is dBm.

For TDD:
Pathloss in dB = Primary CCPCH TX power - Primary CCPCH RSCP.

For Primary CCPCH TX power the IE "Primary CCPCH TX Power" shall be used. The unit is dBm.

Primary CCPCH RSCP is the result of the Primary CCPCH RSCP measurement. The unit is dBm.

If necessary Pathloss shall be rounded up to the next higher integer.
Results higher than 158 shall be reported as 158.
Results lower than 46 shall be reported as 46.

3 Downlink received signal code power (RSCP) after despreading.

4 ISCP measured on Timeslot basis.

A description of those values can be found in [7] and [8].

14.1.2 Intra-frequency reporting events for FDD

Within the measurement reporting criteria field in the Measurement Control message the UTRAN notifies the UE which events should trigger a measurement report. The listed events are the toolbox from which the

UTRAN can choose the reporting events that are needed for the implemented handover evaluation function, or other radio network functions.
All the specified events are measured with respect to any of the measurement quantities given in subclause 14.1.1. The measurement quantities are measured on the monitored primary common pilot channels (CPICH) of the cell defined in the measurement object.
Special mechanisms for the events are illustrated in subclause 14.1.4 and 14.1.5.

NOTE: The events below are numbered 1A, 1B, 1C,… since all intra-frequency reporting events would be labelled 1X, inter-frequency reporting events would be labelled 2X, and so on for the other measurement types.

14.1.2.1 Reporting event 1A: A Primary CPICH enters the reporting range

When an intra-frequency measurement configuring event 1a is set up, the UE shall:

- create a variable TRIGGERED_1A_EVENT related to that measurement, which shall initially be empty;
- delete this variable when the measurement is released.

When event 1A is configured in the UE, the UE shall:

- if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for one or more primary CPICHs, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for one or more primary CPICHs, for each of these primary CPICHs:
  - if all required reporting quantities are available for that cell, and
  - if the equations have been fulfilled during the time "Time to trigger", and if that primary CPICH is part of cells allowed to trigger the event according to "Triggering condition 2", and if that primary CPICH is not included in the "cells triggered" in the variable TRIGGERED_1A_EVENT:
    - include that primary CPICH in the "cells recently triggered" in the variable TRIGGERED_1A_EVENT;
- if the value of "Reporting deactivations threshold" for this event is greater than or equal to the current number of cells in the active set or equal to 0 and any primary CPICHs are stored in the "cells recently triggered" in the variable TRIGGERED_1A_EVENT:
  - if "Reporting interval" for this event is not equal to 0:
    - if the IE "Periodical reporting running" in the variable TRIGGERED_1A_EVENT is set to FALSE:
      - start a timer with the value of "Reporting interval" for this event and set the IE "Periodical reporting running" in the variable TRIGGERED_1A_EVENT to TRUE;
    - set "sent reports" for the primary CPICHs in "cells recently triggered" in the variable TRIGGERED_1A_EVENT to 1;
  - send a measurement report with IEs set as below:
    - set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1a"; and
    - include in "cell measurement event results" all entries of the "cells recently triggered" in the variable TRIGGERED_1A_EVENT that are not part of the active set in descending order according to the configured measurement quantity;

- set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2;

- move all entries from "cells recently triggered" to "cells triggered" in the variable TRIGGERED_1A_EVENT;

- if the timer for the periodical reporting has expired:

  - if any primary CPICH is included in the "cells triggered" in the variable TRIGGERED_1A_EVENT, and not included in the current active set:

    - if "Reporting interval" for this event is not equal to 0, and if "Amount of reporting" is greater than "sent reports" stored for any of these primary CPICHs, in "cells triggered" in the variable TRIGGERED_1A_EVENT:

      - increment the stored counter "sent reports" for all CPICHs in "cell triggered" in variable TRIGGERED_1A_EVENT;

      - start a timer with the value of "Reporting interval" for this event;

      - send a measurement report with IEs set as below:

        - set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1a"; and

        - include in "cell measurement event results" all entries of the variable TRIGGERED_1A_EVENT with value of IE "sent reports" smaller than value of "Amount of reporting" that are not part of the active set in descending order according to the configured measurement quantity;

        - set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2;

      - if "sent reports" in variable TRIGGERED_1A_EVENT is greater than "Amount of reporting" for all entries:

        - set the IE "Periodical Reporting running" in the variable TRIGGERED_1A_EVENT to FALSE and disable the timer for the periodical reporting;

- if "Measurement quantity" is "pathloss" and Equation 3 below is fulfilled for a primary CPICH, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 4 below is fulfilled for a primary CPICH:

  - if that primary CPICH is included in the "cells triggered" in the variable TRIGGERED_1A_EVENT:

    - remove the entry of that primary CPICH from "cells triggered" in the variable TRIGGERED_1A_EVENT;

    - if no entry in the variable TRIGGERED_1A_EVENT has a value of "sent reports" smaller than "Amount of reporting":

      - stop the reporting interval timer;

      - set the IE "Periodical reporting running" in the variable TRIGGERED_1A_EVENT to FALSE.

Upon transition to CELL_DCH the UE shall:

- Include the primary CPICH of all cells in the current active set into the "cells triggered" in the variable TRIGGERED_1A_EVENT.

Equation 1 (Triggering condition for pathloss) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} \leq W \cdot 10 \cdot Log\left(1/\sum_{i=1}^{N_A}(1/M_i)\right) + (1-W) \cdot 10 \cdot LogM_{Best} + (R_{1a} - H_{1a}/2),$$

Equation 2 (Triggering condition for all the other measurement quantities) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} \geq W \cdot 10 \cdot Log\left(\sum_{i=1}^{N_A} M_i\right) + (1-W) \cdot 10 \cdot LogM_{Best} - (R_{1a} - H_{1a}/2),$$

Equation 3 (Leaving triggering condition for pathloss) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} > W \cdot 10 \cdot Log\left(1/\sum_{i=1}^{N_A}(1/M_i)\right) + (1-W) \cdot 10 \cdot LogM_{Best} + (R_{1a} + H_{1a}/2),$$

Equation 4 (Leaving triggering condition for all the other measurement quantities) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} < W \cdot 10 \cdot Log\left(\sum_{i=1}^{N_A} M_i\right) + (1-W) \cdot 10 \cdot LogM_{Best} - (R_{1a} - H_{1a}/2),$$

The variables in the formula are defined as follows:

$\boldsymbol{M_{New}}$ is the measurement result of the cell entering the reporting range.

$\boldsymbol{CIO_{New}}$ is the individual cell offset for the cell entering the reporting range if an individual cell offset is stored for that cell. Otherwise it is equal to 0.

$\boldsymbol{M_i}$ is a measurement result of a cell in the active set.

$\boldsymbol{N_A}$ is the number of cells in the current active set~~.~~, and not stored as "Cells forbidden to affect reporting range".

For pathloss

$\boldsymbol{M_{Best}}$ is the measurement result of the cell in the active set with the lowest measurement result.

for other measurements quantities.

$\boldsymbol{M_{Best}}$ is the measurement result of the cell in the active set with the highest measurement result.

$\boldsymbol{W}$ is a parameter sent from UTRAN to UE.

$\boldsymbol{R_{1a}}$ is the reporting range constant.

$\boldsymbol{H_{1a}}$ is the hysteresis parameter for the event 1a.

If the measurement results are pathloss or CPICH-Ec/No then $\boldsymbol{M_{New}}$, $\boldsymbol{M_i}$ and $\boldsymbol{M_{Best}}$ are expressed as ratios.

If the measurement result is CPICH-RSCP then $\boldsymbol{M_{New}}$, $\boldsymbol{M_i}$ and $\boldsymbol{M_{Best}}$ are expressed in [mW].

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, November 26th-30th, 2001

Tdoc R2-012710

CR-Form-v4

CHANGE REQUEST

⌘ **25.331** **CR** **1156** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Measurement related corrections
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-12-02
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘ Ambiguous measurement handling need to be corrected.

Summary of change: ⌘

1. Sections 8.1.1.6.12, 8.1.1.6.12: SIB11 shall also be read and is also valid for UEs in CELL_FACH, CELL_PCH and URA_PCH states, and even if SIB12 is broadcast since the list of cells broadcast in SIB11 shall be stored by a UE in those states. The text in sections 8.1.1.6.11 and 8.1.1.6.12 is clarified to make it clearer since:
   - The IEs "Intra-frequency/inter-frequency/inter-RAT Cell info list" shall be read from SIB 11, and then some cells can be added/removed in SIB 12. As the text is writen now, it could understood that the UE in connected mode shall first read SIB 12, and then proceed with the remaining text for SIB 11, which would result in that the cells that were included in SIB 12 are removed from the CELL_INFO_LIST variable. The second possible interpretation of the current text would be that the UE does not need to proceed with the remaining text which is also wrong.
   - Some parts of the text in those section refers to non-existing IEs in SIB 11/12: "Inter-frequency measurement quantity"/ "Inter-RAT measurement quantity".
   - The handling of traffic volume measurements is also clarified, since according to the text in section 8.4.1, the UE shall not update the variable MEASUREMENT_IDENTITY with what is received in the IE "Traffic volume measurement system information" if a measurement control has been received that set up a measurement with the same id as the one that is broadcast in "Traffic volume measurement system information".
2. 8.3.5: Intra- and inter-frequency measurements after hard-handover: it is proposed to have the UE stopping measurements on the monitored cells until it receives a MEASUREMENT CONTROL message.
3. Clarification in 8.4.0 regarding the "Monitored set": the definition is rephrased in order not to refer to "neighbouring cells", as this notion does not exist when in

CELL_DCH.

4. 8.4.1.3:
   - when a measurement control message is received, it is stated that the UE shall possibly "overwrite" a measurement that is already stored with that identity. The word "overwriting" shall be understood as that the measurement that was previously stored with that identity shall be released (which also implies that all variables related to that measurement, such as TRIGGERED_1A_EVENT, shall be deleted).
   - The current text is unclear at two occasions, and some clarification is proposed.
5. 8.4.1.6.1: in 8.4.1.6.1, it is stated that the UE shall "stop intra-frequency type measurement reporting assigned in a MEASUREMENT CONTROL" while this holds also for the measurement reporting that was assigned to the UE through SIB11/12.
6. 8.4.1.6.3: since the IE "Measurement validity" cannot be set for inter-RAT measurements, the UE shall always delete the inter-RAT measurements stored in the variable MEASUREMENT_VALIDITY when moving from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH.
7. 8.4.1.6.6, 8.4.1.6a: with the current text, if traffic volume type measurements set up valid in CELL_FACH or CELL_PCH or URA_PCH states are stored in the variable MEASUREMENT_IDENTITY, the UE shall not take into account the traffic volume measurement information broadcast in SIB11/12. However, those measurements could have been configured through system information broadcast in another cell, and in that case, the information related to traffic volume measurement that is broadcast in the new cell shall be taken into account. It is proposed that UE shall skip the traffic volume measurements broadcast in SIB11/12 only if traffic volume measurements with the same identity have been set up or modified through a dedicated message. The same reasoning leads to the change that is proposed in 8.4.1.6a: the traffic volume measurements that were configured through system information shall be removed when a cell reselection is performed. The ones that have been configured or modified through a dedicated message shall be kept.
8. 8.4.1.7.2, 8.4.1.7.3: the current text says that the UE shall stop monitoring the cells in SIB11/12 when moving from CELL_FACH to CELL_DCH. A note clarifies that this does not mean that the UE shall remove those cells from the CELL_INFO_LIST variable. In 8.4.1.7.3, the part related to the IE "Measurement Validity" is removed since this IE cannot be included for inter-RAT measurements.
9. 8.4.1.7.4: a part of this section is removed since it is not related to what happens to the transition from CELL_FACH to CELL_DCH, and that text does not bring any additional information compared to section 8.4.1.3.
10. 8.6.7.1: the behaviour of the UE with regards to measurements when performing cell re-selection is already specified in section 8.4.1.6a, and is not related to the IE "Measurement validity", since this IE specifies what the UE shall do with a measurement at state change. It is thus proposed to remove the text that is related to cell reselection in 8.6.7.1.
11. Since the transmitting power is not available for the detected cells, those cannot be used for intra-frequency measurements when the measurement quantity is pathloss. If detected cells are included in IEs "Triggering condition 1" or "Triggering condition 2" while the measurement quantity is pathloss, it is proposed that the UE set the variable INVALID_CONFIGURATION to TRUE.
12. In chapter 10.3.7.19: for release 99, the W parameters shall be the same for all non-used frequencies included in an inter-frequency measurement, to avoid any ambiguity in the signaling (which threshold/W should correspond to which non-used frequency?)
13. In chapter 10.3.7.32: "Observed time difference to GSM cell" is a the name of the IE whose reporting shall be done according to the boolean included in this "Inter-RAT reporting quantity" IE. It is therefore proposed to change the name of the boolean to "Observed time difference to GSM cell reporting indicator". The same applies for the

IE “GSM carrier RSSI”.

14. Initiation/Clearing of the variables TRIGGERED_1X_EVENT (chapter 14.1.2): those variables shall be created when a measurement is set up and cleared when the measurement is released.
15. In chapter 14.1.2: the time required for the different reporting quantities to be measured (e.g. measuring the Ec/No of a cell will typically be much quicker than measuring the CellSyncInfo). A cell can then potentially trigger an event even though not all the quantities required to be reported are available for that cell. Since in most cases, UTRAN wants to get the reporting quantities for the cell that triggered the event, it is clarified that only cells for which all reporting quantities are available can trigger an event.
16. Handling of the “Cell individual offsets” in the formula given in chapter 14.1.2: the formulas in 14.1.2 are updated to include the cell individual offset described in section 10.1.5.3. The cell individual offset shall only be applied to cells on the left side of the inequality, and not be added to the measured value of the active set cells when computing the quality estimate of the active set. The same changes are needed in the description of the other events and will be provided in the final version of the CR if the principle of the change is agreed.

Impact analysis:
This CR has isolated impact. The change would not affect implementations behaving as indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Updates in rev 1 are highlighted in yellow.

Consequences if not approved:	⌘	Ambiguous handling of the measurements can result in unexpected UE behaviour, and cause unreliable measurements reports.

Clauses affected:	⌘	8.1.1.6.11, 8.1.1.6.12, 8.3.5, 8.4.0, 8.4.1.3, 8.4.1.6.1, 8.4.1.6.3, 8.4.1.6.6, 8.4.1.6a, 8.4.1.7.3, 8.4.1.7.4, 8.6.7.1, 8.6.7.16, 10.3.7.19, 10.3.7.32, 14.1.2		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v3.8.0, CR 1155r1
Other comments:	⌘			

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at:
http://www.3gpp.org/3G_Specs/CRs.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.

8.1.1.6.11 System Information Block type 11

The UE should store all relevant IEs included in this system information block. The UE shall:

- if IE "FACH measurement occasion info" is included:
  - act as specified in subclause 8.6.7.
- else:
  - may perform inter-frequency/inter-RAT measurements or inter-frequency/inter-RAT cell re-selection evaluation, if the UE capabilities permit such measurements while simultaneously receiving the S-CCPCH of the serving cell;
- ~~if in connected mode, and System Information Block type 12 is indicated as used in the cell:~~
  - ~~read and act on information sent in System Information Block type 12;~~
- Clear the variable CELL_INFO_LIST;
- Act upon the received IE "Intra-frequency/Inter-frequency/Inter-RAT cell info list" as described in subclause 8.6.7.3;
- ~~for each measurement type:~~
  - ~~start a measurement using the set of IEs specified for that measurement type;~~
- ~~associate each measurement with the identity number given by the IE "Measurement identity";~~
- ~~clear the variable CELL_INFO_LIST;~~
- ~~act upon the received IE "Intra-frequency/Inter-frequency/Inter-RAT cell info list" as described in subclause 8.6.7.3;~~
- If in idle mode or
- If in connected mode and if system information block type 12 is not broadcast in the cell:
  - if included, store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered; [indent increased one step]
- If in connected mode and if system information block type 12 is not broadcast in the cell:
  - Read the IE “Traffic volume measurement information”
  - If no traffic volume measurement with the measurement identity indicated in the IE “Traffic volume measurement” was set up or modified through a MEASUREMENT CONTROL message,
    - update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.
- if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:
  - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":
    - use the default values specified for the IE "HCS neighbouring cell information" for that cell;

- if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":
  - for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list";
- if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":
  - use the default values specified for the IE "HCS neighbouring cell information" for that cell;
- if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":
  - for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list";
- if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT Cell info list":
  - use the default values specified for the IE "HCS neighbouring cell information" for that cell;
- if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":
  - for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list";

- if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:
  - use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

- if in connected mode, and System Information Block type 12 is indicated as used in the cell:
  - read and act on information sent in System Information Block type 12 as indicated in section 8.1.1.6.12;

8.1.1.6.12 System Information Block type 12

If in connected mode, the UE should store all relevant IEs included in this system information block. The UE shall:

- if IE "FACH measurement occasion info" is included:
  - act as specified in subclause 8.6.7.
- else:
  - perform neither inter-frequency/inter-RAT measurements nor inter-frequency/inter-RAT cell re-selection evaluation, independent of UE measurement capabilities;

- ~~for each measurement type:~~
  - ~~start (or continue) a measurement using the set of IEs specified for that measurement type~~;

- act upon the received IE "Intra-frequency/Inter-frequency/Inter-RAT cell info list" as described in subclause 8.6.7.3;

- if any of the IEs "Intra-frequency measurement quantity", "Intra-frequency reporting quantity for RACH reporting", "Maximum number of reported cells on RACH" or "Reporting information for state CELL_DCH" are not included in the system information block:
  - read the corresponding IE(s) in system information block type 11 and use that information for the intra-frequency measurement;
- if included in this system information block or in System Information Block type 11
  - store the IE "Intra-frequency reporting quantity" and the IE "Intra-frequency measurement reporting criteria" or "Periodical reporting criteria" in order to activate reporting when state CELL_DCH is entered;

~~- if the IE "Inter-frequency measurement quantity" is not included in the system information block:~~
  ~~- read the corresponding IE in System Information Block type 11 and use that information for the inter-frequency measurement;~~
~~- if the IE "Inter-RAT measurement quantity" is not included in the system information block:~~
  ~~- read the corresponding IE in System Information Block type 11 and use that information for the inter-RAT measurement;~~

- If the IE “Traffic volume measurement information” is not included in this system information block:
  - Read the corresponding IE in system information block type 11.
- If the IE “Traffic volume measurement information” was received either in this system information block or in system information block type 11:
  - If no traffic volume measurement with the measurement identity indicated in the IE “Traffic volume measurement” was set up or modified through a MEASUREMENT CONTROL message,
    - update the variable MEASUREMENT_IDENTITY with the measurement information received in that IE.
- If in CELL_FACH state:
  - Start or continue the traffic volume measurements stored in the variable MEASUREMENT_IDENTITY that are valid in CELL_FACH state.

~~- if in state CELL_FACH:~~
  ~~- start traffic volume measurement reporting as specified in the IE "Traffic volume reporting quantity";~~
~~- associate each measurement with the identity number given by the IE "Measurement identity";~~

- if IE "Use of HCS" is set to "used", indicating that HCS is used, do the following:
  - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Intra-frequency cell info list":
    - use the default values specified for the IE "HCS neighbouring cell information" for that cell;
  - if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Intra-frequency cell info list":

        - for that cell use the same parameter values as used for the preceding IE "Intra-frequency cell info list";

    - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-frequency cell info list":

        - use the default values specified for the IE "HCS neighbouring cell information" for that cell;

    - if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-frequency cell info list":

        - for that cell use the same parameter values as used for the preceding IE "Inter-frequency cell info list";

    - if IE "HCS neighbouring cell information" is not included in the first occurrence of IE "Inter-RAT cell info list":

        - use the default values specified for the IE "HCS neighbouring cell information" for that cell;

    - if IE "HCS neighbouring cell information" is not included in other occurrence of IE "Inter-RAT cell info list":

        - for that cell use the same parameter values as used for the preceding IE "Inter-RAT cell info list".

- if the value of the IE "Cell selection and reselection quality measure" is different from the value of the IE "Cell selection and reselection quality measure" obtained from System Information Block type 3 or System Information Block type 4:

    - use the value of the IE from this System Information Block and ignore the value obtained from System Information Block type 3 or System Information Block type 4.

If in idle mode, the UE shall not use the values of the IEs in this system information block.

8.3.5 Hard handover

When performing hard handover with change of frequency, the UE shall:

- Stop all intra-frequency and inter-frequency measurements on the cells listed in the variable CELL_INFO_LIST until a MEASUREMENT CONTROL message is received from UTRAN.

8.3.5.1 Timing re-initialised hard handover

8.4 Measurement procedures

8.4.0 Measurement related definitions

UTRAN may control a measurement in the UE either by broadcast of SYSTEM INFORMATION and/or by transmitting a MEASUREMENT CONTROL message.
The following information is used to control the UE measurements and the measurement results reporting:

1. **Measurement identity**: A reference number that should be used by the UTRAN when setting up, modifying or releasing the measurement and by the UE in the measurement report.

2. **Measurement command**: One out of three different measurement commands.
    - Setup: Setup a new measurement.
    - Modify: Modify a previously defined measurement, e.g. to change the reporting criteria.
    - Release: Stop a measurement and clear all information in the UE that are related to that measurement.
3. **Measurement type**: One of the types listed below describing what the UE shall measure.

Presence or absence of the following control information depends on the measurement type

4. **Measurement objects:** The objects on which the UE shall measure measurement quantities, and corresponding object information.
5. **Measurement quantity:** The quantity the UE shall measure on the measurement object. This also includes the filtering of the measurements.
6. **Reporting quantities:** The quantities the UE shall include in the report in addition to the quantities that are mandatory to report for the specific event.
7. **Measurement reporting criteria**: The triggering of the measurement report, e.g. periodical or event-triggered reporting.
8. **Measurement Validity**: Defines in which UE states the measurement is valid.
9. **Measurement reporting mode**: This specifies whether the UE shall transmit the measurement report using AM or UM RLC.
10. **Additional measurement identities**: A list of references to other measurements. When this measurement triggers a measurement report, the UE shall also include the reporting quantities for the measurements referenced by the additional measurement identities.

All these measurement parameters depend on the measurement type and are described in more detail in clause 14.
The different types of measurements are:

- **Intra-frequency measurements**: measurements on downlink physical channels at the same frequency as the active set. A measurement object corresponds to one cell. Detailed description is found in subclause 14.1.
- **Inter-frequency measurements**: measurements on downlink physical channels at frequencies that differ from the frequency of the active set. A measurement object corresponds to one cell. Detailed description is found in subclause 14.2.
- **Inter-RAT measurements**: measurements on downlink physical channels belonging to another radio access technology than UTRAN, e.g. GSM. A measurement object corresponds to one cell. Detailed description is found in subclause 14.3.
- **Traffic volume measurements**: measurements on uplink traffic volume. A measurement object corresponds to one cell. Detailed description is found in subclause 14.4.
- **Quality measurements**: Measurements of downlink quality parameters, e.g. downlink transport block error rate. A measurement object corresponds to one transport channel in case of BLER. A measurement object corresponds to one timeslot in case of SIR (TDD only). Detailed description is found in subclause 14.5.
- **UE-internal measurements**: Measurements of UE transmission power and UE received signal level. Detailed description is found in subclause 14.6.

- **UE positioning measurements:** Measurements of UE position. Detailed description is found in subclause 14.7.

The UE shall support a number of measurements running in parallel as specified in [19] and [20]. The UE shall also support that each measurement is controlled and reported independently of every other measurement.
Cells that the UE is monitoring are grouped in the UE into three different categories:

1. Cells, which belong to the **active set.** User information is sent from all these cells. In FDD, the cells in the active set are involved in soft handover. In TDD the active set always comprises one cell only.

2. Cells, which are not included in the active set, but are ~~monitored according to a neighbour list assigned by the UTRAN~~ explicitly indicated to be measured by UTRAN belong to the **monitored set.**

   NOTE: The cells explicitly indicated to be measured by UTRAN for a given intra-frequency (resp. inter-frequency, inter-RAT) measurement are:

   - If the IE "Cells for measurement" has been received for this intra-frequency (resp. inter-frequency, inter-RAT) measurement, the intra-frequency (resp. inter-frequency, inter-RAT) cells stored in the variable CELL_INFO_LIST and pointed at in the IE "Cells for measurement".

   - Otherwise any of the intra-frequency (resp. inter-frequency, inter-RAT) cells stored in the variable CELL_INFO_LIST.

3. Cells detected by the UE, which are neither included in the active set nor in the monitored set belong to the **detected set.** Reporting of measurements of the detected set is only applicable to intra-frequency measurements made by UEs in CELL_DCH state.

8.4.1 Measurement control

Figure 56: Measurement Control, normal case

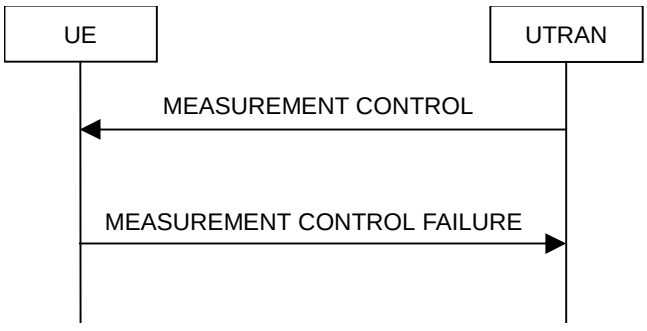

Figure 57: Measurement Control, failure case

8.4.1.1 General

The purpose of the measurement control procedure is to setup, modify or release a measurement in the UE.

8.4.1.2 Initiation

The UTRAN may request a measurement by the UE to be setup, modified or released with a MEASUREMENT CONTROL message, which is transmitted on the downlink DCCH using AM RLC.
The UTRAN should take the UE capabilities into account when a measurement is requested from the UE.
When a new measurement is created, UTRAN should set the IE "Measurement identity" to a value, which is not used for other measurements. UTRAN may use several "Measurement identity" for the same "Measurement type". In case of setting several "Measurement identity" within a same "Measurement type", the measurement object or the list of measurement objects can be set differently for each measurement with different "Measurement identity ".
When a current measurement is modified or released, UTRAN should set the IE "Measurement identity" to the value, which is used for the measurement being modified or released. In case of modifying IEs within a "Measurement identity", it is not needed for UTRAN to indicate the IEs other than modified IEs, and the UE continues to use the current values of the IEs that are not modified.

8.4.1.3 Reception of MEASUREMENT CONTROL by the UE

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.
The UE shall:

- read the IE "Measurement command";
- if the IE "Measurement command" has the value "setup":
  - store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", ~~possibly overwriting~~ ~~releasing first~~first releasing any ~~the~~ ~~measurement~~ previously stored measurement with that identity if that exists;
  - for measurement types "inter-RAT measurement" or "inter-frequency measurement":
    - if, according to its measurement capabilities, the UE requires compressed mode to perform the measurements and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or
    - if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
      - if the measurement is valid in the current RRC state of the UE:
        - begin measurements according to the stored control information for this measurement identity;
  - for measurement type "UE positioning measurement":
    - if the IE "Positioning method" is set to "GPS" and UE has neither received nor stored sufficient assistance data in variable UE_POSITIONING_GPS_DATA to perform the requested measurements:
      - send a MEASUREMENT REPORT message to UTRAN, indicating the kind of assistance data which is necessary to fulfil the measurement request in the IE "UE positioning error";
  - for any other measurement type:

- if the measurement is valid in the current RRC state of the UE:
  - begin measurements according to the stored control information for this measurement identity.

- if the IE "Measurement command" has the value "modify":
  - for all ~~measurement control~~ IEs present in the MEASUREMENT CONTROL message:
    - if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":
      - replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;
      - resume the measurements according to the new stored measurement control information.
    - otherwise:
      - set the variable CONFIGURATION_INCOMPLETE to TRUE;

- if the IE "measurement command" has the value "release":
  - terminate the measurement associated with the identity given in the IE "measurement identity";
  - clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

- if the IE "DPCH Compressed Mode Status Info" is present,:
  - and if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IE 'TGMP' in variable TGPS_IDENTITY):
    - set the variable CONFIGURATION_INCOMPLETE to TRUE;
  - if pattern sequence corresponding to IE "TGPSI" is already active (according to "TGPS Status Flag"):
    - deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message;
  - after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:
    - activate the pattern sequence stored in the variable TGPS_IDENTITY corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "active" at the time indicated by IE "TGCFN"; and
    - begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
    - if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:
      - start the concerned pattern sequence immediately at that CFN;
  - not alter pattern sequences stored in variable TGPS_IDENTITY, but not identitifed in IE "TGPSI"

- if the UE in CELL_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT_IDENTITY:

- update the stored information with the traffic volume measurement control information in variable MEASUREMENT_IDENTITY; and

- refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message;

- if the IE "Read SFN indicator" included in the IE "Cell info" of an inter-frequency cell is set to TRUE and the variable UE_CAPABILITY_TRANSFERRED has the DL "Measurement capability" for "FDD measurements" set to TRUE (the UE requires DL compressed mode in order to perform measurements on FDD):

  - set the variable CONFIGURATION_INCOMPLETE to TRUE;

- clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;

- and the procedure ends.

8.4.1.6 Measurements after transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state

The UE shall apply the following rules for different measurement types after transiting from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state:

8.4.1.6.1 Intra-frequency measurement

Upon transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state, the UE shall:

- stop intra-frequency type measurement reporting ~~assigned in a MEASUREMENT CONTROL message;~~

- if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

- if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or

- if the transition is not due to a reconfiguration message:

  - delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY;

- begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);

- if the UE receives the IE "Intra-frequency reporting quantity for RACH Reporting" and the IE "Maximum number of Reported cells on RACH" IEs from System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11):

  - use this information for reporting measured results in RACH messages.

8.4.1.6.3 Inter-RAT measurement

Upon transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state, the UE shall:

- stop the inter-RAT type measurement reporting assigned in a MEASUREMENT CONTROL message;

~~- if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE; or~~

~~- if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or~~

~~- if the transition is not due to a reconfiguration message:~~

- delete the measurements of type inter-RAT associated with the variable MEASUREMENT_IDENTITY; [indent decreased one level]

- begin monitoring cells listed in the IE "inter-RAT cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);

- in CELL_FACH state:

  - perform measurements on other systems according to the IE "FACH measurement occasion info".

8.4.1.6.6 Traffic volume measurement

Upon transition from CELL_DCH to CELL_FACH or CELL_PCH or URA_PCH state, the UE shall:

- retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT_IDENTITY; and

  - if the optional IE "measurement validity" for this measurement has not been included:

    - delete the measurement associated with the variable MEASUREMENT_IDENTITY;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL_DCH":

    - stop measurement reporting;

    - store the measurement associated with the variable MEASUREMENT_IDENTITY to be used after the next transition to CELL_DCH state;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":

    - continue measurement reporting;

  - if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL_DCH":

    - resume this measurement and associated reporting;

- if no traffic volume type measurements set up or modified through a MEASUREMENT CONTROL message and valid in CELL_FACH or CELL_PCH or URA_PCH states are stored in the variable MEASUREMENT_IDENTITY with the same identity as the one indicated in the IE “Traffic volume measurement system information”:

- store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT_IDENTITY;

- begin traffic volume measurement reporting according to the assigned information.

8.4.1.6a Actions in CELL_FACH/CELL_PCH/URA/PCH state upon cell re-selection

Upon cell reselection while in CELL_FACH/CELL_PCH/URA/PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

- delete ~~the~~ all the measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY.

- Delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

8.4.1.7.3 Inter-RAT measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- stop monitoring the list of cells assigned in the IE "inter-RAT cell info list" in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);

- ~~retrieve each set of measurement control information of measurement type "inter-RAT" stored in the variable MEASUREMENT_IDENTITY; and~~

~~if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":~~

~~resume the measurement reporting.~~

8.4.1.7.4 Traffic volume measurement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT_IDENTITY;

  - if the optional IE "measurement validity" for this measurement has not been included:

    - delete the measurement associated with the variable MEASUREMENT_IDENTITY;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL_DCH":

    - stop measurement reporting; and

    - save the measurement associated with the variable MEASUREMENT_IDENTITY to be used after the next transition to CELL_FACH/CELL_PCH/URA_PCH state;

  - if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":

    - continue measurement reporting;

  - if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL_DCH":

- resume this measurement and associated reporting;

- if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message when transiting to CELL_DCH state:

  - continue an ongoing traffic volume type measurement, assigned in System Information Block type 11 (or System Information Block type 12, according to subclause 8.1.1.6.11);

~~- if the UE in CELL_DCH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in variable MEASUREMENT_IDENTITY:~~

  ~~- update the stored information with the traffic volume measurement control information in variable MEASUREMENT_IDENTITY.~~

8.6.7.1 Measurement validity

If the optional IE "measurement validity" for a given measurement has not been included in measurement control information, the UE shall delete the measurement associated with the variable MEASUREMENT_IDENTITY after the UE makes a transition to a new state.
If the IE "measurement validity" for this measurement has been included in measurement control information, the UE shall save the measurement associated with the variable MEASUREMENT_IDENTITY. The IE "UE state" defines the scope of resuming the measurement.
If the "UE state" is defined as "all states", the UE shall continue the measurement after making a transition to a new state. This scope is assigned only for traffic volume type measurements and can only be applied by the UE if the IE " traffic volume measurement object" has been included in measurement control information. If the IE " traffic volume measurement object" has not been included in measurement control information, the UE shall not save the measurement control information in variable MEASUREMENT_IDENTITY, but shall send a MEASUREMENT CONTROL FAILURE message to the UTRAN with failure cause "Configuration incomplete".
If the "UE state" is defined as "all states except CELL_DCH", the UE shall store the measurement to be resumed after a subsequent transition from CELL_DCH state to any of the other states in connected mode. This scope is assigned only for traffic volume type measurements.
If the "UE state" is defined as "CELL_DCH", the UE shall store the measurement to be resumed after a subsequent transition to CELL_DCH state. ~~After cell re-selection, the UE shall delete any ongoing intra-frequency or inter-frequency and inter-RAT type measurement associated with the variable MEASUREMENT_IDENTITY. Other measurement types shall, however, be continued regardless of cell reselection.~~

8.6.7.16 Intra-frequency measurement

If IE "Intra-frequency measurement" is received by the UE in a MEASUREMENT CONTROL message, where IE "measurement command" has the value "setup", but IE "Intra-frequency measurement quantity", IE "Intra-frequency reporting quantity" or "CHOICE Report criteria" is not received, the UE shall:

- clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY;

- set the variable CONFIGURATION_INCOMPLETE to TRUE.

In case of 1a or 1c (resp. 1b or 1f) event-triggered reporting:

- if the IE “Intra-frequency measurement criteria” is set to “pathloss”, the UE shall:

  - if detected cells are indicated as possibly triggering the event within the IEs “Triggering condition 2” (resp. “Triggering condition 1”):

- set the variable ~~INVALID_CONFIGURATION~~ CONFIGURATION_INCOMPLETE to TRUE

10.3.7.19 Inter-frequency measurement reporting criteria

The triggering of the event-triggered reporting for an inter-frequency measurements. All events concerning inter-frequency measurements are labelled 2x where x is a,b,c..
Event 2a: Change of best frequency.
Event 2b: The estimated quality of the currently used frequency is below a certain threshold **and** the estimated quality of a non-used frequency is above a certain threshold.
Event 2c: The estimated quality of a non-used frequency is above a certain threshold.
Event 2d: The estimated quality of the currently used frequency is below a certain threshold.
Event 2e: The estimated quality of a non-used frequency is below a certain threshold.
Event 2f: The estimated quality of the currently used frequency is above a certain threshold.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Parameters required for each event	OP	1 to <maxMeasEvent>		
>Inter-frequency event identity	MP		Inter-frequency event identity 10.3.7.14	
>Threshold used frequency	CV–*clause 0*		Integer(-115..0)	Ranges used depend on measurement quantity. CPICH Ec/No -24..0dB CPICH/Primary CCPCH RSCP -115..-25dBm
>W used frequency	CV–*clause 2*		Real(0, 0.1..2.0 by step of 0.1)	
>Hysteresis	MP		Real(0, 0.5..14.5 by step of 0.5)	In event 2a, 2b, 2c, 2d, 2e, 2f
>Time to trigger	MP		Time to trigger 10.3.7.64	Indicates the period of time between the timing of event detection and the timing of sending Measurement Report. Time in ms.
>Reporting cell status	OP		Reporting cell status 10.3.7.61	
>Parameters required for each non-used frequency	OP	1 to <maxFreq>		In this release, the first listed threshold and W parameter shall apply to all non-used frequencies.
>>Threshold non used frequency	CV–*clause 1*		Integer(-115..0)	Ranges used depend on measurement quantity. CPICH Ec/No -24..0dB CPICH/Primary CCPCH RSCP -115..-25dBm. This IE is not needed if the IE "Inter-frequency event identity" is set to 2a. However, it is specified to be mandatory to align with the ASN.1.
>>W non-used frequency	CV-*clause 1*		Real(0, 0.1..2.0 by step of 0.1)	

10.3.7.32 Inter-RAT reporting quantity

For all boolean types TRUE means inclusion in the report is requested.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
UTRAN estimated quality	MP		Boolean	This parameter is not used in this release and should be set to FALSE.
CHOICE *system*	MP			
>GSM				
>>Observed time difference to GSM cell Reporting indicator	MP		Boolean	
>>GSM Carrier RSSI Reporting indicator	MP		Boolean	

14.1 Intra-frequency measurements

14.1.1 Intra-frequency measurement quantities

A measurement quantity is used to evaluate whether an intra-frequency event has occurred or not. It can be:

1 Downlink E_c/N_0.

2 Downlink path loss.

For FDD:
Pathloss in dB = Primary CPICH Tx power - CPICH RSCP.

For Primary CPICH Tx power the IE "Primary CPICH Tx power" shall be used. The unit is dBm.

CPICH RSCP is the result of the CPICH RSCP measurement. The unit is dBm.

For TDD:
Pathloss in dB = Primary CCPCH TX power - Primary CCPCH RSCP.

For Primary CCPCH TX power the IE "Primary CCPCH TX Power" shall be used. The unit is dBm.

Primary CCPCH RSCP is the result of the Primary CCPCH RSCP measurement. The unit is dBm.

If necessary Pathloss shall be rounded up to the next higher integer.
Results higher than 158 shall be reported as 158.
Results lower than 46 shall be reported as 46.

3 Downlink received signal code power (RSCP) after despreading.

4 ISCP measured on Timeslot basis.

A description of those values can be found in [7] and [8].

14.1.2 Intra-frequency reporting events for FDD

Within the measurement reporting criteria field in the Measurement Control message the UTRAN notifies the UE which events should trigger a measurement report. The listed events are the toolbox from which the

UTRAN can choose the reporting events that are needed for the implemented handover evaluation function, or other radio network functions.
All the specified events are measured with respect to any of the measurement quantities given in subclause 14.1.1. The measurement quantities are measured on the monitored primary common pilot channels (CPICH) of the cell defined in the measurement object.
Special mechanisms for the events are illustrated in subclause 14.1.4 and 14.1.5.

NOTE: The events below are numbered 1A, 1B, 1C,… since all intra-frequency reporting events would be labelled 1X, inter-frequency reporting events would be labelled 2X, and so on for the other measurement types.

14.1.2.1 Reporting event 1A: A Primary CPICH enters the reporting range

When an intra-frequency measurement configuring event 1a is set up, the UE shall:

- create a variable TRIGGERED_1A_EVENT related to that measurement, which shall initially be empty;
- delete this variable when the measurement is released.

When event 1A is configured in the UE, the UE shall:

- if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for one or more primary CPICHs, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for one or more primary CPICHs, for each of these primary CPICHs:
  - if all required reporting quantities are available for that cell, and
  - if the equations have been fulfilled during the time "Time to trigger", and if that primary CPICH is part of cells allowed to trigger the event according to "Triggering condition 2", and if that primary CPICH is not included in the "cells triggered" in the variable TRIGGERED_1A_EVENT:
    - include that primary CPICH in the "cells recently triggered" in the variable TRIGGERED_1A_EVENT;
- if the value of "Reporting deactivations threshold" for this event is greater than or equal to the current number of cells in the active set or equal to 0 and any primary CPICHs are stored in the "cells recently triggered" in the variable TRIGGERED_1A_EVENT:
  - if "Reporting interval" for this event is not equal to 0:
    - if the IE "Periodical reporting running" in the variable TRIGGERED_1A_EVENT is set to FALSE:
      - start a timer with the value of "Reporting interval" for this event and set the IE "Periodical reporting running" in the variable TRIGGERED_1A_EVENT to TRUE;
    - set "sent reports" for the primary CPICHs in "cells recently triggered" in the variable TRIGGERED_1A_EVENT to 1;
  - send a measurement report with IEs set as below:
    - set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1a"; and
    - include in "cell measurement event results" all entries of the "cells recently triggered" in the variable TRIGGERED_1A_EVENT that are not part of the active set in descending order according to the configured measurement quantity;

- set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2;

- move all entries from "cells recently triggered" to "cells triggered" in the variable TRIGGERED_1A_EVENT;

- if the timer for the periodical reporting has expired:

  - if any primary CPICH is included in the "cells triggered" in the variable TRIGGERED_1A_EVENT, and not included in the current active set:

    - if "Reporting interval" for this event is not equal to 0, and if "Amount of reporting" is greater than "sent reports" stored for any of these primary CPICHs, in "cells triggered" in the variable TRIGGERED_1A_EVENT:

      - increment the stored counter "sent reports" for all CPICHs in "cell triggered" in variable TRIGGERED_1A_EVENT;

      - start a timer with the value of "Reporting interval" for this event;

      - send a measurement report with IEs set as below:

        - set in "intra-frequency measurement event results": "Intrafrequency event identity" to "1a"; and

        - include in "cell measurement event results" all entries of the variable TRIGGERED_1A_EVENT with value of IE "sent reports" smaller than value of "Amount of reporting" that are not part of the active set in descending order according to the configured measurement quantity;

        - set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2;

      - if "sent reports" in variable TRIGGERED_1A_EVENT is greater than "Amount of reporting" for all entries:

        - set the IE "Periodical Reporting running" in the variable TRIGGERED_1A_EVENT to FALSE and disable the timer for the periodical reporting;

- if "Measurement quantity" is "pathloss" and Equation 3 below is fulfilled for a primary CPICH, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 4 below is fulfilled for a primary CPICH:

  - if that primary CPICH is included in the "cells triggered" in the variable TRIGGERED_1A_EVENT:

    - remove the entry of that primary CPICH from "cells triggered" in the variable TRIGGERED_1A_EVENT;

    - if no entry in the variable TRIGGERED_1A_EVENT has a value of "sent reports" smaller than "Amount of reporting":

      - stop the reporting interval timer;

      - set the IE "Periodical reporting running" in the variable TRIGGERED_1A_EVENT to FALSE.

Upon transition to CELL_DCH the UE shall:

- Include the primary CPICH of all cells in the current active set into the "cells triggered" in the variable TRIGGERED_1A_EVENT.

Equation 1 (Triggering condition for pathloss) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} \leq W \cdot 10 \cdot Log\left(1/\sum_{i=1}^{N_A}(1/M_i)\right) + (1-W) \cdot 10 \cdot LogM_{Best} + (R_{1a} - H_{1a}/2),$$

Equation 2 (Triggering condition for all the other measurement quantities) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} \geq W \cdot 10 \cdot Log\left(\sum_{i=1}^{N_A} M_i\right) + (1-W) \cdot 10 \cdot LogM_{Best} - (R_{1a} - H_{1a}/2),$$

Equation 3 (Leaving triggering condition for pathloss) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} > W \cdot 10 \cdot Log\left(1/\sum_{i=1}^{N_A}(1/M_i)\right) + (1-W) \cdot 10 \cdot LogM_{Best} + (R_{1a} + H_{1a}/2),$$

Equation 4 (Leaving triggering condition for all the other measurement quantities) [Formula modified to include CIO]

$$10 \cdot LogM_{New} + CIO_{New} < W \cdot 10 \cdot Log\left(\sum_{i=1}^{N_A} M_i\right) + (1-W) \cdot 10 \cdot LogM_{Best} - (R_{1a} - H_{1a}/2),$$

The variables in the formula are defined as follows:

$\boldsymbol{M_{New}}$ is the measurement result of the cell entering the reporting range.

$\boldsymbol{CIO_{New}}$ is the individual cell offset for the cell entering the reporting range if an individual cell offset is stored for that cell. Otherwise it is equal to 0.

$\boldsymbol{M_i}$ is a measurement result of a cell in the active set.

$\boldsymbol{N_A}$ is the number of cells in the current active set~~.~~, and not stored as "Cells forbidden to affect reporting range".

For pathloss

$\boldsymbol{M_{Best}}$ is the measurement result of the cell in the active set with the lowest measurement result.

for other measurements quantities.

$\boldsymbol{M_{Best}}$ is the measurement result of the cell in the active set with the highest measurement result.

$\boldsymbol{W}$ is a parameter sent from UTRAN to UE.

$\boldsymbol{R_{1a}}$ is the reporting range constant.

$\boldsymbol{H_{1a}}$ is the hysteresis parameter for the event 1a.

If the measurement results are pathloss or CPICH-Ec/No then $\boldsymbol{M_{New}}$, $\boldsymbol{M_i}$ and $\boldsymbol{M_{Best}}$ are expressed as ratios.

If the measurement result is CPICH-RSCP then $\boldsymbol{M_{New}}$, $\boldsymbol{M_i}$ and $\boldsymbol{M_{Best}}$ are expressed in [mW].

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, November 26th-30th, 2001

Tdoc R2-012533

CR-Form-v4

CHANGE REQUEST

⌘ **25.331** **CR** **1157** ⌘ ev **-** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Inconsistency between hard-coded preconfigurations parameters and procedure text
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-11-20
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Inconsistency between the parameters that are used in the default radio configurations and what is specifed in 8.6.4.8 (RB mapping info) and 8.6.5.1 (Transport Format Set): in those section, it is specified that in case the "CHOICE RLC size list" IE is set to "All", then the "CHOICE logical size list" shall be set to "Configured", and the other way round. In the tables in 13.7, both those choices are set to "All".
Summary of change:	⌘	The inconsistency is corrected by setting the "CHOICE RLC size list" to "Configured" Isolated impact analysis: This CR has isolated impact. It does not suggest change of any functionality, but solves an inconsistency between what is specified in the procedural text and the given preconfigurations. The change would not affect implementations assuming the configuration indicated in the CR, would affect implementations otherwise.
Consequences if not approved:	⌘	Inconsistency that could result in unexpected UE behaviour when reconfiguring the default radio configurations.

Clauses affected:	⌘	13.7		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v4.2.1, CR 1158
Other comments:	⌘			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at:
http://www.3gpp.org/3G_Specs/CRs.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.

13.7 Parameter values for default radio configurations

The UE shall support the use of the default radio configurations that are specified in the following.

NOTE 1: These configurations are based on [41] and cover a number of RAB and signalling connection configurations.

In the table that is used to specify the parameter values for these default configurations, the following principles are used:

- Optional IEs that are not used are omitted;
- In case no parameter value is specified in a column, this means the value given the previous (left side) column applies.

NOTE 2: If needed, signalling radio bearer RB4 is established after the completion of handover.

NOTE 3: For each default configuration, the value of both FDD and TDD parameters are specified. All parameters apply to both FDD and TDD modes, unless explicitly stated otherwise. It should be noted that in this respect default configurations differ from pre-defined configurations, which only include parameter values for one mode.

NOTE 4: The transport format sizes, indicated in the following table, concern the RLC PDU size, since all configurations concern dedicated channels. The transport block sizes indicated in TS 34.108 are different since these include the size of the MAC header.

Configuration	3.4 kbps signalling	13.6 kbps signalling	7.95 kbps speech + 3.4 kbps signalling	12.2 kbps speech + 3.4 kbps signalling
Ref 34.108	2	3	6	4
Default configuration identity	0	1	2	3
RB INFORMATION				
rb-Identity	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3, RB5: 5, RB6: 6	RB1: 1, RB2: 2, RB3: 3, RB5: 5, RB6: 6, RB7: 7
rlc-InfoChoice	Rlc-info	Rlc-info	Rlc-info	Rlc-info
>ul-RLC-Mode	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM RB5-RB6: TM	RB1: UM RB2- RB3: AM RB5-RB7: TM
>>transmissionRLC-DiscardMode	RB1: N/A RB2- RB3: NoDiscard	RB1: N/A RB2- RB3: NoDiscard	RB1: N/A RB2- RB3: NoDiscard RB5- RB6: N/A	RB1: N/A RB2- RB3: NoDiscard RB5- RB7: N/A
>>>maxDat	RB1: N/A RB2- RB3: 15	RB1: N/A RB2- RB3: 15	RB1: N/A RB2- RB3: 15 RB5- RB6: N/A	RB1: N/A RB2- RB3: 15 RB5- RB7: N/A
>>transmissionWindowSize	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128 RB5- RB6: N/A	RB1: N/A RB2- RB3: 128 RB5- RB7: N/A
>>timerRST	RB1: N/A RB2- RB3: 300	RB1: N/A RB2- RB3: 300	RB1: N/A RB2- RB3: 300 RB5- RB6: N/A	RB1: N/A RB2- RB3: 300 RB5- RB7: N/A
>>max-RST	RB1: N/A RB2- RB3: 1	RB1: N/A RB2- RB3: 1	RB1: N/A RB2- RB3: 1 RB5- RB6: N/A	RB1: N/A RB2- RB3: 1 RB5- RB7: N/A
>>pollingInfo	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below RB5- RB6: N/A	RB1: N/A RB2- RB3: as below RB5- RB7: N/A
>>>lastTransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>lastRetransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerPollPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A	RB1- RB3: N/A	RB1- RB3: N/A RB5- RB6: FALSE	RB1- RB3: N/A RB5- RB7: FALSE
>dl-RLC-Mode	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM RB5- RB6: TM	RB1: UM RB2- RB3: AM RB5- RB7: TM
>>inSequenceDelivery	RB1: N/A RB2- RB3: TRUE	RB1: N/A RB2- RB3: TRUE	RB1: N/A RB2- RB3: TRUE RB5- RB6: N/A	RB1: N/A RB2- RB3: TRUE RB5- RB7: N/A
>>receivingWindowSize	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128 RB5- RB6: N/A	RB1: N/A RB2- RB3: 128 RB5- RB7: N/A
>>dl-RLC-StatusInfo	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below RB5- RB6: N/A	RB1: N/A RB2- RB3: as below RB5- RB7: N/A
>>>timerStatusProhibit	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>>missingPDU-Indicator	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerStatusPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A	RB1- RB3: N/A	RB1- RB3: N/A RB5- RB6: FALSE	RB1- RB3: N/A RB5- RB7: FALSE
rb-MappingInfo				

>UL-LogicalChannelMappings	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel
>>ul-TransportChannelType	Dch	Dch	Dch	Dch
>>>transportChannelIdentity	RB1- RB3: 1	RB1- RB3: 1	RB1- RB3: 3 RB5: 1, RB6: 2	RB1- RB3: 4 RB5: 1, RB6: 2, RB7: 3
>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3 RB5- RB6: N/A	RB1: 1, RB2: 2, RB3: 3 RB5- RB7: N/A
>>rlc-SizeList	RB1- RB3: ~~all~~ configured	RB1- RB3: ~~all~~ configured	RB1- RB3: ~~all~~ configured RB5- RB6: N/A	RB1- RB3: ~~all~~ configured RB5- RB7: N/A
>>mac-LogicalChannelPriority	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3 RB5- RB6: 5	RB1: 1, RB2: 2, RB3: 3 RB5- RB7: 5
>DL-logicalChannelMappingList				
>>Mapping option 1	One mapping option	One mapping option	One mapping option	One mapping option
>>>dl-TransportChannelType	Dch	Dch	Dch	Dch
>>>>transportChannelIdentity	RB1- RB3: 1	RB1- RB3: 1	RB1- RB3: 3 RB5: 1, RB6: 2	RB1- RB3: 4 RB5: 1, RB6: 2, RB7: 3
>>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3 RB5- RB6: N/A	RB1: 1, RB2: 2, RB3: 3 RB5- RB7: N/A
TrCH INFORMATION PER TrCH				
UL-AddReconfTransChInfoList				
>Uplink transport channel type	dch	dch	dch	dch
>transportChannelIdentity	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>transportFormatSet	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS
>>dynamicTF-information				
>>>tf0/ tf0,1	TrCH1: (0x144, 1x144)	TrCH1: (0x144, 1x144)	TrCH1: (0x75) TrCH2: (0x 84 1x84) TrCH3: (0x144, 1x144)	TrCH1: (0x81) TrCH2: (0x 103, 1x103) TrCH3: (0x 60, 1x60) TrCH4: (0x144, 1x144)
>>>>rlcSize	BitMode	BitMode	BitMode	BitMode
>>>>>sizeType	TrCH1: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 2, part2= 0 (144)	TrCH1: type 1: 75 TrCH2: type 1: 84 TrCH3: 2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 1: 81 TrCH2: type 1: 103 TrCH3: type 1: 60 TrCH4: 2: type 2, part1= 2, part2= 0 (144)
>>>>numberOfTbSizeList	TrCH1: Zero, one	TrCH1: Zero, one	TrCH1: Zero TrCH2-3: Zero, one	TrCH1: Zero TrCH2-4: Zero, one
>>>>logicalChannelList	All	All	All	All
>>>tf 1	N/A	N/A	TrCH1: (1x39) TrCH2- TrCH4: N/A	TrCH1: (1x39) TrCH2- TrCH4: N/A
>>>>numberOfTransportBlocks			TrCH1: One	TrCH1: One
>>>>rlc-Size			TrCH1: BitMode	TrCH1: BitMode

>>>>>sizeType			TrCH1: 1: 39	TrCH1: 1: 39
>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>logicalChannelList			TrCH1: all	TrCH1: all
>>>tf 2	N/A	N/A	TrCH1: (1x75) TrCH2- TrCH3: N/A	TrCH1: (1x81) TrCH2- TrCH4: N/A
>>>>numberOfTransportBlocks			TrCH1: Zero	TrCH1: Zero
>>>>rlc-Size			TrCH1: BitMode	TrCH1: BitMode
>>>>>sizeType			TrCH1: type 1: 75	TrCH1: type 1: 81
>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>logicalChannelList			TrCH1: all	TrCH1: all
>>semistaticTF-Information				
>>>tti	TrCH1: 40	TrCH1: 10	TrCH1- TrCH2: 20 TrCH3: 40	TrCH1- TrCH3: 20 TrCH4: 40
>>>channelCodingType	Convolutional	Convolutional	Convolutional	Convolutional
>>>>codingRate	TrCH1: Third	TrCH1: Third	TrCH1- TrCH2: Third TrCH3: Third	TrCH1- TrCH2: Third TrCH3: Half TrCH4: Third
>>>rateMatchingAttribute	TrCH1: 160	TrCH1: 160	TrCH1: 200 TrCH2: 190 TrCH3: 160	TrCH1: 200 TrCH2: 190 TrCH3: 235 TrCH4: 160
>>>crc-Size	TrCH1: 16	TrCH1: 16	TrCH1: 12 TrCH2: 0 TrCH3: 16	TrCH1: 12 TrCH2- TrCH3: 0 TrCH4: 16
DL-AddReconfTransChInfoList				
>Downlink transport channel type	dch	dch	dch	dch
>dl-TransportChannelIdentity (should be as for UL)	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>tfs-SignallingMode	SameAsUL	SameAsUL	Independent <Only tf0 on TrCH1 is different and shown below>	Independent <Only tf0 on TrCH1 is different and shown below>
>>transportFormatSet			DedicatedTransChTFS	DedicatedTransChTFS
>>>dynamicTF-information				
>>>>tf0/ tf0,1			TrCH1: (1x0)	TrCH1: (1x0)
>>>>rlcSize			BitMode	bitMode
>>>>>sizeType			TrCH1: type 1: 0	TrCH1: type 1: 0
>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>logicalChannelList			All	All
>>ULTrCH-Id	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>dch-QualityTarget				
>>bler-QualityValue	TrCH1: $5x10^{-2}$	TrCH1: $5x10^{-2}$	TrCH1: $7x10^{-3}$ TrCH2- TrCH3: Absent	TrCH1: $7x10^{-3}$ TrCH2- TrCH4: Absent
TrCH INFORMATION, COMMON				
ul-CommonTransChInfo				
>tfcs-ID (TDD only)	1	1	1	1
>sharedChannelIndicator (TDD only)	FALSE	FALSE	FALSE	FALSE
>tfc-Subset	Absent, not required	Absent, not required	Absent, not required	Absent, not required

>ul-TFCS	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete	Complete	Complete	Complete
>>>ctfcSize	Ctfc2Bit	Ctfc2Bit	Ctfc4Bit	Ctfc6Bit
>>>>TFCS representation	Addition	Addition	Addition	Addition
>>>>>TFCS list				
>>>>>>TFCS 1	(TF0)	(TF0)	(TF0, TF0, TF0)	(TF0, TF0, TF0, TF0)
>>>>>>>ctfc	0	0	0	0
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 2	(TF1)	(TF1)	(TF1, TF0, TF0)	(TF1, TF0, TF0, TF0)
>>>>>>>ctfc	1	1	1	1
>>>>>>>gainFactorInformation	Signalled	Signalled	Computed	Computed
>>>>>>>>βc (FDD only)	11	11	N/A	N/A
>>>>>>>>βd	15	15	N/A	N/A
>>>>>>>>referenceTFCId	N/A	N/A	0	0
>>>>>>TFCS 3			(TF2, TF1, TF0)	(TF2, TF1, TF1, TF0)
>>>>>>>ctfc			5	11
>>>>>>>gainFactorInformation			Computed	Computed
>>>>>>>>referenceTFCId			0	0
>>>>>>TFCS 4			(TF0, TF0, TF1)	(TF0, TF0, TF0, TF1)
>>>>>>>ctfc			6	12
>>>>>>>gainFactorInformation			Computed	Computed
>>>>>>>>βc (FDD only)			N/A	N/A
>>>>>>>>βd			N/A	N/A
>>>>>>>>referenceTFCId			0	0
>>>>>>TFCS 5			(TF1, TF0, TF1)	(TF1, TF0, TF0, TF1)
>>>>>>>ctfc			7	13
>>>>>>>gainFactorInformation			Computed	Computed
>>>>>>>>referenceTFCId			0	0
>>>>>>TFCS 6			(TF2, TF1, TF1)	(TF2, TF1, TF1, TF1)
>>>>>>>ctfc			11	23
>>>>>>>gainFactorInformation			Signalled	Signalled
>>>>>>>>βc (FDD only)			11	11
>>>>>>>>βd			15	15
>>>>>>>>referenceTFCId			0	0
dl-CommonTransChInfo				
>tfcs-SignallingMode	Same as UL	Same as UL	Same as UL	Same as UL
PhyCH INFORMATION FDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>powerControlAlgorithm	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm 1
>>>tpcStepSize	1	1	1	1

>tfci-Existence	TRUE	TRUE	TRUE	TRUE
>puncturingLimit	1	1	1	0.88
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>spreadingFactor	256	128	128	128
>>pilotBits	4	4	4	4
>>positionFixed	N/A	N/A	Fixed	Fixed
PhyCH INFORMATION TDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>dpch-ConstantValue	-20	-20	-20	-20
>commonTimeslotInfo				
>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>tfci-Coding	4	4	16	16
>>puncturingLimit	1	0.92	0.52	0.88
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>commonTimeslotInfo				
>>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>>tfci-Coding	4	4	16	16
>>>puncturingLimit	1	0.92	0.52	0.92
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1

Configuration	28.8 kbps conv. CS- data + 3.4 kbps signalling	32 kbps conv. CS-data + 3.4 kbps signalling	64kbps conv. CS-data + 3.4 kbps signalling	14.4 kbps streaming CS-data + 3.4 kbps signalling
Ref 34.108	12	14	13	15
Default configuration identity	4	5	6	7
RB INFORMATION				
rb-Identity	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5
rlc-InfoChoice	Rlc-info	Rlc-info	Rlc-info	Rlc-info
>ul-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>transmissionRLC-DiscardMode	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A
>>>maxDat	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A
>>transmissionWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>timerRST	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A
>>max-RST	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A
>>pollingInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>lastTransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>lastRetransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerPollPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
>dl-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>inSequenceDelivery	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A
>>receivingWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>dl-RLC-StatusInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>timerStatusProhibit	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>>missingPDU-Indicator	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerStatusPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
rb-MappingInfo				
>UL-LogicalChannelMappings	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel

>>ul-TransportChannelType	Dch	Dch	Dch	Dch
>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
>>rlc-SizeList	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A
>>mac-LogicalChannelPriority	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5
>DL-logicalChannelMappingList				
>>Mapping option 1	One mapping option	One mapping option	One mapping option	One mapping option
>>>dl-TransportChannelType	Dch	Dch	Dch	Dch
>>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
TrCH INFORMATION PER TrCH				
UL-AddReconfTransChInfoList				
> Uplink transport channel type	dch	dch	dch	dch
>transportChannelIdentity	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>transportFormatSet	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS
>>dynamicTF-information				
>>>tf0/ tf0,1	TrCH1: (0x576, 1x576, 2x576) TrCH2: (0x144, 1x144)	TrCH1: (0x640, 1x640) TrCH2: (0x144, 1x144)	TrCH1: (0x640, 2x640) TrCH2: (0x144, 1x144)	TrCH1: (0x576, 1x576) TrCH2: (0x144, 1x144)
>>>>rlcSize	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode
>>>>>sizeType	TrCH1: type 2, part1= 11, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 11, part2= 2 (640) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 11, part2= 2 (640) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)
>>>>numberOfTbSizeList	TrCH1: Zero,1, 2 (4) TrCH2: Zero, one	TrCH1: Zero, one TrCH2: Zero, one	TrCH1: Zero, 2 (4) TrCH2: Zero, one	TrCH1: Zero, one, TrCH2: Zero, one
>>>>logicalChannelList	All	All	All	All
>>semiStaticTF-Information				
>>>tti	TrCH1: 40 TrCH2: 40	TrCH1: 20 TrCH2: 40	TrCH1: 20 TrCH2: 40	TrCH1: 40 TrCH2: 40
>>>channelCodingType	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional
>>>>codingRate	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third
>>>rateMatchingAttribute	TrCH1: 180 TrCH2: 160	TrCH1: 185 TrCH2: 160	TrCH1: 170 TrCH2: 160	TrCH1: 165 TrCH2: 160

>>>crc-Size	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16
DL-AddReconfTransChInfoList				
>Downlink transport channel type	dch	dch	dch	dch
>dl-TransportChannelIdentity (should be as for UL)	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>tfs-SignallingMode	SameAsUL	SameAsUL	SameAsUL	SameAsUL
>>transportFormatSet				
>>>dynamicTF-information				
>>>>tf0/ tf0,1				
>>>>rlcSize				
>>>>>sizeType				
>>>>numberOfTbSizeList				
>>>>logicalChannelList				
>>ULTrCH-Id	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>dch-QualityTarget				
>>bler-QualityValue	TrCH1: $2x10^{-3}$ TrCH2: Absent	TrCH1: $2x10^{-3}$ TrCH2: Absent	TrCH1: $2x10^{-3}$ TrCH2: Absent	TrCH1: $1x10^{-2}$ TrCH2: Absent
TrCH INFORMATION, COMMON				
ul-CommonTransChInfo				
>tfcs-ID (TDD only)	1	1	1	1
>sharedChannelIndicator (TDD only)	FALSE	FALSE	FALSE	FALSE
>tfc-Subset	Absent, not required	Absent, not required	Absent, not required	Absent, not required
>ul-TFCS	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete	Complete	Complete	Complete
>>>ctfcSize	Ctfc2Bit	Ctfc2Bit	Ctfc2Bit	Ctfc4Bit
>>>>TFCS representation	Addition	Addition	Addition	Addition
>>>>>TFCS list				
>>>>>>TFCS 1	(TF0, TF0)	(TF0, TF0)	(TF0, TF0)	(TF0, TF0)
>>>>>>>ctfc	0	0	0	0
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 2	(TF1, TF0)	(TF1, TF0)	(TF1, TF0)	(TF1, TF0)
>>>>>>>ctfc	1	1	1	1
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>βc (FDD only)	N/A	N/A	N/A	N/A
>>>>>>>>βd	N/A	N/A	N/A	N/A
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 3	(TF2, TF0)	(TF0, TF1)	(TF0, TF1)	(TF0, TF1)
>>>>>>>ctfc	2	2	2	2
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 4	(TF0, TF1)	(TF1, TF1)	(TF1, TF1)	(TF1, TF1)
>>>>>>>ctfc	3	3	3	3
>>>>>>>gainFactorInformation	Computed	Signalled	Signalled	Signalled
>>>>>>>>βc (FDD only)	N/A	8	8	11

>>>>>>>>βd	N/A	15	15	15
>>>>>>>>referenceTFCId	N/A	N/A	N/A	N/A
>>>>>>TFCS 5	(TF1, TF1)	N/A	N/A	
>>>>>>>ctfc	4			
>>>>>>>gainFactorInformation	Computed			
>>>>>>>>referenceTFCId	8			
>>>>>>TFCS 6	(TF2, TF1)	N/A	N/A	
>>>>>>>ctfc	5			
>>>>>>>gainFactorInformation	Signalled			
>>>>>>>>βc (FDD only)	8			
>>>>>>>>βd	15			
>>>>>>>>referenceTFCId	N/A			
>>>>>>TFCS 7				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>referenceTFCId				
>>>>>>TFCS 8				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>referenceTFCId				
>>>>>>TFCS 9				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>referenceTFCId				
>>>>>>TFCS 10				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>βc (FDD only)				
>>>>>>>>βd				
>>>>>>>>referenceTFCId				
dl-CommonTransChInfo				
>tfcs-SignallingMode	Same as UL	Same as UL	Same as UL	Same as UL
PhyCH INFORMATION FDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>powerControlAlgorithm	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm 1
>>>tpcStepSize	1	1	1	1
>tfci-Existence	TRUE	TRUE	TRUE	TRUE
>puncturingLimit	0.92	0.8	0.92	1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>spreadingFactor	64	64	32	128
>>pilotBits	8	8	8	8
>>positionFixed	Flexible	Flexible	Flexible	Flexible
PhyCH INFORMATION TDD				
UL-DPCH-InfoPredef				

>ul-DPCH-PowerControlInfo				
>>dpch-ConstantValue	-20	-20	-20	-20
>commonTimeslotInfo				
>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>tfci-Coding	16	8	8	8
>>puncturingLimit	0.44	0.8	0.56	0.8
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>commonTimeslotInfo				
>>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>>tfci-Coding	16	8	8	8
>>>puncturingLimit	0.44	0.64	0.56	0.8
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1

Configuration	28.8 kbps streaming CS-data + 3.4 kbps signalling	57.6 kbps streaming CS-data + 3.4 kbps signalling
Ref 34.108	16	17
Default configuration identity	8	9
RB INFORMATION		
rb-Identity	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5
rlc-InfoChoice	Rlc-info	Rlc-info
>ul-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>transmissionRLC-DiscardMode	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A
>>>maxDat	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A
>>transmissionWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>timerRST	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A
>>max-RST	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A
>>pollingInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>lastTransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>lastRetransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerPollPeriodic	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
>dl-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>inSequenceDelivery	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A
>>receivingWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>dl-RLC-StatusInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>timerStatusProhibit	RB2- RB3: 100	RB2- RB3: 100
>>>missingPDU-Indicator	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerStatusPeriodic	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
rb-MappingInfo		
>UL-LogicalChannelMappings	OneLogicalChannel	OneLogicalChannel

>>ul-TransportChannelType	Dch	Dch
>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
>>rlc-SizeList	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A
>>mac-LogicalChannelPriority	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5
>DL-logicalChannelMappingList		
>>Mapping option 1	One mapping option	One mapping option
>>>dl-TransportChannelType	Dch	Dch
>>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
TrCH INFORMATION PER TrCH		
UL-AddReconfTransChInfoList		
>Uplink transport channel type	dch	dch
>transportChannelIdentity	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>transportFormatSet	DedicatedTransChTFS	DedicatedTransChTFS
>>dynamicTF-information		
>>>tf0/ tf0,1	TrCH1: (0x576, 1x576, 2x576) TrCH2: (0x144, 1x144)	TrCH1: (0x576, 1x576, 2x576, 3x576, 4x576) TrCH2: (0x144, 1x144)
>>>>rlcSize	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode
>>>>>sizeType	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)
>>>>numberOfTbSizeList	TrCH1: Zero, one, 2 TrCH2: Zero, one	TrCH1: Zero, one, 2, 3, 4 TrCH2: Zero, one
>>>>logicalChannelList	All	All
>>semiStaticTF-Information		
>>>tti	TrCH1: 40 TrCH2: 40	TrCH1: 40 TrCH2: 40
>>>channelCodingType	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional
>>>>codingRate	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third

>>>rateMatchingAttribute	TrCH1: 155 TrCH2: 160	TrCH1: 145 TrCH2: 160
>>>crc-Size	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16
DL-AddReconfTransChInfoList		
>Downlink transport channel type	dch	dch
>dl-TransportChannelIdentity (should be as for UL)	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>tfs-SignallingMode	SameAsUL	SameAsUL
>>transportFormatSet		
>>>dynamicTF-information		
>>>>tf0/ tf0,1		
>>>>rlcSize		
>>>>>sizeType		
>>>>numberOfTbSizeList		
>>>>logicalChannelList		
>>ULTrCH-Id	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>dch-QualityTarget		
>>bler-QualityValue	TrCH1: $1x10^{-2}$ TrCH2: Absent	TrCH1: $1x10^{-2}$ TrCH2: Absent
TrCH INFORMATION, COMMON		
ul-CommonTransChInfo		
>tfcs-ID (TDD only)	1	1
>sharedChannelIndicator (TDD only)	FALSE	FALSE
>tfc-Subset	Absent, not required	Absent, not required
>ul-TFCS	Normal TFCI signalling	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete	Complete
>>>ctfcSize	Ctfc4Bit	Ctfc4Bit
>>>>TFCS representation	Addition	Addition
>>>>>TFCS list		
>>>>>>TFCS 1	(TF0, TF0)	(TF0, TF0)
>>>>>>>ctfc	0	0
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 2	(TF1, TF0)	(TF1, TF0)
>>>>>>>ctfc	1	1
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>βc (FDD only)	N/A	N/A
>>>>>>>>βd	N/A	N/A
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 3	(TF2, TF0)	(TF2, TF0)
>>>>>>>ctfc	2	2
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 4	(TF0, TF1)	(TF3, TF0)
>>>>>>>ctfc	3	3

>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>βc (FDD only)	N/A	N/A
>>>>>>>>βd	N/A	N/A
>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 5	(TF1, TF1)	(TF4, TF0)
>>>>>>>ctfc	4	4
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 6	(TF2, TF1)	(TF0, TF1)
>>>>>>>ctfc	5	5
>>>>>>>gainFactorInformation	Signalled	Computed
>>>>>>>>βc (FDD only)	8	N/A
>>>>>>>>βd	15	N/A
>>>>>>>>referenceTFCId	N/A	0
>>>>>>TFCS 7		(TF1, TF1)
>>>>>>>ctfc		6
>>>>>>>gainFactorInformation		Computed
>>>>>>>>referenceTFCId		0
>>>>>>TFCS 8		(TF2, TF1)
>>>>>>>ctfc		7
>>>>>>>gainFactorInformation		Computed
>>>>>>>>referenceTFCId		0
>>>>>>TFCS 9		(TF3, TF1)
>>>>>>>ctfc		8
>>>>>>>gainFactorInformation		Computed
>>>>>>>>referenceTFCId		0
>>>>>>TFCS 10		(TF4, TF1)
>>>>>>>ctfc		9
>>>>>>>gainFactorInformation		Signalled
>>>>>>>>βc (FDD only)		8
>>>>>>>>βd		15
>>>>>>>>referenceTFCId		0
dl-CommonTransChInfo		
>tfcs-SignallingMode	Same as UL	Same as UL
PhyCH INFORMATION FDD		
UL-DPCH-InfoPredef		
>ul-DPCH-PowerControlInfo		
>>powerControlAlgorithm	Algorithm 1	Algorithm 1
>>>tpcStepSize	1	1
>tfci-Existence	TRUE	TRUE
>puncturingLimit	1	1
DL-CommonInformationPredef		
>dl-DPCH-InfoCommon		
>>spreadingFactor	64	32
>>pilotBits	8	8
>>positionFixed	Flexible	Flexible

PhyCH INFORMATION TDD		
UL-DPCH-InfoPredef		
>ul-DPCH-PowerControlInfo		
>>dpch-ConstantValue	-20	-20
>commonTimeslotInfo		
>>secondInterleavingMode	frameRelated	frameRelated
>>tfci-Coding	16	16
>>puncturingLimit	0.44	0.48
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef		
>dl-DPCH-InfoCommon		
>>commonTimeslotInfo		
>>>secondInterleavingMode	frameRelated	frameRelated
>>>tfci-Coding	16	16
>>>puncturingLimit	0.44	0.48
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1

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CR-Form-v4

CHANGE REQUEST

⌘ **25.331** **CR** **1158** ⌘ ev **-** ⌘ Current version: **4.1.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Inconsistency between hard-coded preconfigurations parameters and procedure text
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	2001-12-03
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Inconsistency between the parameters that are used in the default radio configurations and what is specifed in 8.6.4.8 (RB mapping info) and 8.6.5.1 (Transport Format Set): in those section, it is specified that in case the "CHOICE RLC size list" IE is set to "All", then the "CHOICE logical size list" shall be set to "Configured", and the other way round. In the tables in 13.7, both those choices are set to "All".
Summary of change:	⌘	The inconsistency is corrected by setting the "CHOICE RLC size list" to "Configured" Isolated impact analysis: This CR has isolated impact. It does not suggest change of any functionality, but solves an inconsistency between what is specified in the procedural text and the given preconfigurations. The change would not affect implementations assuming the configuration indicated in the CR, would affect implementations otherwise.
Consequences if not approved:	⌘	Inconsistency that could result in unexpected UE behaviour when reconfiguring the default radio configurations.

Clauses affected:	⌘	13.7		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v3.8.0, CR 1157
Other comments:	⌘			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at:
http://www.3gpp.org/3G_Specs/CRs.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.

13.7 Parameter values for default radio configurations

The UE shall support the use of the default radio configurations that are specified in the following.

NOTE 1: These configurations are based on [41] and cover a number of RAB and signalling connection configurations.

In the table that is used to specify the parameter values for these default configurations, the following principles are used:

- Optional IEs that are not used are omitted;
- In case no parameter value is specified in a column, this means the value given the previous (left side) column applies.

NOTE 2: If needed, signalling radio bearer RB4 is established after the completion of handover.

NOTE 3: For each default configuration, the value of FDD, 3.84 Mcps TDD and 1.28 Mcps TDD parameters are specified. All parameters apply to FDD, 3.84 Mcps TDD and 1.28 Mcps TDD modes, unless explicitly stated otherwise. It should be noted that in this respect default configurations differ from pre-defined configurations, which only include parameter values for one mode.

NOTE 4: The transport format sizes, indicated in the following table, concern the RLC PDU size, since all configurations concern dedicated channels. The transport block sizes indicated in TS 34.108 are different since these include the size of the MAC header.

Configuration	3.4 kbps signalling	13.6 kbps signalling	7.95 kbps speech + 3.4 kbps signalling	12.2 kbps speech + 3.4 kbps signalling
Ref 34.108	2	3	6	4
Default configuration identity	0	1	2	3
RB INFORMATION				
rb-Identity	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3, RB5: 5, RB6: 6	RB1: 1, RB2: 2, RB3: 3, RB5: 5, RB6: 6, RB7: 7
rlc-InfoChoice	Rlc-info	Rlc-info	Rlc-info	Rlc-info
>ul-RLC-Mode	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM RB5-RB6: TM	RB1: UM RB2- RB3: AM RB5-RB7: TM
>>transmissionRLC-DiscardMode	RB1: N/A RB2- RB3: NoDiscard	RB1: N/A RB2- RB3: NoDiscard	RB1: N/A RB2- RB3: NoDiscard RB5- RB6: N/A	RB1: N/A RB2- RB3: NoDiscard RB5- RB7: N/A
>>>maxDat	RB1: N/A RB2- RB3: 15	RB1: N/A RB2- RB3: 15	RB1: N/A RB2- RB3: 15 RB5- RB6: N/A	RB1: N/A RB2- RB3: 15 RB5- RB7: N/A
>>transmissionWindowSize	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128 RB5- RB6: N/A	RB1: N/A RB2- RB3: 128 RB5- RB7: N/A
>>timerRST	RB1: N/A RB2- RB3: 300	RB1: N/A RB2- RB3: 300	RB1: N/A RB2- RB3: 300 RB5- RB6: N/A	RB1: N/A RB2- RB3: 300 RB5- RB7: N/A
>>max-RST	RB1: N/A RB2- RB3: 1	RB1: N/A RB2- RB3: 1	RB1: N/A RB2- RB3: 1 RB5- RB6: N/A	RB1: N/A RB2- RB3: 1 RB5- RB7: N/A
>>pollingInfo	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below RB5- RB6: N/A	RB1: N/A RB2- RB3: as below RB5- RB7: N/A
>>>lastTransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>lastRetransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerPollPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A	RB1- RB3: N/A	RB1- RB3: N/A RB5- RB6: FALSE	RB1- RB3: N/A RB5- RB7: FALSE
>dl-RLC-Mode	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM	RB1: UM RB2- RB3: AM RB5- RB6: TM	RB1: UM RB2- RB3: AM RB5- RB7: TM
>>inSequenceDelivery	RB1: N/A RB2- RB3: TRUE	RB1: N/A RB2- RB3: TRUE	RB1: N/A RB2- RB3: TRUE RB5- RB6: N/A	RB1: N/A RB2- RB3: TRUE RB5- RB7: N/A
>>receivingWindowSize	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128	RB1: N/A RB2- RB3: 128 RB5- RB6: N/A	RB1: N/A RB2- RB3: 128 RB5- RB7: N/A
>>dl-RLC-StatusInfo	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below	RB1: N/A RB2- RB3: as below RB5- RB6: N/A	RB1: N/A RB2- RB3: as below RB5- RB7: N/A
>>>timerStatusProhibit	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>>missingPDU-Indicator	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerStatusPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A	RB1- RB3: N/A	RB1- RB3: N/A RB5- RB6: FALSE	RB1- RB3: N/A RB5- RB7: FALSE
rb-MappingInfo				

>UL-LogicalChannelMappings	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel
>>ul-TransportChannelType	Dch	Dch	Dch	Dch
>>>transportChannelIdentity	RB1- RB3: 1	RB1- RB3: 1	RB1- RB3: 3 RB5: 1, RB6: 2	RB1- RB3: 4 RB5: 1, RB6: 2, RB7: 3
>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3 RB5- RB6: N/A	RB1: 1, RB2: 2, RB3: 3 RB5- RB7: N/A
>>rlc-SizeList	RB1- RB3: ~~all~~ configured	RB1- RB3: ~~all~~ configured	RB1- RB3: ~~all~~ configured RB5- RB6: N/A	RB1- RB3: ~~all~~ configured RB5- RB7: N/A
>>mac-LogicalChannelPriority	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3 RB5- RB6: 5	RB1: 1, RB2: 2, RB3: 3 RB5- RB7: 5
>DL-logicalChannelMappingList				
>>Mapping option 1	One mapping option	One mapping option	One mapping option	One mapping option
>>>dl-TransportChannelType	Dch	Dch	Dch	Dch
>>>>transportChannelIdentity	RB1- RB3: 1	RB1- RB3: 1	RB1- RB3: 3 RB5: 1, RB6: 2	RB1- RB3: 4 RB5: 1, RB6: 2, RB7: 3
>>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3	RB1: 1, RB2: 2, RB3: 3 RB5- RB6: N/A	RB1: 1, RB2: 2, RB3: 3 RB5- RB7: N/A
TrCH INFORMATION PER TrCH				
UL-AddReconfTransChInfoList				
>Uplink transport channel type	dch	dch	dch	dch
>transportChannelIdentity	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>transportFormatSet	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS
>>dynamicTF-information				
>>>tf0/ tf0,1	TrCH1: (0x144, 1x144)	TrCH1: (0x144, 1x144)	TrCH1: (0x75) TrCH2: (0x 84 1x84) TrCH3: (0x144, 1x144)	TrCH1: (0x81) TrCH2: (0x 103, 1x103) TrCH3: (0x 60, 1x60) TrCH4: (0x144, 1x144)
>>>>rlcSize	BitMode	BitMode	BitMode	BitMode
>>>>>sizeType	TrCH1: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 2, part2= 0 (144)	TrCH1: type 1: 75 TrCH2: type 1: 84 TrCH3: 2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 1: 81 TrCH2: type 1: 103 TrCH3: type 1: 60 TrCH4: 2: type 2, part1= 2, part2= 0 (144)
>>>>numberOfTbSizeList	TrCH1: Zero, one	TrCH1: Zero, one	TrCH1: Zero TrCH2-3: Zero, one	TrCH1: Zero TrCH2-4: Zero, one
>>>>logicalChannelList	All	All	All	All
>>>tf 1	N/A	N/A	TrCH1: (1x39) TrCH2- TrCH4: N/A	TrCH1: (1x39) TrCH2- TrCH4: N/A
>>>>numberOfTransportBlocks			TrCH1: One	TrCH1: One
>>>>rlc-Size			TrCH1: BitMode	TrCH1: BitMode

>>>>>sizeType			TrCH1: 1: 39	TrCH1: 1: 39
>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>logicalChannelList			TrCH1: all	TrCH1: all
>>>tf 2	N/A	N/A	TrCH1: (1x75) TrCH2- TrCH3: N/A	TrCH1: (1x81) TrCH2- TrCH4: N/A
>>>>numberOfTransportBlocks			TrCH1: Zero	TrCH1: Zero
>>>>rlc-Size			TrCH1: BitMode	TrCH1: BitMode
>>>>>sizeType			TrCH1: type 1: 75	TrCH1: type 1: 81
>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>logicalChannelList			TrCH1: all	TrCH1: all
>>semistaticTF-Information				
>>>tti	TrCH1: 40	TrCH1: 10	TrCH1- TrCH2: 20 TrCH3: 40	TrCH1- TrCH3: 20 TrCH4: 40
>>>channelCodingType	Convolutional	Convolutional	Convolutional	Convolutional
>>>>codingRate	TrCH1: Third	TrCH1: Third	TrCH1- TrCH2: Third TrCH3: Third	TrCH1- TrCH2: Third TrCH3: Half TrCH4: Third
>>>rateMatchingAttribute	TrCH1: 160	TrCH1: 160	TrCH1: 200 TrCH2: 190 TrCH3: 160	TrCH1: 200 TrCH2: 190 TrCH3: 235 TrCH4: 160
>>>crc-Size	TrCH1: 16	TrCH1: 16	TrCH1: 12 TrCH2: 0 TrCH3: 16	TrCH1: 12 TrCH2- TrCH3: 0 TrCH4: 16
DL-AddReconfTransChInfoList				
>Downlink transport channel type	dch	dch	dch	dch
>dl-TransportChannelIdentity (should be as for UL)	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>tfs-SignallingMode	SameAsUL	SameAsUL	Independent <Only tf0 on TrCH1 is different and shown below>	Independent <Only tf0 on TrCH1 is different and shown below>
>>transportFormatSet			DedicatedTransChTFS	DedicatedTransChTFS
>>>dynamicTF-information				
>>>>tf0/ tf0,1			TrCH1: (1x0)	TrCH1: (1x0)
>>>>rlcSize			BitMode	bitMode
>>>>>sizeType			TrCH1: type 1: 0	TrCH1: type 1: 0
>>>>numberOfTbSizeList			TrCH1: One	TrCH1: One
>>>>logicalChannelList			All	All
>>ULTrCH-Id	TrCH1: 1	TrCH1: 1	TrCH1: 1, TrCH2: 2, TrCH3: 3	TrCH1: 1, TrCH2: 2, TrCH3: 3, TrCH4: 4
>dch-QualityTarget				
>>bler-QualityValue	TrCH1: $5x10^{-2}$	TrCH1: $5x10^{-2}$	TrCH1: $7x10^{-3}$ TrCH2- TrCH3: Absent	TrCH1: $7x10^{-3}$ TrCH2- TrCH4: Absent
TrCH INFORMATION, COMMON				
ul-CommonTransChInfo				
>tfcs-ID (TDD only)	1	1	1	1
>sharedChannelIndicator (TDD only)	FALSE	FALSE	FALSE	FALSE
>tfc-Subset	Absent, not required	Absent, not required	Absent, not required	Absent, not required

>ul-TFCS	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete	Complete	Complete	Complete
>>>ctfcSize	Ctfc2Bit	Ctfc2Bit	Ctfc4Bit	Ctfc6Bit
>>>>TFCS representation	Addition	Addition	Addition	Addition
>>>>>TFCS list				
>>>>>>TFCS 1	(TF0)	(TF0)	(TF0, TF0, TF0)	(TF0, TF0, TF0, TF0)
>>>>>>>ctfc	0	0	0	0
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 2	(TF1)	(TF1)	(TF1, TF0, TF0)	(TF1, TF0, TF0, TF0)
>>>>>>>ctfc	1	1	1	1
>>>>>>>gainFactorInformation	Signalled	Signalled	Computed	Computed
>>>>>>>>βc (FDD only)	11	11	N/A	N/A
>>>>>>>>βd	15	15	N/A	N/A
>>>>>>>>referenceTFCId	N/A	N/A	0	0
>>>>>>TFCS 3			(TF2, TF1, TF0)	(TF2, TF1, TF1, TF0)
>>>>>>>ctfc			5	11
>>>>>>>gainFactorInformation			Computed	Computed
>>>>>>>>referenceTFCId			0	0
>>>>>>TFCS 4			(TF0, TF0, TF1)	(TF0, TF0, TF0, TF1)
>>>>>>>ctfc			6	12
>>>>>>>gainFactorInformation			Computed	Computed
>>>>>>>>βc (FDD only)			N/A	N/A
>>>>>>>>βd			N/A	N/A
>>>>>>>>referenceTFCId			0	0
>>>>>>TFCS 5			(TF1, TF0, TF1)	(TF1, TF0, TF0, TF1)
>>>>>>>ctfc			7	13
>>>>>>>gainFactorInformation			Computed	Computed
>>>>>>>>referenceTFCId			0	0
>>>>>>TFCS 6			(TF2, TF1, TF1)	(TF2, TF1, TF1, TF1)
>>>>>>>ctfc			11	23
>>>>>>>gainFactorInformation			Signalled	Signalled
>>>>>>>>βc (FDD only)			11	11
>>>>>>>>βd			15	15
>>>>>>>>referenceTFCId			0	0
dl-CommonTransChInfo				
>tfcs-SignallingMode	Same as UL	Same as UL	Same as UL	Same as UL
PhyCH INFORMATION FDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>powerControlAlgorithm	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm 1
>>>tpcStepSize	1	1	1	1

>tfci-Existence	TRUE	TRUE	TRUE	TRUE
>puncturingLimit	1	1	1	0.88
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>spreadingFactor	256	128	128	128
>>pilotBits	4	4	4	4
>>positionFixed	N/A	N/A	Fixed	Fixed
PhyCH INFORMATION 3.84 Mcps TDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>dpch-ConstantValue	-20	-20	-20	-20
>commonTimeslotInfo				
>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>tfci-Coding	4	4	16	16
>>puncturingLimit	1	0.92	0.52	0.88
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>commonTimeslotInfo				
>>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>>tfci-Coding	4	4	16	16
>>>puncturingLimit	1	0.92	0.52	0.92
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
PhyCH INFORMATION 1.28 Mcps TDD				
UL-DPCH-InfoPredef				
>commonTimeslotInfo				
>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>tfci-Coding	4	4	16	16
>>puncturingLimit	1	0.64	0.80	0.60
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>commonTimeslotInfo				
>>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>>tfci-Coding	4	4	16	16
>>>puncturingLimit	1	0.64	0.80	0.60
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1

Configuration	28.8 kbps conv. CS- data + 3.4 kbps signalling	32 kbps conv. CS-data + 3.4 kbps signalling	64kbps conv. CS-data + 3.4 kbps signalling	14.4 kbps streaming CS-data + 3.4 kbps signalling
Ref 34.108	12	14	13	15
Default configuration identity	4	5	6	7
RB INFORMATION				
rb-Identity	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5
rlc-InfoChoice	Rlc-info	Rlc-info	Rlc-info	Rlc-info
>ul-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>transmissionRLC-DiscardMode	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A
>>>maxDat	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A
>>transmissionWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>timerRST	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A
>>max-RST	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A
>>pollingInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>lastTransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>lastRetransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerPollPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
>dl-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>inSequenceDelivery	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A
>>receivingWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>dl-RLC-StatusInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>timerStatusProhibit	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>>missingPDU-Indicator	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerStatusPeriodic	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
rb-MappingInfo				
>UL-LogicalChannelMappings	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel	OneLogicalChannel

>>ul-TransportChannelType	Dch	Dch	Dch	Dch
>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
>>rlc-SizeList	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A
>>mac-LogicalChannelPriority	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5
>DL-logicalChannelMappingList				
>>Mapping option 1	One mapping option	One mapping option	One mapping option	One mapping option
>>>dl-TransportChannelType	Dch	Dch	Dch	Dch
>>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
TrCH INFORMATION PER TrCH				
UL-AddReconfTransChInfoList				
>Uplink transport channel type	dch	dch	dch	dch
>transportChannelIdentity	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>transportFormatSet	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS	DedicatedTransChTFS
>>dynamicTF-information				
>>>tf0/ tf0,1	TrCH1: (0x576, 1x576, 2x576) TrCH2: (0x144, 1x144)	TrCH1: (0x640, 1x640) TrCH2: (0x144, 1x144)	TrCH1: (0x640, 2x640) TrCH2: (0x144, 1x144)	TrCH1: (0x576, 1x576) TrCH2: (0x144, 1x144)
>>>>rlcSize	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode
>>>>>sizeType	TrCH1: type 2, part1= 11, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 11, part2= 2 (640) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 11, part2= 2 (640) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)
>>>>numberOfTbSizeList	TrCH1: Zero,1, 2 (4) TrCH2: Zero, one	TrCH1: Zero, one TrCH2: Zero, one	TrCH1: Zero, 2 (4) TrCH2: Zero, one	TrCH1: Zero, one, TrCH2: Zero, one
>>>>logicalChannelList	All	All	All	All
>>semiStaticTF-Information				
>>>tti	TrCH1: 40 TrCH2: 40	TrCH1: 20 TrCH2: 40	TrCH1: 20 TrCH2: 40	TrCH1: 40 TrCH2: 40
>>>channelCodingType	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional
>>>>codingRate	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third
>>>rateMatchingAttribute	TrCH1: 180 TrCH2: 160	TrCH1: 185 TrCH2: 160	TrCH1: 170 TrCH2: 160	TrCH1: 165 TrCH2: 160

>>>crc-Size	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16
DL-AddReconfTransChInfoList				
>Downlink transport channel type	dch	dch	dch	dch
>dl-TransportChannelIdentity (should be as for UL)	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>tfs-SignallingMode	SameAsUL	SameAsUL	SameAsUL	SameAsUL
>>transportFormatSet				
>>>dynamicTF-information				
>>>>tf0/ tf0,1				
>>>>rlcSize				
>>>>>sizeType				
>>>>numberOfTbSizeList				
>>>>logicalChannelList				
>>ULTrCH-Id	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>dch-QualityTarget				
>>bler-QualityValue	TrCH1: $2x10^{-3}$ TrCH2: Absent	TrCH1: $2x10^{-3}$ TrCH2: Absent	TrCH1: $2x10^{-3}$ TrCH2: Absent	TrCH1: $1x10^{-2}$ TrCH2: Absent
TrCH INFORMATION, COMMON				
ul-CommonTransChInfo				
>tfcs-ID (TDD only)	1	1	1	1
>sharedChannelIndicator (TDD only)	FALSE	FALSE	FALSE	FALSE
>tfc-Subset	Absent, not required	Absent, not required	Absent, not required	Absent, not required
>ul-TFCS	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete	Complete	Complete	Complete
>>>ctfcSize	Ctfc2Bit	Ctfc2Bit	Ctfc2Bit	Ctfc4Bit
>>>>TFCS representation	Addition	Addition	Addition	Addition
>>>>>TFCS list				
>>>>>>TFCS 1	(TF0, TF0)	(TF0, TF0)	(TF0, TF0)	(TF0, TF0)
>>>>>>>ctfc	0	0	0	0
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 2	(TF1, TF0)	(TF1, TF0)	(TF1, TF0)	(TF1, TF0)
>>>>>>>ctfc	1	1	1	1
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>βc (FDD only)	N/A	N/A	N/A	N/A
>>>>>>>>βd	N/A	N/A	N/A	N/A
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 3	(TF2, TF0)	(TF0, TF1)	(TF0, TF1)	(TF0, TF1)
>>>>>>>ctfc	2	2	2	2
>>>>>>>gainFactorInformation	Computed	Computed	Computed	Computed
>>>>>>>>referenceTFCId	0	0	0	0
>>>>>>TFCS 4	(TF0, TF1)	(TF1, TF1)	(TF1, TF1)	(TF1, TF1)
>>>>>>>ctfc	3	3	3	3
>>>>>>>gainFactorInformation	Computed	Signalled	Signalled	Signalled
>>>>>>>>βc (FDD only)	N/A	8	8	11

>>>>>>>>βd	N/A	15	15	15
>>>>>>>>referenceTFCId	N/A	N/A	N/A	N/A
>>>>>>TFCS 5	(TF1, TF1)	N/A	N/A	
>>>>>>>ctfc	4			
>>>>>>>gainFactorInformation	Computed			
>>>>>>>>referenceTFCId	8			
>>>>>>TFCS 6	(TF2, TF1)	N/A	N/A	
>>>>>>>ctfc	5			
>>>>>>>gainFactorInformation	Signalled			
>>>>>>>>βc (FDD only)	8			
>>>>>>>>βd	15			
>>>>>>>>referenceTFCId	N/A			
>>>>>>TFCS 7				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>referenceTFCId				
>>>>>>TFCS 8				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>referenceTFCId				
>>>>>>TFCS 9				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>referenceTFCId				
>>>>>>TFCS 10				
>>>>>>>ctfc				
>>>>>>>gainFactorInformation				
>>>>>>>>βc (FDD only)				
>>>>>>>>βd				
>>>>>>>>referenceTFCId				
dl-CommonTransChInfo				
>tfcs-SignallingMode	Same as UL	Same as UL	Same as UL	Same as UL
PhyCH INFORMATION FDD				
UL-DPCH-InfoPredef				
>ul-DPCH-PowerControlInfo				
>>powerControlAlgorithm	Algorithm 1	Algorithm 1	Algorithm 1	Algorithm 1
>>>tpcStepSize	1	1	1	1
>tfci-Existence	TRUE	TRUE	TRUE	TRUE
>puncturingLimit	0.92	0.8	0.92	1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>spreadingFactor	64	64	32	128
>>pilotBits	8	8	8	8
>>positionFixed	Flexible	Flexible	Flexible	Flexible
PhyCH INFORMATION 3.84 Mcps TDD				
UL-DPCH-InfoPredef				

>ul-DPCH-PowerControlInfo				
>>dpch-ConstantValue	-20	-20	-20	-20
>commonTimeslotInfo				
>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>tfci-Coding	16	8	8	8
>>puncturingLimit	0.44	0.8	0.56	0.8
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>commonTimeslotInfo				
>>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>>tfci-Coding	16	8	8	8
>>>puncturingLimit	0.44	0.64	0.56	0.8
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
PhyCH INFORMATION 1.28 Mcps TDD				
UL-DPCH-InfoPredef				
>commonTimeslotInfo				
>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>tfci-Coding	16	8	8	8
>>puncturingLimit	0.64	0.60	0.64	1
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef				
>dl-DPCH-InfoCommon				
>>commonTimeslotInfo				
>>>secondInterleavingMode	frameRelated	frameRelated	frameRelated	frameRelated
>>>tfci-Coding	16	8	8	8
>>>puncturingLimit	0.64	0.60	0.64	0.88
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1	repetitionPeriod1

Configuration	28.8 kbps streaming CS-data + 3.4 kbps signalling	57.6 kbps streaming CS-data + 3.4 kbps signalling
Ref 34.108	16	17
Default configuration identity	8	9
RB INFORMATION		
rb-Identity	RB1: 1, RB2: 2, RB3: 3, RB5: 5	RB1: 1, RB2: 2, RB3: 3, RB5: 5
rlc-InfoChoice	Rlc-info	Rlc-info
>ul-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>transmissionRLC-DiscardMode	RB1: N/A RB2- RB3: NoDiscard RB5: N/A	RB1: N/A RB2- RB3: NoDiscard RB5: N/A
>>>maxDat	RB1: N/A RB2- RB3: 15 RB5: N/A	RB1: N/A RB2- RB3: 15 RB5: N/A
>>transmissionWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>timerRST	RB1: N/A RB2- RB3: 300 RB5: N/A	RB1: N/A RB2- RB3: 300 RB5: N/A
>>max-RST	RB1: N/A RB2- RB3: 1 RB5: N/A	RB1: N/A RB2- RB3: 1 RB5: N/A
>>pollingInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>lastTransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>lastRetransmissionPDU-Poll	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerPollPeriodic	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
>dl-RLC-Mode	RB1: UM RB2- RB3: AM RB5: TM	RB1: UM RB2- RB3: AM RB5: TM
>>inSequenceDelivery	RB1: N/A RB2- RB3: TRUE RB5: N/A	RB1: N/A RB2- RB3: TRUE RB5: N/A
>>receivingWindowSize	RB1: N/A RB2- RB3: 128 RB5: N/A	RB1: N/A RB2- RB3: 128 RB5: N/A
>>dl-RLC-StatusInfo	RB1: N/A RB2- RB3: as below RB5: N/A	RB1: N/A RB2- RB3: as below RB5: N/A
>>>timerStatusProhibit	RB2- RB3: 100	RB2- RB3: 100
>>>missingPDU-Indicator	RB2- RB3: FALSE	RB2- RB3: FALSE
>>>timerStatusPeriodic	RB2- RB3: 100	RB2- RB3: 100
>>segmentationIndication	RB1- RB3: N/A RB5: FALSE	RB1- RB3: N/A RB5: FALSE
rb-MappingInfo		
>UL-LogicalChannelMappings	OneLogicalChannel	OneLogicalChannel

>>ul-TransportChannelType	Dch	Dch
>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
>>rlc-SizeList	RB1- RB3: ~~all~~ Configured RB5: N/A	RB1- RB3: ~~all~~ Configured RB5: N/A
>>mac-LogicalChannelPriority	RB1: 1, RB2: 2, RB3: 3 RB5: 5	RB1: 1, RB2: 2, RB3: 3 RB5: 5
>DL-logicalChannelMappingList		
>>Mapping option 1	One mapping option	One mapping option
>>>dl-TransportChannelType	Dch	Dch
>>>>transportChannelIdentity	RB1- RB3: 2 RB5: 1	RB1- RB3: 2 RB5: 1
>>>logicalChannelIdentity	RB1: 1, RB2: 2, RB3: 3 RB5: N/A	RB1: 1, RB2: 2, RB3: 3 RB5: N/A
TrCH INFORMATION PER TrCH		
UL-AddReconfTransChInfoList		
>Uplink transport channel type	dch	dch
>transportChannelIdentity	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>transportFormatSet	DedicatedTransChTFS	DedicatedTransChTFS
>>dynamicTF-information		
>>>tf0/ tf0,1	TrCH1: (0x576, 1x576, 2x576) TrCH2: (0x144, 1x144)	TrCH1: (0x576, 1x576, 2x576, 3x576, 4x576) TrCH2: (0x144, 1x144)
>>>>rlcSize	TrCH1: OctetMode TrCH2:BitMode	TrCH1: OctetMode TrCH2:BitMode
>>>>>sizeType	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)	TrCH1: type 2, part1= 9, part2= 2 (576) TrCH2: type 2, part1= 2, part2= 0 (144)
>>>>numberOfTbSizeList	TrCH1: Zero, one, 2 TrCH2: Zero, one	TrCH1: Zero, one, 2, 3, 4 TrCH2: Zero, one
>>>>logicalChannelList	All	All
>>semiStaticTF-Information		
>>>tti	TrCH1: 40 TrCH2: 40	TrCH1: 40 TrCH2: 40
>>>channelCodingType	TrCH1: Turbo TrCH2: Convolutional	TrCH1: Turbo TrCH2: Convolutional
>>>>codingRate	TrCH1: N/A TrCH2: Third	TrCH1: N/A TrCH2: Third

>>>rateMatchingAttribute	TrCH1: 155 TrCH2: 160	TrCH1: 145 TrCH2: 160
>>>crc-Size	TrCH1: 16 TrCH2: 16	TrCH1: 16 TrCH2: 16
DL-AddReconfTransChInfoList		
>Downlink transport channel type	dch	dch
>dl-TransportChannelIdentity (should be as for UL)	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>tfs-SignallingMode	SameAsUL	SameAsUL
>>transportFormatSet		
>>>dynamicTF-information		
>>>>tf0/ tf0,1		
>>>>rlcSize		
>>>>>sizeType		
>>>>numberOfTbSizeList		
>>>>logicalChannelList		
>>ULTrCH-Id	TrCH1: 1, TrCH2: 2	TrCH1: 1, TrCH2: 2
>dch-QualityTarget		
>>bler-QualityValue	TrCH1: $1x10^{-2}$ TrCH2: Absent	TrCH1: $1x10^{-2}$ TrCH2: Absent
TrCH INFORMATION, COMMON		
ul-CommonTransChInfo		
>tfcs-ID (TDD only)	1	1
>sharedChannelIndicator (TDD only)	FALSE	FALSE
>tfc-Subset	Absent, not required	Absent, not required
>ul-TFCS	Normal TFCI signalling	Normal TFCI signalling
>>explicitTFCS-ConfigurationMode	Complete	Complete
>>>ctfcSize	Ctfc4Bit	Ctfc4Bit
>>>>TFCS representation	Addition	Addition
>>>>>TFCS list		
>>>>>>TFCS 1	(TF0, TF0)	(TF0, TF0)
>>>>>>>ctfc	0	0
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 2	(TF1, TF0)	(TF1, TF0)
>>>>>>>ctfc	1	1
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>βc (FDD only)	N/A	N/A
>>>>>>>>βd	N/A	N/A
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 3	(TF2, TF0)	(TF2, TF0)
>>>>>>>ctfc	2	2
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 4	(TF0, TF1)	(TF3, TF0)
>>>>>>>ctfc	3	3

>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>βc (FDD only)	N/A	N/A
>>>>>>>>βd	N/A	N/A
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 5	(TF1, TF1)	(TF4, TF0)
>>>>>>>ctfc	4	4
>>>>>>>gainFactorInformation	Computed	Computed
>>>>>>>>referenceTFCId	0	0
>>>>>>TFCS 6	(TF2, TF1)	(TF0, TF1)
>>>>>>>ctfc	5	5
>>>>>>>gainFactorInformation	Signalled	Computed
>>>>>>>>βc (FDD only)	8	N/A
>>>>>>>>βd	15	N/A
>>>>>>>>referenceTFCId	N/A	0
>>>>>>TFCS 7		(TF1, TF1)
>>>>>>>ctfc		6
>>>>>>>gainFactorInformation		Computed
>>>>>>>>referenceTFCId		0
>>>>>>TFCS 8		(TF2, TF1)
>>>>>>>ctfc		7
>>>>>>>gainFactorInformation		Computed
>>>>>>>>referenceTFCId		0
>>>>>>TFCS 9		(TF3, TF1)
>>>>>>>ctfc		8
>>>>>>>gainFactorInformation		Computed
>>>>>>>>referenceTFCId		0
>>>>>>TFCS 10		(TF4, TF1)
>>>>>>>ctfc		9
>>>>>>>gainFactorInformation		Signalled
>>>>>>>>βc (FDD only)		8
>>>>>>>>βd		15
>>>>>>>>referenceTFCId		0
dl-CommonTransChInfo		
>tfcs-SignallingMode	Same as UL	Same as UL
PhyCH INFORMATION FDD		
UL-DPCH-InfoPredef		
>ul-DPCH-PowerControlInfo		
>>powerControlAlgorithm	Algorithm 1	Algorithm 1
>>>tpcStepSize	1	1
>tfci-Existence	TRUE	TRUE
>puncturingLimit	1	1
DL-CommonInformationPredef		
>dl-DPCH-InfoCommon		
>>spreadingFactor	64	32
>>pilotBits	8	8
>>positionFixed	Flexible	Flexible

PhyCH INFORMATION 3.84 Mcps TDD		
UL-DPCH-InfoPredef		
>ul-DPCH-PowerControlInfo		
>>dpch-ConstantValue	-20	-20
>commonTimeslotInfo		
>>secondInterleavingMode	frameRelated	frameRelated
>>tfci-Coding	16	16
>>puncturingLimit	0.44	0.48
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef		
>dl-DPCH-InfoCommon		
>>commonTimeslotInfo		
>>>secondInterleavingMode	frameRelated	frameRelated
>>>tfci-Coding	16	16
>>>puncturingLimit	0.44	0.48
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1
PhyCH INFORMATION 1.28 Mcps TDD		
UL-DPCH-InfoPredef		
>commonTimeslotInfo		
>>secondInterleavingMode	frameRelated	frameRelated
>>tfci-Coding	16	16
>>puncturingLimit	0.64	0.72
>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1
DL-CommonInformationPredef		
>dl-DPCH-InfoCommon		
>>commonTimeslotInfo		
>>>secondInterleavingMode	frameRelated	frameRelated
>>>tfci-Coding	16	16
>>>puncturingLimit	0.64	0.72
>>>repetitionPeriodAndLength	repetitionPeriod1	repetitionPeriod1

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, 26th-30th November 2001

Tdoc R2-012548

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1165** ⌘ ev **-** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network ☐

Title:	⌘	PLMN search in CELL_PCH/URA_PCH states with 80ms DRX cycle
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	12/11/2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘ When a UE is performing a PLMN scan whilst in CELL_PCH or URA_PCH state and operating with an 80ms DRX cycle, it is possible that the UE's paging occasion on the serving cell will always coincide with the MIB of the cell of interest. Hence, the UE may not be able to determine the PLMN identity of the cell.

Summary of change: ⌘ It is proposed that a note is added to the specification to indicate that when operating with a DRX cycle of 80ms, the search for higher priority PLMN can only be 'best effort'. The note states:

'Note: If the DRX cycle length is 80ms then a search for higher priority PLMNs may not identify all the available PLMNs due to the paging occasion on the current serving cell coinciding with the MIB of the cell of interest.'

Isolated Impact Analysis
Functionality corrected: Search for higher priority PLMN whilst in CELL_PCH/URA_PCH states.

Isolated impact statement: Correction to a function where specification was not sufficiently explicit. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘ It will not be clear from the specification that a PLMN scan in CELL_PCH and URA_PCH states with a DRX cycle of 80ms can only be performed on a 'best effort' basis.

Clauses affected: ⌘ 7.2.2.1

Other specs affected: ⌘
☐ Other core specifications ⌘ 25.331 v4.2.1, CR 1166
☐ Test specifications
☐ O&M Specifications

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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. ⌘

7.2.2.1 URA_PCH or CELL_PCH state

In the URA_PCH or CELL_PCH state the UE shall perform the following actions:

NOTE: Neither DCCH nor DTCH are available in these states.

- if the UE is "in service area":
  - maintain up-to-date system information as broadcast by the serving cell as specified in the sub-clause 8.1.1;
  - perform cell reselection process as specified in [4];
  - perform a periodic search for higher priority PLMNs as specified in [25];

NOTE: If the DRX cycle length is 80ms then a search for higher priority PLMNs may not identify all the available PLMNs due to the paging occasion on the current serving cell coinciding with the MIB of the cell of interest.

  - monitor the paging occasions and PICH monitoring occasions determined according to subclause 8.6.3.1a and 8.6.3.2 and receive paging information on the PCH mapped on the S-CCPCH selected by the UE according to the procedure in subclause 8.5.19;
  - act on RRC messages received on PCCH and BCCH;
  - perform measurements process according to measurement control information as specified in subclause 8.4 and in subclause 14.4;
  - maintain up-to-date BMC data if it supports Cell Broadcast Service (CBS) as specified in [37];
  - run timer T305 for periodical URA update if the UE is in URA_PCH or for periodical cell update if the UE is in CELL_PCH;
- if the UE is "out of service area":
  - perform cell reselection process as specified in [4];
  - run timer T316;
  - run timer T305

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Makuhari, Japan, 26th-30th November 2001

Tdoc R2-012712

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1166** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network ☐

Title:	⌘	PLMN search in CELL_PCH/URA_PCH states with 80ms DRX cycle
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	12/11/2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	When a UE is performing a PLMN scan whilst in CELL_PCH or URA_PCH state and operating with an 80ms DRX cycle, it is possible that the UE's paging occasion on the serving cell will always coincide with the MIB of the cell of interest. Hence, the UE may not be able to determine the PLMN identity of the cell.
Summary of change:	⌘	It is proposed that a note is added to the specification to indicate that when operating with a DRX cycle of 80ms, the search for higher priority PLMN can only be 'best effort'. The note states: 'Note: If the DRX cycle length is 80ms then a search for higher priority PLMNs may not identify all the available PLMNs due to the paging occasion on the current serving cell coinciding with the MIB of the cell of interest.' **Isolated Impact Analysis** Functionality corrected: Search for higher priority PLMN whilst in CELL_PCH/URA_PCH states. Isolated impact statement: Correction to a function where specification was not sufficiently explicit. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.
Consequences if not approved:	⌘	It will not be clear from the specification that a PLMN scan in CELL_PCH and URA_PCH states with a DRX cycle of 80ms can only be performed on a 'best effort' basis.

Clauses affected:	⌘	7.2.2.1		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v3.8.0, CR 1165

Other comments: ⌘

How to create CRs using this form:

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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. ⌘

7.2.2.1 URA_PCH or CELL_PCH state

In the URA_PCH or CELL_PCH state the UE shall perform the following actions:

NOTE: Neither DCCH nor DTCH are available in these states.

- if the UE is "in service area":
  - maintain up-to-date system information as broadcast by the serving cell as specified in the sub-clause 8.1.1;
  - perform cell reselection process as specified in [4];
  - perform a periodic search for higher priority PLMNs as specified in [25];

NOTE: If the DRX cycle length is 80ms then a search for higher priority PLMNs may not identify all the available PLMNs due to the paging occasion on the current serving cell coinciding with the MIB of the cell of interest.

  - monitor the paging occasions and PICH monitoring occasions determined according to subclause 8.6.3.1a and 8.6.3.2 and receive paging information on the PCH mapped on the S-CCPCH selected by the UE according to the procedure in subclause 8.5.19;
  - act on RRC messages received on PCCH and BCCH;
  - perform measurements process according to measurement control information as specified in subclause 8.4 and in subclause 14.4;
  - maintain up-to-date BMC data if it supports Cell Broadcast Service (CBS) as specified in [37];
  - run timer T305 for periodical URA update if the UE is in URA_PCH or for periodical cell update if the UE is in CELL_PCH;
- if the UE is "out of service area":
  - perform cell reselection process as specified in [4];
  - run timer T316;
  - run timer T305

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Makuhari, Japan, 26th-30th November 2001

Tdoc R2-012549

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1167** ⌘ ev **-** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction to CFN calculation for FDD
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	16 Nov 2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	The formula for determining the CFN within the UE is incorrect and not in alignment with 25.402. Also, the specification is not clear about the frames to which formula is referring.
Summary of change:	⌘	The formula is corrected to: CFN = (SFN - (DOFF div 38400)) mod 256 and the following definition is added: 'the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN' A similar definition is added for the common channel case. **Isolated Impact Analysis** Functionality corrected: Calculation of CFN within the UE. Isolated impact statement: Correction to a function where specification was not sufficiently explicit and containing some contradiction with another specification. Would not affect implementations behaving like indicated in the CR, would affect implementations otherwise.
Consequences if not approved:	⌘	If not approved the calculation of CFN the will be ambiguous. This could lead to UEs with incorrect implementations of the CFN calculation and cause layer 1 interoperability problems.

Clauses affected:	⌘	8.5.15.1, 8.5.15.2, 8.5.15.3, 8.5.15.4		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v4.2.1, CR 1168

Other comments: ⌘

How to create CRs using this form:

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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. ⌘

8.5.15 CFN calculation

8.5.15.1 Initialisation for CELL_DCH state after state transition

When the UE receives any of the messages causing the UE to perform a state transition to CELL_DCH, the UE shall set the CFN in relation to the SFN of the first radio link listed in the IE "Downlink information per radio link list" included in that message according to the following formula:

- for FDD:

  CFN = ~~((SFN*38400 - DOFF) div 38400)~~ (SFN - (DOFF div 38400)) mod 256

  - where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;

- for TDD:

  CFN = (SFN - DOFF) mod 256

8.5.15.2 Initialisation in CELL_DCH state at hard handover

When the UE is in CELL_DCH state and receives any of the messages causing the UE to perform a hard handover, the UE shall check the IE "Timing indication" in that message and:

- if IE "Timing indication" has the value "initialise" (i.e. timing re-initialised hard handover):
  - read SFN on target cell identified by the first radio link listed in the IE "Downlink information per radio link list" included in that message;
  - set the CFN according to the following formula:
    - for FDD:
      - CFN = ~~((SFN*38400 - DOFF) div 38400)~~ (SFN - (DOFF div 38400)) mod 256;
      - where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;
    - for TDD:
      - CFN = (SFN - DOFF) mod 256;
- if IE "Timing indication" has the value "maintain" (i.e. timing-maintained hard handover), the UE shall keep CFN with no change due to the hard handover, and only increase CFN (mod 256) by 1 every frame.

8.5.15.3 Initialisation for CELL_FACH

When the UE performs cell selection, re-selection or changes to CELL_FACH state the UE shall set CFN for all common or shared channels according to:

- CFN = SFN mod 256
- where the formula gives the CFN of the downlink common or shared channel frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;

After the initialisation, the CFN in the UE is increased (mod 256) by 1 every frame.

8.5.15.4 Initialisation after intersystem handover to UTRAN

Upon inter RAT handover to UTRAN the UE shall, regardless of the value received within IE "Timing indication" (if received):

- read SFN on target cell and set the CFN according to the following formula:
  - for FDD:

    CFN = ~~((SFN*38400 – DOFF) div 38400)~~ (SFN - (DOFF div 38400)) mod 256 [Note to Hans: Style changed to B3]

    - where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;

  - for TDD:

    CFN = (SFN - DOFF) mod 256 [Note to Hans: Style changed to B3]

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, 26th-30th November 2001

Tdoc R2-012713

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1168** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction to CFN calculation for FDD
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	16 Nov 2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
REL-4 *(Release 4)*
REL-5 *(Release 5)*

Reason for change: ⌘ The formula for determining the CFN within the UE is incorrect and not in alignment with 25.402. Also, the specification is not clear about the frames to which formula is referring.

Summary of change: ⌘ The formula is corrected to:

CFN = (SFN - (DOFF div 38400)) mod 256

and the following definition is added:

'the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN'

A similar definition is added for the common channel case.

Isolated Impact Analysis
Functionality corrected: Calculation of CFN within the UE.

Isolated impact statement: Correction to a function where specification was not sufficiently explicit and containing some contradiction with another specification. Would not affect implementations behaving like indicated in the CR, would affect implementations otherwise.

Consequences if not approved: ⌘ If not approved the calculation of CFN the will be ambiguous. This could lead to UEs with incorrect implementations of the CFN calculation and cause layer 1 interoperability problems.

Clauses affected: ⌘ 8.5.15.1, 8.5.15.2, 8.5.15.3, 8.5.15.4

Other specs affected: ⌘
☐ Other core specifications ⌘ 25.331 v3.8.0, CR 1167
☐ Test specifications
☐ O&M Specifications

Other comments:	⌘ Related CR30 to 25.402

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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. ⌘

8.5.15 CFN calculation

8.5.15.1 Initialisation for CELL_DCH state after state transition

When the UE receives any of the messages causing the UE to perform a state transition to CELL_DCH, the UE shall set the CFN in relation to the SFN of the first radio link listed in the IE "Downlink information per radio link list" included in that message according to the following formula:

- for FDD:

  CFN = ~~((SFN*38400 – DOFF) div 38400)~~ (SFN - (DOFF div 38400)) mod 256

  - where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;

- for TDD:

  CFN = (SFN - DOFF) mod 256

8.5.15.2 Initialisation in CELL_DCH state at hard handover

When the UE is in CELL_DCH state and receives any of the messages causing the UE to perform a hard handover, the UE shall check the IE "Timing indication" in that message and:

- if IE "Timing indication" has the value "initialise" (i.e. timing re-initialised hard handover):
  - read SFN on target cell identified by the first radio link listed in the IE "Downlink information per radio link list" included in that message;
  - set the CFN according to the following formula:
    - for FDD:
      - CFN = ~~((SFN*38400 – DOFF) div 38400)~~ (SFN - (DOFF div 38400)) mod 256;
      - where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;
    - for TDD:
      - CFN = (SFN - DOFF) mod 256;
- if IE "Timing indication" has the value "maintain" (i.e. timing-maintained hard handover), the UE shall keep CFN with no change due to the hard handover, and only increase CFN (mod 256) by 1 every frame.

8.5.15.3 Initialisation for CELL_FACH

When the UE performs cell selection, re-selection or changes to CELL_FACH state the UE shall set CFN for all common or shared channels according to:

- CFN = SFN mod 256
- where the formula gives the CFN of the downlink common or shared channel frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;

After the initialisation, the CFN in the UE is increased (mod 256) by 1 every frame.

8.5.15.4 Initialisation after intersystem handover to UTRAN

Upon inter RAT handover to UTRAN the UE shall, regardless of the value received within IE "Timing indication" (if received):

- read SFN on target cell and set the CFN according to the following formula:
  - for FDD:

    CFN = ~~((SFN*38400 – DOFF) div 38400)~~ (SFN - (DOFF div 38400)) mod 256 [Note to Hans: Style changed to B3]

    - where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN;

  - for TDD:

    CFN = (SFN - DOFF) mod 256 [Note to Hans: Style changed to B3]

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, 26th-30th November 2001

Tdoc R2-012550

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1169** ⌘ ev **-** ⌘ Current version: **3.8.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction to Radio Bearer Control
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	16 Nov 2001
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change: ⌘

1 - The handling of the IE 'RAB Information for setup' contains 3 conditions that are incorrect:

i/ 'if the radio bearer identified with the IE "RB identity" does not exist in the variable ESTABLISHED RABS for another radio access bearer than the one identified with the IE "RAB info"' then the UE performs the actions to setup the radio bearer.

ii/ - 'if the radio bearer identified with the IE "RB identity" already exists in the variable ESTABLISHED RABS for another radio access bearer than the one identified with the IE "RAB info"' then the UE considers it an invald configeration.

These conditions imply that if the radio bearer already exists for the indicated RAB then it is not an invalid case and the UE should perform the actions to setup the radio bearer. This incorrectly implies that a Radio Bearer Setup message could effectively reconfigure a already existing radio bearer.

iii/ - 'if the radio bearer identified with the IE "RB identity does not exist in the variable ESTABLISHED RABS for the radio access bearer identified with the IE "RAB info"' then the UE performs the actions to setup the radio bearer.

This condition is unnecessary as the radio bearer to be setup should be present in the variable for any RAB.

2 - Section 8.6.4.5 specifies that stopping a radio bearer with RB identity less than 2 is considered invalid. The case where the network requests that RB2 is stopped should also be considered invalid.

Summary of change: ⌘

1 - The conditions are corrected so that the actions to setup bearer are only performed when the radio bearer does not already exist for any radio bearer. Otherwise, it is an invalid configuration.

		2 - The condition is corrected to be 'less than or equal to 2'. **Isolated Impact Analysis** Functionality corrected: Radio bearer control Isolated impact statement: Correction to a function where specification was not ambiguous or not sufficiently explicit. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.
Consequences if not approved:	⌘	If not approved the specification would remain ambiguous, leading to different UE implementations.

Clauses affected:	⌘	8.6.4.2, 8.6.4.5		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v4.2.1, CR 1170
Other comments:	⌘			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.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. ⌘

8.6.4.2 RAB information for setup

If the IE "RAB information for setup" is included, the procedure is used to establish radio bearers belonging to a radio access bearer, and the UE shall:

- if several IEs "RAB information for setup" are included and the included IEs "CN domain identity" in the IE "RAB info" does not all have the same value:
  - set the variable INVALID_CONFIGURATION to TRUE;
- if the radio access bearer identified with the IE "RAB info" does not exist in the variable ESTABLISHED_RABS:
  - create a new entry for the radio access bearer in the variable ESTABLISHED_RABS;
  - store the content of the IE "RAB info" in the entry for the radio access bearer in the variable ESTABLISHED_RABS;
  - indicate the establishment of the radio access bearer to the upper layer entity using the IE "CN domain identity", forwarding the content of the IE "RAB identity";
  - calculate the START value only once during this procedure (the same START value shall be used on all new radio bearers created for this radio access bearer) according to subclause 8.5.9 for the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" part of the IE "RAB information to setup";
  - store the calculated START value in the variable START_VALUE_TO_TRANSMIT;
- for each radio bearer in the IE "RB information to setup":
  - if the radio bearer identified with the IE "RB identity" does not exist in the variable ESTABLISHED_RABS ~~for another radio access bearer than the one identified with the IE "RAB info"~~:
    - perform the actions specified in subclause 8.6.4.3;
    - store information about the new radio bearer in the entry for the radio access bearer identified by "RAB info" in the variable ESTABLISHED_RABS;
  - ~~if the radio bearer identified with the IE "RB identity" does not exist in the variable ESTABLISHED_RABS for the radio access bearer identified with the IE "RAB info":~~
    - create a new RAB subflow for the radio access bearer;
    - number the RAB subflow in ascending order, assigning the smallest number to the RAB subflow corresponding to the first radio bearer in the list;
    - if the IE "CN domain identity" in the IE "RAB info" is set to "PS domain" and the number of RAB subflows for the radio access bearer is greater than 1:
      - set the variable INVALID_CONFIGURATION to TRUE;
  - if the radio bearer identified with the IE "RB identity" already exists in the variable ESTABLISHED_RABS ~~for another radio access bearer than the one identified with the IE "RAB info"~~:
    - set the variable INVALID_CONFIGURATION to TRUE.

8.6.4.2a RAB information to reconfigure

If the IE "RAB information to reconfigure" is included then the UE shall:

- if the entry for the radio access bearer identified by the IE "CN domain identity" together with the IE "RAB Identity" in the variable ESTABLISHED_RABS already exists:
  - perform the action for the IE "NAS Synchronization Indicator", according to subclause 8.6.4.12;
- else:

- set the variable INVALID_CONFIGURATION to TRUE.

8.6.4.5 RB information to reconfigure

If the IE "RB information to reconfigure" is included, the UE shall apply the following actions on the radio bearer identified with the value of the IE "RB identity". The UE shall:

- perform the actions for the IE "PDCP info", if present, according to subclause 8.6.4.10, applied for the radio bearer;
- perform the actions for the IE "RLC info", according to subclause 8.6.4.9, applied for the radio bearer;
- perform the actions for the IE "RB mapping info", according to subclause 8.6.4.8, applied for the radio bearer;
- if the IE "Downlink RLC mode" in the IE "RLC info" is set to "TM RLC":
  - configure delivery of erroneous SDUs in lower layers according to indication from upper layer [5].
- if the IE "PDCP SN info" is included:
  - perform the actions as specified in subclause 8.6.4.11 applied for the radio bearer;
- if the IE "RB stop/continue" is included; and
  - if the "RB identity" has a value greater than 2; and
    - if the value of the IE "RB stop/continue" is "stop":
      - configure the RLC entity for the radio bearer to stop;
      - set the IE "RB started" in the variable ESTABLISHED_RABS to "stopped" for that radio bearer;
    - if the value of the IE "RB stop/continue" is "continue":
      - configure the RLC entity for the radio bearer to continue;
      - set the IE "RB started" in the variable ESTABLISHED_RABS to "started" for that radio bearer;
  - if the IE "RB identity" is set to a value less than or equal to 2:
    - set the variable INVALID_CONFIGURATION to TRUE.

3GPP TSG-RAN WG2 Meeting #25
Makuhari, Japan, 26th-30th November 2001

Tdoc R2-012714

CR-Form-v4

CHANGE REQUEST

⌘ **25.331 CR 1170** ⌘ ev **-** ⌘ Current version: **4.2.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network **X** Core Network ☐

Title:	⌘	Correction to Radio Bearer Control
Source:	⌘	TSG-RAN WG2
Work item code:	⌘	TEI
Date:	⌘	16 Nov 2001
Category:	⌘	**A**
Release:	⌘	REL-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change: ⌘

1 - The handling of the IE 'RAB Information for setup' contains 3 conditions that are incorrect:

i/ 'if the radio bearer identified with the IE "RB identity" does not exist in the variable ESTABLISHED RABS for another radio access bearer than the one identified with the IE "RAB info"' then the UE performs the actions to setup the radio bearer.

ii/ - 'if the radio bearer identified with the IE "RB identity" already exists in the variable ESTABLISHED RABS for another radio access bearer than the one identified with the IE "RAB info"' then the UE considers it an invald configeration.

These conditions imply that if the radio bearer already exists for the indicated RAB then it is not an invalid case and the UE should perform the actions to setup the radio bearer. This incorrectly implies that a Radio Bearer Setup message could effectively reconfigure a already existing radio bearer.

iii/ - 'if the radio bearer identified with the IE "RB identity does not exist in the variable ESTABLISHED RABS for the radio access bearer identified with the IE "RAB info"' then the UE performs the actions to setup the radio bearer.

This condition is unnecessary as the radio bearer to be setup should be present in the variable for any RAB.

2 - Section 8.6.4.5 specifies that stopping a radio bearer with RB identity less than 2 is considered invalid. The case where the network requests that RB2 is stopped should also be considered invalid.

Summary of change: ⌘

1 - The conditions are corrected so that the actions to setup bearer are only performed when the radio bearer does not already exist for any radio bearer. Otherwise, it is an invalid configuration.

		2 - The condition is corrected to be 'less than or equal to 2'. **Isolated Impact Analysis** Functionality corrected: Radio bearer control Isolated impact statement: Correction to a function where specification was not ambiguous or not sufficiently explicit. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.
Consequences if not approved:	⌘	If not approved the specification would remain ambiguous, leading to different UE implementations.

Clauses affected:	⌘	8.6.4.2, 8.6.4.5		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	25.331 v3.8.0, CR 1169
Other comments:	⌘			

How to create CRs using this form:

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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. ⌘

8.6.4.2 RAB information for setup

If the IE "RAB information for setup" is included, the procedure is used to establish radio bearers belonging to a radio access bearer, and the UE shall:

- if several IEs "RAB information for setup" are included and the included IEs "CN domain identity" in the IE "RAB info" does not all have the same value:
  - set the variable INVALID_CONFIGURATION to TRUE;
- if the radio access bearer identified with the IE "RAB info" does not exist in the variable ESTABLISHED_RABS:
  - create a new entry for the radio access bearer in the variable ESTABLISHED_RABS;
  - store the content of the IE "RAB info" in the entry for the radio access bearer in the variable ESTABLISHED_RABS;
  - indicate the establishment of the radio access bearer to the upper layer entity using the IE "CN domain identity", forwarding the content of the IE "RAB identity";
  - calculate the START value only once during this procedure (the same START value shall be used on all new radio bearers created for this radio access bearer) according to subclause 8.5.9 for the CN domain as indicated in the IE "CN domain identity" in the IE "RAB info" part of the IE "RAB information to setup";
  - store the calculated START value in the variable START_VALUE_TO_TRANSMIT;
- for each radio bearer in the IE "RB information to setup":
  - if the radio bearer identified with the IE "RB identity" does not exist in the variable ESTABLISHED_RABS ~~for another radio access bearer than the one identified with the IE "RAB info"~~:
    - perform the actions specified in subclause 8.6.4.3;
    - store information about the new radio bearer in the entry for the radio access bearer identified by "RAB info" in the variable ESTABLISHED_RABS;
  - ~~if the radio bearer identified with the IE "RB identity" does not exist in the variable ESTABLISHED_RABS for the radio access bearer identified with the IE "RAB info":~~
    - create a new RAB subflow for the radio access bearer;
    - number the RAB subflow in ascending order, assigning the smallest number to the RAB subflow corresponding to the first radio bearer in the list;
    - if the IE "CN domain identity" in the IE "RAB info" is set to "PS domain" and the number of RAB subflows for the radio access bearer is greater than 1:
      - set the variable INVALID_CONFIGURATION to TRUE;
  - if the radio bearer identified with the IE "RB identity" already exists in the variable ESTABLISHED_RABS ~~for another radio access bearer than the one identified with the IE "RAB info"~~:
    - set the variable INVALID_CONFIGURATION to TRUE.

8.6.4.2a RAB information to reconfigure

If the IE "RAB information to reconfigure" is included then the UE shall:

- if the entry for the radio access bearer identified by the IE "CN domain identity" together with the IE "RAB Identity" in the variable ESTABLISHED_RABS already exists:
  - perform the action for the IE "NAS Synchronization Indicator", according to subclause 8.6.4.12;
- else:

- set the variable INVALID_CONFIGURATION to TRUE.

8.6.4.5 RB information to reconfigure

If the IE "RB information to reconfigure" is included, the UE shall apply the following actions on the radio bearer identified with the value of the IE "RB identity". The UE shall:

- perform the actions for the IE "PDCP info", if present, according to subclause 8.6.4.10, applied for the radio bearer;
- perform the actions for the IE "RLC info", according to subclause 8.6.4.9, applied for the radio bearer;
- perform the actions for the IE "RB mapping info", according to subclause 8.6.4.8, applied for the radio bearer;
- if the IE "Downlink RLC mode" in the IE "RLC info" is set to "TM RLC":
  - configure delivery of erroneous SDUs in lower layers according to indication from upper layer [5].
- if the IE "PDCP SN info" is included:
  - perform the actions as specified in subclause 8.6.4.11 applied for the radio bearer;
- if the IE "RB stop/continue" is included; and
  - if the "RB identity" has a value greater than 2; and
    - if the value of the IE "RB stop/continue" is "stop":
      - configure the RLC entity for the radio bearer to stop;
      - set the IE "RB started" in the variable ESTABLISHED_RABS to "stopped" for that radio bearer;
    - if the value of the IE "RB stop/continue" is "continue":
      - configure the RLC entity for the radio bearer to continue;
      - set the IE "RB started" in the variable ESTABLISHED_RABS to "started" for that radio bearer;
  - if the IE "RB identity" is set to a value less than or equal to 2:
    - set the variable INVALID_CONFIGURATION to TRUE.