

**TSG-RAN Meeting #12
Stockholm, Sweden, 12 - 15 June 2001**

RP-010313

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
R2-011437	agreed	25.331	784	1	R99	Clarification of FRESH in SRNS relocation	F	3.6.0	3.7.0
R2-011438	agreed	25.331	785		Rel-4	Clarification of FRESH in SRNS relocation	A	4.0.0	4.1.0
R2-011259	agreed	25.331	788	1	R99	Correction to UE timers and constants in idle mode	F	3.6.0	3.7.0
R2-011439	agreed	25.331	789		Rel-4	Correction to UE timers and constants in idle mode	A	4.0.0	4.1.0
R2-011260	agreed	25.331	792	1	R99	Clarification on multiframe allocation in TDD	F	3.6.0	3.7.0
R2-011261	agreed	25.331	793		Rel-4	Clarification on multiframe allocation in TDD	A	4.0.0	4.1.0
R2-011262	agreed	25.331	794	1	R99	Predefined parameters for logical channels	F	3.6.0	3.7.0
R2-011263	agreed	25.331	795		Rel-4	Predefined parameters for logical channels	A	4.0.0	4.1.0
R2-011250	agreed	25.331	796	1	R99	Pathloss calculation	F	3.6.0	3.7.0
R2-011251	agreed	25.331	797		Rel-4	Pathloss calculation	A	4.0.0	4.1.0
R2-011264	agreed	25.331	798	1	R99	Clarification on periodic measurement reporting	F	3.6.0	3.7.0
R2-011265	agreed	25.331	799		Rel-4	Clarification on periodic measurement reporting	A	4.0.0	4.1.0
R2-011399	agreed	25.331	802	2	R99	Handling of IE PRACH TFCS and Primary CPICH/Primary CCPCH info	F	3.6.0	3.7.0
R2-011400	agreed	25.331	803	1	Rel-4	Handling of IE PRACH TFCS and Primary CPICH/Primary CCPCH info	A	4.0.0	4.1.0
R2-011268	agreed	25.331	804	1	R99	Correction to FACH measurement occasion in TDD	F	3.6.0	3.7.0
R2-011269	agreed	25.331	805		Rel-4	Correction to FACH measurement occasion in TDD	A	4.0.0	4.1.0
R2-011440	agreed	25.331	806	2	R99	Clarification of L1 synchronization procedures	F	3.6.0	3.7.0
R2-011441	agreed	25.331	807		Rel-4	Clarification of L1 synchronization procedures	A	4.0.0	4.1.0
R2-011234	agreed	25.331	808	1	R99	Correction of Activation Time definition	F	3.6.0	3.7.0
R2-011442	agreed	25.331	809		Rel-4	Correction of Activation Time definition	A	4.0.0	4.1.0

CHANGE REQUEST

⌘ **25.331 CR 784** ⌘ rev **r1** ⌘ Current version: **3.6.0** ⌘

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:	⌘ Clarification of FRESH in SRNS relocation		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 15 th May 2001
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (essential 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 <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ Target RNC is supposed to include the FRESH value to the first DL RRC message after SRNS relocation. This is needed to restart integrity protection after SRNS relocation. However, this case has not been covered in the current procedural description of reception of IE ' Integrity protection mode info'. Therefore, UE will ignore the FRESH coming from Target RNC. This will lead to failure of integrity protection after SRNS relocation.
Summary of change:	⌘ The case where IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" is used at SRNS relocation. Backward compatibility: This CR is a correction to a function where procedural text or rules were missing. This CR would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.
Consequences if not approved:	⌘ The integrity protection fails at SRNS relocation.

Clauses affected:	⌘ 8.6.3.5		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

8.6.3.5 Integrity protection mode info

The IE "Integrity protection mode info" defines the new integrity protection configuration. If the IE "Integrity protection mode info" is present and if the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_STATUS is set to FALSE, the UE shall check the IE "Integrity protection mode command" as part of the IE "Integrity protection mode info", and perform the following. The UE shall:

- if the IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started"; or if the IE "Integrity protection mode command" has the value "Modify" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Not Started":
 - ignore this attempt to change the integrity protection configuration; and
 - set the variable INVALID_CONFIGURATION to TRUE;
- else:
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_STATUS to TRUE;
 - if IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Not started":
 - if the IE "Historical status" in the variable INTEGRITY_PROTECTION_INFO has the value "Never been active":
 - initialise the information for all signalling radio bearers in the variable INTEGRITY_PROTECTION_INFO according to the following:
 - set the IE "Uplink RRC Message sequence number" to zero;
 - do not include the IE "Downlink RRC Message sequence number";
 - set the IE "Historical status" in the variable INTEGRITY_PROTECTION_INFO to the value "Has been active";
 - set the IE "Status" in the variable INTEGRITY_PROTECTION_INFO to the value "Started";
 - perform integrity protection on the received message as described in subclause 8.5.10.1;
 - use the algorithm (UIA [40]) indicated by the IE "Integrity protection algorithm" contained in the IE "Integrity protection mode info";
 - use the IE "Integrity protection initialisation number", contained in the IE "Integrity protection mode info" as the value of FRESH [40];
 - if IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" (Note: this case is used in SRNS relocation):
 - perform integrity protection on the received message as described in subclause 8.5.10.1;
 - use the algorithm (UIA [40]) indicated by the IE "Integrity protection algorithm" contained in the IE "Integrity protection mode info";
 - use the IE "Integrity protection initialisation number", contained in the IE "Integrity protection mode info" as the value of FRESH [40];
- if IE "Integrity protection mode command" has the value "modify" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started":
 - start applying the new integrity protection configuration in the downlink at the RRC sequence number, for each radio bearer n, indicated by the entry for radio bearer n in the "RRC message sequence number list" in the IE "Downlink integrity protection activation info", included in the IE "Integrity protection mode info";
 - perform integrity protection on the received message as described in subclause 8.5.10.1;

- if present, use the algorithm indicated by the IE "Integrity protection algorithm" (UIA [40]);
- set the content of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO according to the following:
 - for each established signalling radio bearer, stored in the variable ESTABLISHED_RABS:
 - include a value of the RRC sequence number, when the new integrity protection in uplink is to be applied;
 - for RB#0:
 - set the value of the included RRC sequence number to greater than or equal to the current value of the RRC sequence number for RB#0 in the variable INTEGRITY_PROTECTION_INFO, plus the value of the constant N302 plus one;
- start applying the new integrity protection configuration in the uplink at the RRC sequence number, for each radio bearer n, except for RB#2, indicated by the entry for radio bearer n in the "RRC message sequence number list" in the IE "Uplink integrity protection activation info", included in the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- start applying the new integrity protection configuration in the uplink at the RRC sequence number for RB#2, as specified for the procedure initiating the integrity protection reconfiguration;
- set the values of the IE "Uplink integrity protection activation info".

If the IE "Integrity protection mode info" is present and if the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_STATUS is set to TRUE, the UE shall:

- ignore this second attempt to change the integrity protection configuration; and
- set the variable INCOMPATIBLE_SECURITY_RECONFIGURATION to TRUE.

If the IE "Integrity protection mode info" is not present, the UE shall not change the integrity protection configuration.

10.3.3.19 Integrity protection mode info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Integrity protection mode command	MP		Enumerated(start, modify)	
Downlink integrity protection activation info	<i>CV-modify</i>		Integrity protection activation info 10.3.3.17	
Integrity protection algorithm	OP		Integrity protection algorithm 10.3.3.18	
Integrity protection initialisation number	<i>CV-start</i>		Bitstring(32)	FRESH [40]

Condition	Explanation
<i>Start</i>	The IE is mandatory if the IE "Integrity protection mode command" has the value "start ", otherwise it is not needed in the message.
<i>Modify</i>	The IE is only present if the IE "Integrity protection mode command" has the value "modify"

11.3 Information element definitions

```
IntegrityProtectionModeCommand ::= CHOICE {
  startIntegrityProtection      SEQUENCE {
    integrityProtInitNumber      IntegrityProtInitNumber
  },
  modify                        SEQUENCE {
    dl-IntegrityProtActivationInfo IntegrityProtActivationInfo
  }
}

IntegrityProtectionModeInfo ::= SEQUENCE {
  integrityProtectionModeCommand IntegrityProtectionModeCommand,
  -- TABULAR: DL integrity protection activation info and Integrity
  -- protection intialisation number have been nested inside
  -- IntegrityProtectionModeCommand.
  integrityProtectionAlgorithm IntegrityProtectionAlgorithm OPTIONAL
}

IntegrityProtInitNumber ::= BIT STRING (SIZE (32))
```

CHANGE REQUEST

⌘ **25.331 CR 785** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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:	⌘ Clarification of FRESH in SRNS relocation		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 25 th May 2001
Category:	⌘ A	Release:	⌘ REL-4
	Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

Reason for change:	⌘ Target RNC is supposed to include the FRESH value to the first DL RRC message after SRNS relocation. This is needed to restart integrity protection after SRNS relocation. However, this case has not been covered in the current procedural description of reception of IE ' Integrity protection mode info'. Therefore, UE will ignore the FRESH coming from Target RNC. This will lead to failure of integrity protection after SRNS relocation.
Summary of change:	⌘ The case where IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" is used at SRNS relocation. Backward compatibility: The proposed changes do not affect the ASN.1 definitions. A UE, which has not implemented this change, will ignore the FRESH coming from Target RNC. This will lead to failure of integrity protection after SRNS relocation.
Consequences if not approved:	⌘ The integrity protection fails at SRNS relocation.

Clauses affected:	⌘ 8.6.3.5		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

8.6.3.5 Integrity protection mode info

The IE "Integrity protection mode info" defines the new integrity protection configuration. If the IE "Integrity protection mode info" is present and if the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_STATUS is set to FALSE, the UE shall check the IE "Integrity protection mode command" as part of the IE "Integrity protection mode info", and perform the following. The UE shall:

- ~~if the IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started"; or if the IE "Integrity protection mode command" has the value "Modify" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Not Started":~~
- ignore this attempt to change the integrity protection configuration; and
- set the variable INVALID_CONFIGURATION to TRUE;
- else:
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_STATUS to TRUE;
 - if IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Not started":
 - if the IE "Historical status" in the variable INTEGRITY_PROTECTION_INFO has the value "Never been active":
 - initialise the information for all signalling radio bearers in the variable INTEGRITY_PROTECTION_INFO according to the following:
 - set the IE "Uplink RRC Message sequence number" to zero;
 - do not include the IE "Downlink RRC Message sequence number";
 - set the IE "Historical status" in the variable INTEGRITY_PROTECTION_INFO to the value "Has been active";
 - set the IE "Status" in the variable INTEGRITY_PROTECTION_INFO to the value "Started";
 - perform integrity protection on the received message as described in subclause 8.5.10.1;
 - use the algorithm (UIA [40]) indicated by the IE "Integrity protection algorithm" contained in the IE "Integrity protection mode info";
 - use the IE "Integrity protection initialisation number", contained in the IE "Integrity protection mode info" as the value of FRESH [40];
 - if IE "Integrity protection mode command" has the value "start" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started" (Note: this case is used in SRNS relocation):
 - perform integrity protection on the received message as described in subclause 8.5.10.1;
 - use the algorithm (UIA [40]) indicated by the IE "Integrity protection algorithm" contained in the IE "Integrity protection mode info";
 - use the IE "Integrity protection initialisation number", contained in the IE "Integrity protection mode info" as the value of FRESH [40];
- if IE "Integrity protection mode command" has the value "modify" and the IE "Status" in the variable INTEGRITY_PROTECTION_INFO has the value "Started":
 - start applying the new integrity protection configuration in the downlink at the RRC sequence number, for each radio bearer n, indicated by the entry for radio bearer n in the "RRC message sequence number list" in the IE "Downlink integrity protection activation info", included in the IE "Integrity protection mode info";
 - perform integrity protection on the received message as described in subclause 8.5.10.1;

- if present, use the algorithm indicated by the IE "Integrity protection algorithm" (UIA [40]);
- set the content of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO according to the following:
 - for each established signalling radio bearer, stored in the variable ESTABLISHED_RABS:
 - include a value of the RRC sequence number, when the new integrity protection in uplink is to be applied;
 - for RB#0:
 - set the value of the included RRC sequence number to greater than or equal to the current value of the RRC sequence number for RB#0 in the variable INTEGRITY_PROTECTION_INFO, plus the value of the constant N302 plus one;
- start applying the new integrity protection configuration in the uplink at the RRC sequence number, for each radio bearer n, except for RB#2, indicated by the entry for radio bearer n in the "RRC message sequence number list" in the IE "Uplink integrity protection activation info", included in the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- start applying the new integrity protection configuration in the uplink at the RRC sequence number for RB#2, as specified for the procedure initiating the integrity protection reconfiguration;
- set the values of the IE "Uplink integrity protection activation info".

If the IE "Integrity protection mode info" is present and if the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_STATUS is set to TRUE, the UE shall:

- ignore this second attempt to change the integrity protection configuration; and
- set the variable INCOMPATIBLE_SECURITY_RECONFIGURATION to TRUE.

If the IE "Integrity protection mode info" is not present, the UE shall not change the integrity protection configuration.

10.3.3.19 Integrity protection mode info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Integrity protection mode command	MP		Enumerated(start, modify)	
Downlink integrity protection activation info	<i>CV-modify</i>		Integrity protection activation info 10.3.3.17	
Integrity protection algorithm	OP		Integrity protection algorithm 10.3.3.18	
Integrity protection initialisation number	<i>CV-start</i>		Bitstring(32)	FRESH [40]

Condition	Explanation
<i>Start</i>	The IE is mandatory if the IE "Integrity protection mode command" has the value "start ", otherwise it is not needed in the message.
<i>Modify</i>	The IE is only present if the IE "Integrity protection mode command" has the value "modify"

11.3 Information element definitions

```
IntegrityProtectionModeCommand ::= CHOICE {
  startIntegrityProtection      SEQUENCE {
    integrityProtInitNumber      IntegrityProtInitNumber
  },
  modify                        SEQUENCE {
    dl-IntegrityProtActivationInfo IntegrityProtActivationInfo
  }
}

IntegrityProtectionModeInfo ::= SEQUENCE {
  integrityProtectionModeCommand IntegrityProtectionModeCommand,
  -- TABULAR: DL integrity protection activation info and Integrity
  -- protection intialisation number have been nested inside
  -- IntegrityProtectionModeCommand.
  integrityProtectionAlgorithm IntegrityProtectionAlgorithm OPTIONAL
}

IntegrityProtInitNumber ::= BIT STRING (SIZE (32))
```

CHANGE REQUEST

⌘ **25.331 CR 788** ⌘ ev **r1** ⌘ Current version: **3.6.0** ⌘

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:	⌘ Correction to UE timers and constants in idle mode		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 23 rd May 2001
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> 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 <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ In the SIB1 tabular description there have been claimed that UE Timers and constants in idle mode 10.3.3.44 should have defined either default values or they should be optional. In the current specification they are marked in 10.3.3.44 as mandatorily present without default values.
Summary of change:	⌘ Needed default values are assigned to "UE Timers and constants in idle mode" in 10.3.3.44. Backward compatibility: This CR is backwards compatible.
Consequences if not approved:	⌘ Inconsistent description in the specification. Missing default values in IE "UE Timers and constants in idle mode", possibly leading to unpredictable UE behaviour..

Clauses affected:	⌘ 10.3.3.44		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

10.3.3.44 UE Timers and Constants in idle mode

This information element specifies timer- and constant values used by the UE in idle mode.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
T300	MP		Integer(100, 200... 2000 by step of 200, 3000, 4000, 6000, 8000)	Value in milliseconds. <u>Default value is 1000.</u>
N300	MP		Integer(0.. 7)	<u>Default value is 3.</u>
T312	MP		Integer(0 .. 15)	Value in seconds. <u>Default value is 1.</u>
N312	MP		Integer (1, 50, 100, 200, 400, 600, 800, 1000)	<u>Default value is 1.</u>

<small>CR-Form-v4</small>	
<h2 style="margin: 0;">CHANGE REQUEST</h2>	
⌘ 25.331 CR 789 ⌘ ev - ⌘	Current version: 4.0.0 ⌘

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:	⌘ Correction to UE timers and constants in idle mode		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 23 rd May 2001
Category:	⌘ A	Release:	⌘ REL-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		REL-4 (Release 4)
			REL-5 (Release 5)

Reason for change:	⌘ In the SIB1 tabular description there have been claimed that UE Timers and constants in idle mode 10.3.3.44 should have defined either default values or they should be optional. In the current specification they are marked in 10.3.3.44 as mandatorily present without default values.
Summary of change:	⌘ Needed default values are assigned to "UE Timers and constants in idle mode" in 10.3.3.44.
Consequences if not approved:	⌘ Inconsistent description in the specification. Missing default values in IE "UE Timers and constants in idle mode".

Clauses affected:	⌘ 10.3.3.44		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications	⌘	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> O&M Specifications		
Other comments:	⌘		

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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.

10.3.3.44 UE Timers and Constants in idle mode

This information element specifies timer- and constant values used by the UE in idle mode.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
T300	MP		Integer(100, 200... 2000 by step of 200, 3000, 4000, 6000, 8000)	Value in milliseconds. <u>Default value is 1000.</u>
N300	MP		Integer(0.. 7)	<u>Default value is 3.</u>
T312	MP		Integer(0 .. 15)	Value in seconds. <u>Default value is 1.</u>
N312	MP		Integer (1, 50, 100, 200, 400, 600, 800, 1000)	<u>Default value is 1.</u>

CHANGE REQUEST

⌘ **25.331 CR 792** ⌘ rev **r1** ⌘ Current version: **3.6.0** ⌘

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:	⌘ Clarification on multiframe allocation in TDD		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 3.05.2001
Category:	⌘ F	Release:	⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change: ⌘	<p>The signalling allows to define multiframe allocations that are not compatible with each others. Therefore there is a need to clarify the requested behaviour of the UEs.</p> <p>The added descriptions are consistent with the examples that are provided in WG1 specifications for common channels.</p> <p>The UE requirements in terms of reception of physical channels are not totally clearly described.</p> <p>In order to reduce the requirements of the UEs UEs are not required to receive the FACH channel while receiving DSCH. Thus simultaneous reception of these two channels is not required but the UE shall switch between the channels depending on whether a PDSCH is allocated to the UE or not.</p> <p>Clarification on SCCPCH reception requirements for shared channel operation in TDD.</p> <p>Backward compatibility aspects:</p> <ul style="list-style-type: none"> • Reception of common physical channels Colliding configurations are possible. Therefore the precedence of the physical channels needs to be specified to ease terminals life. UEs implementing previous versions of the standard would not have the knowledge. It is expected that most implementations would have used this implementation because it conforms to the examples given in 25.221. • Reception of FACH while DSCH is allocated Without this CR UEs would have to monitor also while a DSCH is allocated. This would not cause any problems but Ues would receive the FACH without being required to. • Reception of SCCPCH in shared channel operation in TDD Clarifies common understanding.
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	<ul style="list-style-type: none"> • Correction to a function where the specification was : <ul style="list-style-type: none"> • ambiguous or not sufficiently explicit. <p>Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.</p>															
Summary of change: ⌘	Clarification on requirements of physical channel reception are included.															
Consequences if not approved: ⌘	Interpretation of multiframe allocations unclear. Unnecessary requirements on the UE															
Clauses affected: ⌘	8.2.7.1, 8.6.6.4, 8.6.6.16															
Other specs affected:	<table border="0"> <tr> <td>⌘</td> <td><input type="checkbox"/></td> <td>Other core specifications</td> <td>⌘</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/></td> <td>Test specifications</td> <td></td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/></td> <td>O&M Specifications</td> <td></td> <td></td> </tr> </table>	⌘	<input type="checkbox"/>	Other core specifications	⌘			<input type="checkbox"/>	Test specifications				<input type="checkbox"/>	O&M Specifications		
⌘	<input type="checkbox"/>	Other core specifications	⌘													
	<input type="checkbox"/>	Test specifications														
	<input type="checkbox"/>	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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

8.2.7.1 General

The purpose of this procedure is to allocate radio resources to USCH and/or DSCH transport channels in TDD mode, for use by a UE. This procedure can also be used to indicate to the UE, that a PUSCH allocation is pending, in order to prevent further capacity requests from the UE.

UEs are not required to receive FACH and DSCH simultaneously i.e. if resources are allocated to DSCH the FACH reception may be suspended.

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 "Secondary CCPCH info" 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;
 - else:**
 - 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;
- 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;
 - if the received message is any other message than CELL UPDATE CONFIRM; and
 - if other IEs 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":
- set the variable INVALID_CONFIGURATION to TRUE.

8.6.6.16 Repetition period, Repetition length, Offset (TDD only)

In case the physical allocations of different channels overlap the following priority rules shall apply for common channels and shall be taken into account by the UE:

- PICH takes precedence over Primary CCPCH
- PICH takes precedence over Secondary CCPCH
- Secondary CCPCH takes precedence over Primary CCPCH

The frame allocation can be derived by following rules:

If no IE "Offset" is explicitly given, the parameter "Offset" to be used is calculated by the following equation:

$$\text{Activation time mod Repetition period} = \text{Offset.}$$

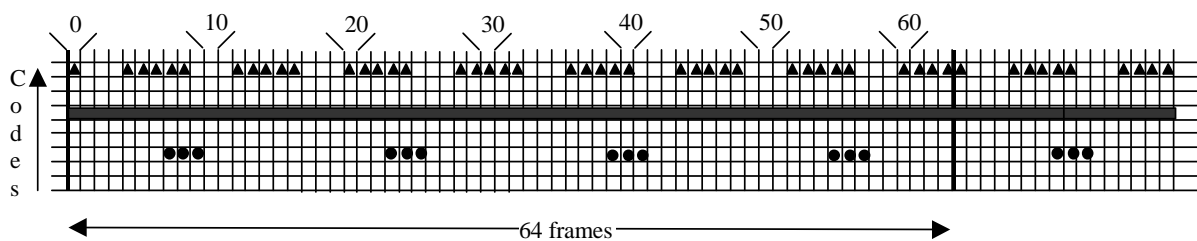
Frames from CFN CFN_{off} to $CFN_{\text{off}} + \text{Repetition length}$ belong to the allocation with CFN_{off} fulfilling the following equation:

$$CFN_{\text{off}} \text{ mod Repetition period} = \text{Offset.}$$

Repetition length is always a multiple of the largest TTI within the CCTrCH fulfilling the following equation:

$$(\text{largest TTI within CCTrCH}) * X = \text{Repetition Length}$$

Example of usage:



- ▲ physic. channel (Code 7; Repetition period=8; Repetition length=5; Activation time = 4 => Offset = 4 => $CFN_{\text{off}} = 4, 12, 20, 28, 36, 44, 52, 60$)
- physic. channel (Code 5; Repetition Period=1 => Repetition length=0; Offset = 0 => $CFN_{\text{off}} = 0, 1, 2, 3, 4, \dots$ (continuous allocation))
- physic. channel (Code 3; Repetition period=16; Repetition length=3; Activation time = 23 => Offset = 7 => $CFN_{\text{off}} = 7, 23, 39, 55$)

Figure 60: Examples for frame allocations in TDD

CHANGE REQUEST

⌘ **25.331 CR 793** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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:	⌘ Clarification on multiframe allocation in TDD		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 23.05.2001
Category:	⌘ A	Release:	⌘ REL-4
	Use <u>one</u> 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 <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The signalling allows to define multiframe allocations that are not compatible with each others. Therefore there is a need to clarify the requested behaviour of the UEs. The added descriptions are consistent with the examples that are provided in WG1 specifications for common channels. The UE requirements in terms of reception of physical channels are not totally clearly described. In order to reduce the requirements of the UEs UEs are not required to receive the FACH channel while receiving DSCH. Thus simultaneous reception of these two channels is not required but the UE shall switch between the channels depending on whether a PDSCH is allocated to the UE or not. Clarification on SCCPCH reception requirements for shared channel operation in TDD.
Summary of change:	⌘ Clarification on requirements of physical channel reception are included.
Consequences if not approved:	⌘ Interpretation of multiframe allocations unclear. Unnecessary requirements on the UE

Clauses affected:	⌘ 8.2.7.1, 8.6.6.4, 8.6.6.16		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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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.

8.2.7.1 General

The purpose of this procedure is to allocate radio resources to USCH and/or DSCH transport channels in TDD mode, for use by a UE. This procedure can also be used to indicate to the UE, that a PUSCH allocation is pending, in order to prevent further capacity requests from the UE.

UEs are not required to receive FACH and DSCH simultaneously i.e. if resources are allocated to DSCH the FACH reception may be suspended.

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 "Secondary CCPCH info" 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;
 - else:**
 - 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;
- 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;
 - if the received message is any other message than CELL UPDATE CONFIRM; and
 - if other IEs 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":
- set the variable INVALID_CONFIGURATION to TRUE.

8.6.6.16 Repetition period, Repetition length, Offset (TDD only)

In case the physical allocations of different channels overlap the following priority rules shall apply for common channels and shall be taken into account by the UE:

- PICH takes precedence over Primary CCPCH
- PICH takes precedence over Secondary CCPCH
- Secondary CCPCH takes precedence over Primary CCPCH

The frame allocation can be derived by following rules:

If no IE "Offset" is explicitly given, the parameter "Offset" to be used is calculated by the following equation:

$$\text{Activation time mod Repetition period} = \text{Offset.}$$

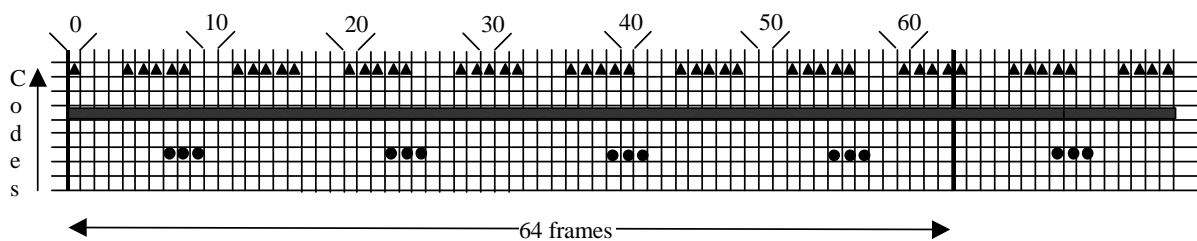
Frames from CFN CFN_{off} to $CFN_{\text{off}} + \text{Repetition length}$ belong to the allocation with CFN_{off} fulfilling the following equation:

$$CFN_{\text{off}} \text{ mod Repetition period} = \text{Offset.}$$

Repetition length is always a multiple of the largest TTI within the CCTrCH fulfilling the following equation:

$$(\text{largest TTI within CCTrCH}) * X = \text{Repetition Length}$$

Example of usage:



- ▲ physic. channel (Code 7; Repetition period=8; Repetition length=5; Activation time = 4 => Offset = 4 => $CFN_{\text{off}} = 4, 12, 20, 28, 36, 44, 52, 60$)
- physic. channel (Code 5; Repetition Period=1 => Repetition length=0; Offset = 0 => $CFN_{\text{off}} = 0, 1, 2, 3, 4, \dots$ (continuous allocation))
- physic. channel (Code 3; Repetition period=16; Repetition length=3; Activation time = 23 => Offset = 7 => $CFN_{\text{off}} = 7, 23, 39, 55$)

Figure 60: Examples for frame allocations in TDD

CHANGE REQUEST

⌘ **25.331 CR 794** ⌘ rev **r1** ⌘ Current version: **3.6.0** ⌘

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:	⌘ Predefined parameters for logical channels		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 07.05.01
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> 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.		<i>Use one of the following releases:</i> 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:	⌘ Parameters for the SHCCH and BCH on FACH need to be predefined. These information are currently missing. Furthermore a reference to 25.302 is included because the transport format parameters for BCCH on BCH are specified there in a normative annex.
Summary of change:	⌘ Parameters for SHCCH and BCH on FACH included in section 13.6. Correction on SRB0 with respect to "RLC Transmission discard" Reference to 25.302 added.
Consequences if not approved:	⌘ Parameters are not specified. The parameters are essential for the functionality. Backward compatibility aspects: <ul style="list-style-type: none"> • Correction for SRB0: The change clarifies what was meant before and was described not precisely. No backward compatibility problems are seen with this clarification. • RB information parameters for SHCCH: Parameters were not specified up to now. Therefore the specification of the parameters is essential though it might lead to backward compatibility problems that can't be avoided. • RB parameters for BCCH on FACH and PCCH on PCH Usage of proper parameters by the UE is essential. Since no parameters were explicitly specified up to now this change cannot be avoided. It is expected that implementations would have used these parameters. • Correction to a function where the specification was : <ul style="list-style-type: none"> • Procedural text or rules were missing. Would not affect implementations behaving like indicated in the CR, would affect

implementations supporting the corrected functionality otherwise.

Clauses affected:	⌘	6.3, 13.6a (new), 13.6b (new), 13.6c (new), 13.6d (new)		
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications	⌘	
		<input type="checkbox"/> Test specifications		
		<input type="checkbox"/> O&M Specifications		
Other comments:	⌘			

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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.

6 Services expected from lower layers

6.1 Services expected from Layer 2

The services provided by layer 2 are described in [2], [15] and [16].

6.2 Services expected from Layer 1

The services provided by layer 1 are described in [2].

6.3 Signalling Radio Bearers

The Radio Bearers available for usage by RRC messages using RLC-TM, RLC-UM and RLC-AM on the DCCH and CCCH are specified in the following. The UE and UTRAN shall select the radio bearers for RRC messages using RLC-TM, RLC-UM or RLC-AM on the DCCH and CCCH, according to the following:

- RB 0 shall be used for all messages sent on the CCCH (UL: RLC-TM, DL: RLC-UM).
- RB 1 shall be used for all messages sent on the DCCH, when using RLC unacknowledged mode (RLC-UM).
- RB 2 shall be used for all messages sent on the DCCH, when using RLC acknowledged mode (RLC-AM), except for the RRC messages carrying higher layer (NAS) signalling.
- RB 3 and optionally RB 4 shall be used for the RRC messages carrying higher layer (NAS) signalling and sent on the DCCH in RLC acknowledged mode (RLC-AM), as specified in subclause 8.1.8., 8.1.9 and 8.1.10.
- Additionally, RBs whose identities shall be set between 5 and 31 may be used for the RRC messages on the DCCH sent in RLC transparent mode (RLC-TM).
- RRC messages on the SHCCH are mapped either on RACH or on the USCH with the lowest assigned Transport Channel Id in the uplink and either on FACH or on the DSCH with the lowest assigned Transport Channel Id using RLC-TM.
These messages are only specified for TDD mode.

The Radio Bearer configuration for SRB0, [SHCCH, BCCH on FACH and PCCH on PCH](#) is specified in 13.6, [13.6a](#), [13.6b](#) and [13.6c](#).

When an RRC message is transmitted in DL on CCCH or SHCCH using RLC UM, RRC should indicate to RLC that a special RLC length indicator should be used [16]. The UE shall assume that this indication has been given. The special length indicator indicates that an RLC SDU begins in the beginning of an RLC PDU.

13.6 RB information parameters for SRB 0

The following Radio Bearer parameter values apply for SRB0:

Information element/ Group name	Value	Comment
RLC info		
>Uplink RLC mode	TM	
>>Transmission RLC discard	No-discardomitted	Neither discard is used, nor will there be a reset
>>Segmentation indication	FALSE	
>Downlink RLC mode	UM	
RB mapping info		Single multiplexing option
>Uplink mapping info		
>>UL transport channel	RACH	RACH corresponding with selected PRACH
>>RLC size list	N/A	The first TB defined in the Transport Format Set for the transport channel that is used
>Downlink mapping info		
>>DL transport channel	FACH	

13.6a RB information parameters for SHCCH

The following Radio Bearer parameter values apply for SHCCH:

Information element/ Group name	Value	Comment
RLC info		
>Uplink RLC mode	TM	
>>Transmission RLC discard	omitted	Neither discard is used, nor will there be a reset
>>Segmentation indication	FALSE	
>Downlink RLC mode	UM	
RB mapping info		
>Uplink mapping info		Option 1
>>UL transport channel	RACH	RACH corresponding with selected PRACH
>>RLC size list	N/A	The first TB defined in the Transport Format Set for the transport channel that is used
>Downlink mapping info		
>>DL transport channel	FACH	
>Uplink mapping info		Option 2
>>UL transport channel	USCH	
>>UL Transport Channel Identity	1	
>>MAC logical channel priority	1	
>>RLC size list	N/A	The first TB defined in the Transport Format Set for the transport channel that is used
>Downlink mapping info		
>>DL transport channel	DSCH	
>>DL Transport Channel Identity	1	

13.6b RB information parameters for BCCH on FACH

The following Radio Bearer parameter values apply for BCCH on FACH:

Information element/ Group name	Value	Comment
Downlink RLC mode	TM	
Segmentation indication	FALSE	

13.6c RB information parameters for PCCH on PCH

The following Radio Bearer parameter values apply for PCCH on PCH:

<u>Information element/ Group name</u>	<u>Value</u>	<u>Comment</u>
<u>Downlink RLC mode</u>	<u>TM</u>	
<u>Segmentation indication</u>	<u>FALSE</u>	

13.6d Parameters for BCCH on BCH

The transport format parameters for BCH are specified in [34].

CHANGE REQUEST

⌘ **25.331 CR 795** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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:	⌘ Predefined parameters for logical channels		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 24.05.01
Category:	⌘ A	Release:	⌘ REL-4
	Use <u>one</u> 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 <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ Parameters for the SHCCH and BCH on FACH need to be predefined. These information are currently missing. Furthermore a reference to 25.302 is included because the transport format parameters for BCCH on BCH are specified there in a normative annex.
Summary of change:	⌘ Parameters for SHCCH and BCH on FACH included in section 13.6. Correction on SRB0 with respect to "RLC Transmission discard" Reference to 25.302 added.
Consequences if not approved:	⌘ Parameters are not specified. The parameters are essential for the functionality. <ul style="list-style-type: none"> • Correction for SRB0: The change clarifies what was meant before and was described not precisely. • RB information parameters for SHCCH: Parameters were not specified up to now. • RB parameters for BCCH on FACH and PCCH on PCH Usage of proper parameters by the UE is essential. Since no parameters were explicitly specified up to now this change cannot be avoided.

Clauses affected:	⌘ 6.3, 13.6a (new), 13.6b (new), 13.6c (new), 13.6d (new)		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

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6 Services expected from lower layers

6.1 Services expected from Layer 2

The services provided by layer 2 are described in [2], [15] and [16].

6.2 Services expected from Layer 1

The services provided by layer 1 are described in [2].

6.3 Signalling Radio Bearers

The Radio Bearers available for usage by RRC messages using RLC-TM, RLC-UM and RLC-AM on the DCCH and CCCH are specified in the following. The UE and UTRAN shall select the radio bearers for RRC messages using RLC-TM, RLC-UM or RLC-AM on the DCCH and CCCH, according to the following:

- RB 0 shall be used for all messages sent on the CCCH (UL: RLC-TM, DL: RLC-UM).
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- RB 2 shall be used for all messages sent on the DCCH, when using RLC acknowledged mode (RLC-AM), except for the RRC messages carrying higher layer (NAS) signalling.
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- Additionally, RBs whose identities shall be set between 5 and 31 may be used for the RRC messages on the DCCH sent in RLC transparent mode (RLC-TM).
- RRC messages on the SHCCH are mapped either on RACH or on the USCH with the lowest assigned Transport Channel Id in the uplink and either on FACH or on the DSCH with the lowest assigned Transport Channel Id using RLC-TM.
These messages are only specified for TDD mode.

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When an RRC message is transmitted in DL on CCCH or SHCCH using RLC UM, RRC should indicate to RLC that a special RLC length indicator should be used [16]. The UE shall assume that this indication has been given. The special length indicator indicates that an RLC SDU begins in the beginning of an RLC PDU.

13.6 RB information parameters for SRB 0

The following Radio Bearer parameter values apply for SRB0:

Information element/ Group name	Value	Comment
RLC info		
>Uplink RLC mode	TM	
>>Transmission RLC discard	No-discardomitted	Neither discard is used, nor will there be a reset
>>Segmentation indication	FALSE	
>Downlink RLC mode	UM	
RB mapping info		Single multiplexing option
>Uplink mapping info		
>>UL transport channel	RACH	RACH corresponding with selected PRACH
>>RLC size list	N/A	The first TB defined in the Transport Format Set for the transport channel that is used
>Downlink mapping info		
>>DL transport channel	FACH	

13.6a RB information parameters for SHCCH

The following Radio Bearer parameter values apply for SHCCH:

Information element/ Group name	Value	Comment
RLC info		
>Uplink RLC mode	TM	
>>Transmission RLC discard	omitted	Neither discard is used, nor will there be a reset
>>Segmentation indication	FALSE	
>Downlink RLC mode	UM	
RB mapping info		
>Uplink mapping info		Option 1
>>UL transport channel	RACH	RACH corresponding with selected PRACH
>>RLC size list	N/A	The first TB defined in the Transport Format Set for the transport channel that is used
>Downlink mapping info		
>>DL transport channel	FACH	
>Uplink mapping info		Option 2
>>UL transport channel	USCH	
>>UL Transport Channel Identity	1	
>>MAC logical channel priority	1	
>>RLC size list	N/A	The first TB defined in the Transport Format Set for the transport channel that is used
>Downlink mapping info		
>>DL transport channel	DSCH	
>>DL Transport Channel Identity	1	

13.6b RB information parameters for BCCH on FACH

The following Radio Bearer parameter values apply for BCCH on FACH:

Information element/ Group name	Value	Comment
Downlink RLC mode	TM	
Segmentation indication	FALSE	

13.6c RB information parameters for PCCH on PCH

The following Radio Bearer parameter values apply for PCCH on PCH:

<u>Information element/ Group name</u>	<u>Value</u>	<u>Comment</u>
<u>Downlink RLC mode</u>	<u>TM</u>	
<u>Segmentation indication</u>	<u>FALSE</u>	

13.6d Parameters for BCCH on BCH

The transport format parameters for BCH are specified in [34].

3GPP TSG-RAN WG2 Meeting #21
 Pusan, Korea, 21 - 25 May 2001

R2-011250

CR-Form-v3
CHANGE REQUEST
⌘ 25.331 CR 796 ⌘ rev r1 ⌘ Current version: 3.6.0 ⌘

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:	⌘ Pathloss calculation		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 10.5.2001
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> 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)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.			

Reason for change:	⌘ Intra-frequency Measurement "pathloss" is not well defined. See also R2-010912 during TSG-RAN WG2 meeting #20. During RAN2#20 it was decided to make no change to the pathloss range (46-158db). It was proposed to round the calculated pathloss result up. The "formula" for pathloss is : Pathloss = Primary CPICH Tx power – CPICH RSCP for FDD Pathloss = Primary CCPCH Tx power – Primary CCPCH RSCP for TDD and is included in an appropriate section. 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. Backward compatibility aspects: This CR clarifies the setting of the reported value for Pathloss. <ul style="list-style-type: none"> • rounding up to the next integer: implementations using another rule will report a value that does not conform with this CR. However, the difference will be small. Thus no problems in terms of backward compatibility are expected if a UE does not implement this change. • reporting if calculated value exceeds value range of IE "Pathloss" it is expected that the proposed solution is used in most implementations Correction to a function where the specification was : ambiguous or not sufficiently explicit. Would not affect implementations behaving like indicated in the CR, would affect
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	implementations supporting the corrected functionality otherwise.	
Summary of change:	⌘	14.1.1 A definition to pathloss was made in a more general place. A rule for calculation and accuracy was added. 10.3.7.38 An already existing expression was removed.
Consequences if not approved:	⌘	- Lack of clarity for pathloss calculation and reporting.
Clauses affected:	⌘	10.3.7.38, 14.1.1
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	⌘	

How to create CRs using this form:

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- 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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

10.3.7.38 Intra-frequency measurement quantity

The quantity the UE shall measure in case of intra-frequency measurement. It also includes the filtering of the measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Filter coefficient	MP		Filter coefficient 10.3.7.9	
CHOICE mode	MP			
>FDD				
>>Measurement quantity	MP		Enumerated(C PICH Ec/N0, CPICH RSCP, Pathloss, UTRA Carrier RSSI)	Pathloss=Primary CPICH Tx power-CPICH RSCP If used in Inter system measurement quantity only Ec/N0 an RSCP is allowed. If used in inter-frequency measurement quantity RSSI is not allowed.
>TDD				
>>Measurement quantity list	MP	1 to 4		
>>>Measurement quantity	MP		Enumerated(Pr imary CCPCH RSCP, Pathloss, Timeslot ISCP, UTRA Carrier RSSI)	Pathloss=Primary CCPCH Tx power-Primary CCPCH RSCP If used in inter-frequency measurement quantity RSSI is not allowed.

14 Specific functions

14.1 Intra-frequency measurements

14.1.1 Intra-frequency measurement quantities

- 1 Downlink E_c/I_0 (chip energy per total received channel power density).
- 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.

3GPP TSG-RAN WG2 Meeting #21
 Pusan, Korea, 21 - 25 May 2001

R2-011251

CR-Form-v3
CHANGE REQUEST
⌘ 25.331 CR CR 796 ⌘ rev - ⌘ Current version: 4.0.0 ⌘

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:	⌘ Pathloss calculation		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 23.5.2001
Category:	⌘ A	Release:	⌘ REL-4
Use <u>one</u> 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)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.			

Reason for change:	⌘ Intra-frequency Measurement "pathloss" is not well defined. See also R2-010912 during TSG-RAN WG2 meeting #20. During RAN2#20 it was decided to make no change to the pathloss range (46-158db). It was proposed to round the calculated pathloss result up. The "formula" for pathloss is : Pathloss = Primary CPICH Tx power – CPICH RSCP for FDD Pathloss = Primary CCPCH Tx power – Primary CCPCH RSCP for TDD and is included in an appropriate section. 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.
Summary of change:	⌘ 14.1.1 A definition to pathloss was made in a more general place. A rule for calculation and accuracy was added. ⌘ 10.3.7.38 An already existing expression was removed.
Consequences if not approved:	⌘ - Lack of clarity for pathloss calculation and reporting.

Clauses affected:	⌘ 10.3.7.38, 14.1.1
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications ⌘ <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications
Other comments:	⌘

How to create CRs using this form:

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- 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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

10.3.7.38 Intra-frequency measurement quantity

The quantity the UE shall measure in case of intra-frequency measurement. It also includes the filtering of the measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Filter coefficient	MP		Filter coefficient 10.3.7.9	
CHOICE mode	MP			
>FDD				
>>Measurement quantity	MP		Enumerated(C PICH Ec/N0, CPICH RSCP, Pathloss, UTRA Carrier RSSI)	Pathloss=Primary CPICH Tx power-CPICH RSCP If used in Inter system measurement quantity only Ec/N0 an RSCP is allowed. If used in inter-frequency measurement quantity RSSI is not allowed.
>TDD				
>>Measurement quantity list	MP	1 to 4		
>>>Measurement quantity	MP		Enumerated(Pr imary CCPCH RSCP, Pathloss, Timeslot ISCP, UTRA Carrier RSSI)	Pathloss=Primary CCPCH Tx power-Primary CCPCH RSCP If used in inter-frequency measurement quantity RSSI is not allowed.

14 Specific functions

14.1 Intra-frequency measurements

14.1.1 Intra-frequency measurement quantities

- 1 Downlink E_c/I_0 (chip energy per total received channel power density).
- 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.

CHANGE REQUEST

⌘ **25.331 CR 798** ⌘ rev **r1** ⌘ Current version: **3.6.0** ⌘

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:	⌘ Clarification on periodic measurement reporting		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 2001-05-10
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> 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 <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	

Reason for change: ⌘ - The description about about the periodical reporting criteria is not clear.
 - The behavior of an UE, which is not able to report all results is not exactly described.
 (See also R2-010915)

In cases of a complex list for measurements, it might happen that UEs are not capable of performing all requested measurements within the reporting intervall. It is currently not clearly specified how UEs shall cope with this situation. The CR proposes that the entries shall be omitted in the respective measurement report.

In case of the first measurement report it is clarified that UEs are not required to send the complete measurement report according to the configuration but send the first measurement report as soon as any measurement results are available.

The CR assures that a measurement report can be unambiguously interpreted by the UTRAN.

Backward Compatibility:

- It is assumed that many readers will use the same interpretation.
- UEs, which do not fullfill the proposed interpretation, might have a high delay for the first measurement report.
- UEs, which do not fullfill the proposed interpretation, might send the old measurement results.

However, different interpretation than provided in this CR will not jeopardize the functionality of the UE.

- Correction to a function where the specification was :
 - ambiguous or not sufficiently explicit.

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

Summary of change: ⌘ Clause 8.6.7.8

- It clarified that the first Measurement Report is also transmitted in cases where parts of requested measurements are missing.
- requirements on measurement reporting are clarified

Consequences if not approved: ⌘ - Unclear interpretation of standard possible.

Clauses affected: ⌘ 8.6.7.8

Other specs affected: ⌘ Other core specifications ⌘
 Test specifications
 O&M Specifications

Other comments: ⌘

8.6.7.8 Periodical Reporting Criteria

If the IE "Periodical Reporting Criteria" is received by the UE, the UE shall:

- store the contents of the IE "Amount of Reporting" and IE "Reporting interval" in the variable MEASUREMENT_IDENTITY.

The UE shall:

- send the first MEASUREMENT REPORT message as soon as the first measurement has been completed according to the requirements and the measurement capabilities set in [19] and [20].;

If parts of the configured measurements according to the variable MEASUREMENT_IDENTITY are not available these entries shall be omitted in the MEASUREMENT REPORT.

and then

- send the next MEASUREMENT REPORT messages with intervals specified by the IE "Reporting interval".

If parts of the configured measurements according to the variable MEASUREMENT_IDENTITY are not available these entries shall be omitted in the MEASUREMENT REPORT.

If a measurement result was reported in a previous MEASUREMENT REPORT and was not updated, this entry shall be omitted in the MEASUREMENT REPORT.

After the UE has sent a total number of MEASUREMENT REPORT messages, which equal the value indicated in the IE "Amount of reporting", the UE shall:

- terminate measurement reporting; and
- delete all measurement information linked with the "Measurement identity" of the ongoing measurement from the variable MEASUREMENT_IDENTITY.

CHANGE REQUEST

⌘ **25.331 CR 799** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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:	⌘ Clarification on periodic measurement reporting ⌘		
Source:	⌘ TSG-RAN WG2 ⌘		
Work item code:	⌘ TEI ⌘	Date:	⌘ 2001-05-23 ⌘
Category:	⌘ A ⌘	Release:	⌘ REL-4 ⌘
	<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>

Reason for change:	<p>⌘ - The description about about the periodical reporting criteria is not clear. - The behavior of an UE, which is not able to report all results is not exactly described. (See also R2-010915)</p> <p>In cases of a complex list for measurements, it might happen that UEs are not capable of performing all requested measurements within the reporting intervall. It is currently not clearly specified how UEs shall cope with this situation. The CR proposes that the entries shall be omitted in the respective measurement report.</p> <p>In case of the first measurement report it is clarified that UEs are not required to send the complete measurement report according to the configuration but send the first measurement report as soon as any measurement results are available.</p> <p>The CR assures that a measurement report can be unambiguously interpreted by the UTRAN.</p>
Summary of change:	<p>⌘ Clause 8.6.7.8 ⌘</p> <p>- It clarified that the first Measurement Report is also transmitted in cases where parts of requested measurements are missing. - requirements on measurement reporting are clarified</p>
Consequences if not approved:	<p>⌘ - Unclear interpretation of standard possible. ⌘</p>

Clauses affected:	⌘ 8.6.7.8 ⌘		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

8.6.7.8 Periodical Reporting Criteria

If the IE "Periodical Reporting Criteria" is received by the UE, the UE shall:

- store the contents of the IE "Amount of Reporting" and IE "Reporting interval" in the variable MEASUREMENT_IDENTITY.

The UE shall:

- send the first MEASUREMENT REPORT message as soon as the first measurement has been completed according to the requirements and the measurement capabilities set in [19] and [20].;

If parts of the configured measurements according to the variable MEASUREMENT_IDENTITY are not available these entries shall be omitted in the MEASUREMENT REPORT.

and then

- send the next MEASUREMENT REPORT messages with intervals specified by the IE "Reporting interval".

If parts of the configured measurements according to the variable MEASUREMENT_IDENTITY are not available these entries shall be omitted in the MEASUREMENT REPORT.

If a measurement result was reported in a previous MEASUREMENT REPORT and was not updated, this entry shall be omitted in the MEASUREMENT REPORT.

After the UE has sent a total number of MEASUREMENT REPORT messages, which equal the value indicated in the IE "Amount of reporting", the UE shall:

- terminate measurement reporting; and
- delete all measurement information linked with the "Measurement identity" of the ongoing measurement from the variable MEASUREMENT_IDENTITY.

3GPP TSG-RAN WG2 Meeting #21
 Pusan, Korea, 21 - 25 May 2001

Tdoc R2-011399

CR-Form-v3
CHANGE REQUEST
⌘ 25.331 CR 802 ⌘ rev r2 ⌘ Current version: 3.6.0 ⌘

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 IE PRACH TFCS and Primary CPICH/Primary CCPCH info
Source:	⌘ TSG-RAN WG2
Work item code:	⌘ TEI Date: ⌘ 07.05.01
Category:	⌘ F Release: ⌘ R99
<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>	

Reason for change: ⌘	<ul style="list-style-type: none"> • IE "PRACH TFCS" The IE "PRACH info (for RACH)" was removed from all dedicated RRC messages. However, the information element PRACH TFCS still exists in the IE " UL Transport channel information common for all transport channels". Additionally, the information element "PRACH TFCS" exists in system information blocks 5 and 6 and it is understood that no inconsistency shall occur between both of the instances of "PRACH TFCS". Since the interactions between the IE "PRACH TFCS" in system information and in dedicated messages are unclear it is proposed to do not use the information that are received in the dedicated message. In order to avoid changes in the signalling it is proposed to state in the procedural text that the UE shall set the variable INVALID_CONFIGURATION to TRUE if the IE "PRACH TFCS" is included in a dedicated message. • IE "Primary CPICH info"/"Primary CCPCH info" In reconfiguration procedures causing the UE to end up in CELL_FACH it is unclear whether the UE shall initiate a CELL UPDATE procedure if no IE "Primary CPICH info" in FDD or "Primary CCPCH info" in TDD is included in the reconfiguration message. It is proposed that the UE shall perform a CELL UPDATE procedure in this case. • Generic procedure descriptions for IEs "Primary CCPCH info" Incorrect generic procedure description corrected • "PRACH TFCS" The behaviour on reception of this IE is not specified. Without this CR the existence of the IE in a message would not lead to an incomplete configuration but UEs would probably just ignore the information element because usage of the IE would lead to problems. Thus the proposed change is NOT backward compatible to earlier versions of the
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<p>specification. However, Ues implementing the previous version of the protocol would not work properly in case UTRAN would send this IE to the UE. Therefore this correction is essentiell for proper behaviour of UEs. However, problems with existing implementations could be avoided by proper UTRAN implementation.</p> <p>Correction to a function where the specification was :</p> <ul style="list-style-type: none"> o Containing some contradictions. • Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise. • "Primary CPICH info"/"Primary CCPCH info" The case that is clarified with this CR is currently not addressed in the specification. The proposed UE behaviour is straight forward therefore it is expected that most implementors would have used this implementation. Another possible would have been to do not initiate the CELL UPDATE procedure. This would lead to the situation that it is not clear to the UTRAN which cell has been selected by the UE. Despite of the obvious problems that come along with this fact UEs with this erroneous implementation would work properly in most circumstances. <p>Backward compatibility:</p> <ul style="list-style-type: none"> • Correction to a function where the specification was : <ul style="list-style-type: none"> o Ambiguous or not sufficiently explicit. <p>Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.</p>	
<p>Summary of change: ⌘</p>	<p>The handling of IE "PRACH TFCS" is clarified. Inclusion in message leads to invalid configuration Clarification included that UE shall initiate CELL UPDATE procedure in case of missing IE Primary CPICH (FDD) Primary CCPCH (TDD)</p>
<p>Consequences if not approved: ⌘</p>	<p>The UE does not know how to react on the reception of IE "PRACH TFCS". The UE behaviour on missing Primary CPICH/Primary CCPCH info is not specified.</p>

<p>Clauses affected: ⌘</p>	<p>8.2.2.3, 8.6.5.9, 8.6.6.17, 10.3.5.24</p>												
<p>Other specs affected:</p>	<table border="0"> <tr> <td>⌘ <input type="checkbox"/></td> <td>Other core specifications</td> <td>⌘</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Test specifications</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>O&M Specifications</td> <td></td> <td></td> </tr> </table>	⌘ <input type="checkbox"/>	Other core specifications	⌘		<input type="checkbox"/>	Test specifications			<input type="checkbox"/>	O&M Specifications		
⌘ <input type="checkbox"/>	Other core specifications	⌘											
<input type="checkbox"/>	Test specifications												
<input type="checkbox"/>	O&M Specifications												
<p>Other comments: ⌘</p>													

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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.

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message

it shall:

- set the variable ORDERED_RECONFIGURATION to TRUE;
- may first release the current physical channel configuration and
- then establish a new physical channel configuration and act upon all received information elements as specified in subclause 8.6, unless specified in the following:
 - in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - act upon the IE "PDSCH code mapping" as specified in subclause 8.6 and;
 - infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted;
- enter a state according to subclause 8.6.3.3.

If the UE remains in CELL_DCH state after state transition, the UE shall:

- if the IE "UL DPCH Info" is absent, not change its current UL Physical channel configuration;
- if the IE "DL DPCH Info for each RL" is absent, not change its current DL Physical channel configuration.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];

- if the received reconfiguration message 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 the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;
 - start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
 - select PRACH according to subclause 8.6.6.2;
 - select Secondary CCPCH according to subclause 8.6.6.5;
 - use the transport format set given in system information;
 - if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - ignore that IE and stop using DRX;
 - if the contents of the variable C_RNTI is empty:
 - perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- if the received reconfiguration message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";
- if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - if the variable START_VALUE_TO_TRANSMIT is set:
 - include and set the IE "START" to the value of that variable;
 - if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";
- if the received reconfiguration message contained the IE "Ciphering mode info":

- include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the received reconfiguration message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":
 - include and set the IE "Integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- clear that entry;
- if the variable PDCP_SN_INFO is not empty:
 - include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO;
- in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - set the IE "Uplink Timing Advance" to the calculated value;
- if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted response message;

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];
- prohibit periodical status transmission in RLC;
- remove any C-RNTI from MAC;
- clear the variable C_RNTI;
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- select Secondary CCPCH according to subclause 8.6.6.5;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2;
- if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - The procedure ends;

- if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - The procedure ends;
- if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - when the URA update procedure completed:
 - The procedure ends.

8.6.5.9 UL Transport channel information common for all transport channels

If the IE "UL Transport channel information common for all transport channels" is included the UE shall:

- perform actions for the IE "TFC subset" as specified in subclause 8.6.5.3;
- if the IE "PRACH TFCS" is included:
 - ~~set the variable INVALID_CONFIGURATION to TRUE~~perform actions for the IE "TFCS" for the selected PRACH as specified in subelause 8.6.5.2;
- if the IE has the choice "mode" set to FDD:
 - perform actions for the IE "UL DCH TFCS" as specified in subclause 8.6.5.2;
- if the IE has the choice "mode" set to TDD:
 - if the IE "Individual UL CCTr_rCH information" is included:
 - for each TFCS identified by IE "UL TFCS id":
- perform actions for the IE "UL TFCS" as specified in subclause 8.6.5.2.

8.6.6.17 Primary CCPCH info

If the IE "Primary CCPCH info" is included the UE shall:

- use the information elements in this IE.

If the IE "Primary CCPCH info" in TDD and the IE "New C-RNTI" are included and the message including these IEs is used to initiate a state transition to CELL_FACH, the UE shall:

- select the cell indicated by the IE "Primary CCPCH info";
- use the given C-RNTI when using common transport channels of type RACH, FACH and CPCH in that given cell after having completed the transition to that cell.

10.3.5.24 UL Transport channel information common for all transport channels

Information Element/Group name	Need	Multi	Type and reference	Semantics description
TFC subset	MD		Transport Format Combination Subset 10.3.5.22	Default value is the complete existing set of transport format combinations
PRACH TFCS	OP		Transport format combination set 10.3.5.20	This IE should be absent within IE "Predefined RB configuration" <u>not be included in this version of the protocol.</u>
CHOICE <i>mode</i>	OP			
>FDD				
>>UL DCH TFCS	MP		Transport format combination set 10.3.5.20	
>TDD				
>>Individual UL CCTrCH information	OP	1 to <maxCCTrCH>		
>>>UL TFCS Identity	MP		Transport format combination set identity 10.3.5.21	Identifies a special CCTrCH for shared or dedicated channels.
>>>UL TFCS	MP		Transport format combination set 10.3.5.20	

3GPP TSG-RAN WG2 Meeting #21
 Pusan, Korea, 21 - 25 May 2001

Tdoc R2-011400

CR-Form-v3
<h2 style="margin: 0;">CHANGE REQUEST</h2>
⌘ 25.331 CR 803 ⌘ rev r1 ⌘ Current version: 4.0.0 ⌘

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 IE PRACH TFCS and Primary CPICH/Primary CCPCH info		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI Date: ⌘ 25.05.01		
Category:	⌘ A Release: ⌘ REL-4		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p><i>Use <u>one</u> of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p> </td> <td style="width: 50%; vertical-align: top;"> <p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p> </td> </tr> </table>		<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>
<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>		

Reason for change: ⌘	<ul style="list-style-type: none"> • IE "PRACH TFCS" The IE "PRACH info (for RACH)" was removed from all dedicated RRC messages. However, the information element PRACH TFCS still exists in the IE " UL Transport channel information common for all transport channels". Additionally, the information element "PRACH TFCS" exists in system information blocks 5 and 6 and it is understood that no inconsistency shall occur between both of the instances of "PRACH TFCS". Since the interactions between the IE "PRACH TFCS" in system information and in dedicated messages are unclear it is proposed to do not use the information that are received in the dedicated message. In order to avoid changes in the signalling it is proposed to state in the procedural text that the UE shall set the variable INVALID_CONFIGURATION to TRUE if the IE "PRACH TFCS" is included in a dedicated message. • IE "Primary CPICH info"/"Primary CCPCH info" In reconfiguration procedures causing the UE to end up in CELL_FACH it is unclear whether the UE shall initiate a CELL UPDATE procedure if no IE "Primary CPICH info" in FDD or "Primary CCPCH info" in TDD is included in the reconfiguration message. It is proposed that the UE shall perform a CELL UPDATE procedure in this case. • Generic procedure descriptions for IEs "Primary CCPCH info" Incorrect generic procedure description corrected • "PRACH TFCS" The behaviour on reception of this IE is not specified. Without this CR the existence of the IE in a message would not lead to an incomplete configuration but UEs would probably just ignore the information element because usage of the IE would lead to problems. Thus the proposed change is NOT backward compatible to earlier versions of the
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	<p>specification. However, Ues implementing the previous version of the protocol would not work properly in case UTRAN would send this IE to the UE. Therefore this correction is essentiell for proper behaviour of UEs. However, problems with existing implementations could be avoided by proper UTRAN implementation.</p> <ul style="list-style-type: none"> "Primary CPICH info"/"Primary CCPCH info" The case that is clarified with this CR is currently not addressed in the specification. The proposed UE behaviour is straight forward therefore it is expected that most implementors would have used this implementation. Another possible would have been to do not initiate the CELL UPDATE procedure. This would lead to the situation that it is not clear to the UTRAN which cell has been selected by the UE. Despite of the obvious problems that come along with this fact UEs with this erroneous implementation would work properly in most circumstances.
Summary of change: ⌘	The handling of IE "PRACH TFCS" is clarified. Inclusion in message leads to invalid configuration Clarification included that UE shall initiate CELL UPDATE procedure in case of missing IE Primary CPICH (FDD) Primary CCPCH (TDD)
Consequences if not approved: ⌘	The UE does not know how to react on the reception of IE "PRACH TFCS". The UE behaviour on missing Primary CPICH/Primary CCPCH info is not specified.

Clauses affected: ⌘	8.2.2.3, 8.6.5.9, 8.6.6.17, 10.3.5.24												
Other specs affected:	<table border="0"> <tr> <td>⌘ <input type="checkbox"/></td> <td>Other core specifications</td> <td>⌘</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Test specifications</td> <td></td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td>O&M Specifications</td> <td></td> <td><input type="checkbox"/></td> </tr> </table>	⌘ <input type="checkbox"/>	Other core specifications	⌘	<input type="checkbox"/>	<input type="checkbox"/>	Test specifications		<input type="checkbox"/>	<input type="checkbox"/>	O&M Specifications		<input type="checkbox"/>
⌘ <input type="checkbox"/>	Other core specifications	⌘	<input type="checkbox"/>										
<input type="checkbox"/>	Test specifications		<input type="checkbox"/>										
<input type="checkbox"/>	O&M Specifications		<input type="checkbox"/>										
Other comments: ⌘													

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- 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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message

it shall:

- set the variable ORDERED_RECONFIGURATION to TRUE;
- may first release the current physical channel configuration and
- then establish a new physical channel configuration and act upon all received information elements as specified in subclause 8.6, unless specified in the following:
 - in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - act upon the IE "PDSCH code mapping" as specified in subclause 8.6 and;
 - infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted;
- enter a state according to subclause 8.6.3.3.

If the UE remains in CELL_DCH state after state transition, the UE shall:

- if the IE "UL DPCH Info" is absent, not change its current UL Physical channel configuration;
- if the IE "DL DPCH Info for each RL" is absent, not change its current DL Physical channel configuration.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];

- if the received reconfiguration message 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 the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;
 - start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
 - select PRACH according to subclause 8.6.6.2;
 - select Secondary CCPCH according to subclause 8.6.6.5;
 - use the transport format set given in system information;
 - if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - ignore that IE and stop using DRX;
 - if the contents of the variable C_RNTI is empty:
 - perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- if the received reconfiguration message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";
- if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - if the variable START_VALUE_TO_TRANSMIT is set:
 - include and set the IE "START" to the value of that variable;
 - if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";
- if the received reconfiguration message contained the IE "Ciphering mode info":

- include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the received reconfiguration message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":
 - include and set the IE "Integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- clear that entry;
- if the variable PDCP_SN_INFO is not empty:
 - include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO;
- in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - set the IE "Uplink Timing Advance" to the calculated value;
- if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted response message;

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];
- prohibit periodical status transmission in RLC;
- remove any C-RNTI from MAC;
- clear the variable C_RNTI;
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- select Secondary CCPCH according to subclause 8.6.6.5;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2;
- if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - The procedure ends;

- if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - The procedure ends;
- if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - when the URA update procedure completed:
 - The procedure ends.

8.6.5.9 UL Transport channel information common for all transport channels

If the IE "UL Transport channel information common for all transport channels" is included the UE shall:

- perform actions for the IE "TFC subset" as specified in subclause 8.6.5.3;
- if the IE "PRACH TFCS" is included:
 - ~~set the variable INVALID_CONFIGURATION to TRUE~~perform actions for the IE "TFCS" for the selected PRACH as specified in subelause 8.6.5.2;
- if the IE has the choice "mode" set to FDD:
 - perform actions for the IE "UL DCH TFCS" as specified in subclause 8.6.5.2;
- if the IE has the choice "mode" set to TDD:
 - if the IE "Individual UL CCTr_rCH information" is included:
 - for each TFCS identified by IE "UL TFCS id":
- perform actions for the IE "UL TFCS" as specified in subclause 8.6.5.2.

8.6.6.17 Primary CCPCH info

If the IE "Primary CCPCH info" is included the UE shall:

- use the information elements in this IE.

If the IE "Primary CCPCH info" in TDD and the IE "New C-RNTI" are included and the message including these IEs is used to initiate a state transition to CELL_FACH, the UE shall:

- select the cell indicated by the IE "Primary CCPCH info";
- use the given C-RNTI when using common transport channels of type RACH, FACH and CPCH in that given cell after having completed the transition to that cell.

10.3.5.24 UL Transport channel information common for all transport channels

Information Element/Group name	Need	Multi	Type and reference	Semantics description
TFC subset	MD		Transport Format Combination Subset 10.3.5.22	Default value is the complete existing set of transport format combinations
PRACH TFCS	OP		Transport format combination set 10.3.5.20	This IE should be absent within IE "Predefined RB configuration" <u>not be included in this version of the protocol.</u>
CHOICE <i>mode</i>	OP			
>FDD				
>>UL DCH TFCS	MP		Transport format combination set 10.3.5.20	
>TDD				
>>Individual UL CCTrCH information	OP	1 to <maxCCTrCH>		
>>>UL TFCS Identity	MP		Transport format combination set identity 10.3.5.21	Identifies a special CCTrCH for shared or dedicated channels.
>>>UL TFCS	MP		Transport format combination set 10.3.5.20	

CHANGE REQUEST

⌘ **25.331 CR 804** ⌘ rev **r1** ⌘ Current version: **3.6.0** ⌘

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:	⌘ Correction to FACH measurement occasion in TDD		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 7.5.2001
Category:	⌘ F	Release:	⌘ R99
	<i>Use one of the following categories:</i> 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.		<i>Use one of the following releases:</i> 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:	⌘ Unnecessary restriction on FACH measurement occasions. FACH measurement occasions can ease all UE measurements.
Summary of change:	⌘ FACH measurement occasions are specified to be usable for all kind of measurements in TDD
Consequences if not approved:	⌘ UEs not implementing this change have more problems in fulfilling the requirements in terms of measurements. Backward compatibility aspects: No problems in terms of backward compatibility are identified. This change only eases terminal implementation and does not cause problems on the network or UE side.

Clauses affected:	⌘ 8.5.11, 10.3.7.8	
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘
Other comments:	⌘	

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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.

8.5.11 FACH measurement occasion calculation

When in CELL_FACH state and when the variable C_RNTI is non-empty the UE in FDD mode shall perform inter-frequency and inter system measurements during the frame(s) with the SFN value fulfilling the following equation:

$$\text{SFN div } N = \text{C_RNTI mod } M_REP + n * M_REP$$

where

- N is the TTI (in number of 10ms frames) of the FACH having the largest TTI on the SCCPCH monitored by UE
- C_RNTI is the C-RNTI value of the UE stored in the variable C_RNTI
- M_REP is the Measurement Occasion cycle length. According to the equation above, a FACH Measurement Occasion of N frames will be repeated every N * M_REP frame, and $M_REP = 2^k$.

where,

- k is the FACH Measurement occasion cycle length coefficient.
The value of the FACH Measurement occasion cycle length coefficient is read in system information in "System Information Block type 11" or "System Information Block type 12" in the IE "FACH measurement occasion info".
- n = 0,1,2... as long as SFN is below its maximum value

The UE is allowed to measure on other occasions in case the UE moves "out of service" area or in case it can simultaneously perform the ordered measurements.

An UE in TDD mode shall use the frame(s) with the SFN value fulfilling the above equation for ~~inter-frequency TDD~~ neighbour cells ~~measurements only~~.

10.3.7.8 FACH measurement occasion info

This IE is for FDD only.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
FACH Measurement occasion cycle length coefficient	OP		Integer(1..12)	
Inter-frequency FDD measurement indicator	MP		Boolean	TRUE means that measurements are required
Inter-frequency TDD measurement indicator	MP		Boolean	TRUE means that measurements are required
Inter-RAT measurement indicators	OP	1 to <maxOther RAT>		
>RAT type	MP		Enumerated(GSM, IS2000)	

CHANGE REQUEST

⌘ **25.331 CR 805** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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:	⌘ Correction to FACH measurement occasion in TDD		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI	Date:	⌘ 25.5.2001
Category:	⌘ A	Release:	⌘ REL-4
	<i>Use one of the following categories:</i> 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.		<i>Use one of the following releases:</i> 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:	⌘ Unnecessary restriction on FACH measurement occasions. FACH measurement occasions can ease all UE measurements.
Summary of change:	⌘ FACH measurement occasions are specified to be usable for all kind of measurements in TDD
Consequences if not approved:	⌘ UEs not implementing this change have more problems in fulfilling the requirements in terms of measurements.

Clauses affected:	⌘ 8.5.11, 10.3.7.8	
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

8.5.11 FACH measurement occasion calculation

When in CELL_FACH state and when the variable C_RNTI is non-empty the UE in FDD mode shall perform inter-frequency and inter system measurements during the frame(s) with the SFN value fulfilling the following equation:

$$\text{SFN div } N = \text{C_RNTI mod } M_REP + n * M_REP$$

where

- N is the TTI (in number of 10ms frames) of the FACH having the largest TTI on the SCCPCH monitored by UE
- C_RNTI is the C-RNTI value of the UE stored in the variable C_RNTI
- M_REP is the Measurement Occasion cycle length. According to the equation above, a FACH Measurement Occasion of N frames will be repeated every N * M_REP frame, and $M_REP = 2^k$.

where,

- k is the FACH Measurement occasion cycle length coefficient.
The value of the FACH Measurement occasion cycle length coefficient is read in system information in "System Information Block type 11" or "System Information Block type 12" in the IE "FACH measurement occasion info".
- n = 0,1,2... as long as SFN is below its maximum value

The UE is allowed to measure on other occasions in case the UE moves "out of service" area or in case it can simultaneously perform the ordered measurements.

An UE in TDD mode shall use the frame(s) with the SFN value fulfilling the above equation for ~~inter-frequency TDD-~~ neighbour cells ~~measurements only~~.

10.3.7.8 FACH measurement occasion info

This IE is for FDD only.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
FACH Measurement occasion cycle length coefficient	OP		Integer(1..12)	
Inter-frequency FDD measurement indicator	MP		Boolean	TRUE means that measurements are required
Inter-frequency TDD measurement indicator	MP		Boolean	TRUE means that measurements are required
Inter-RAT measurement indicators	OP	1 to <maxOther RAT>		
>RAT type	MP		Enumerated(GSM, IS2000)	

CHANGE REQUEST

⌘ **25.331 CR 806** ⌘ rev **r2** ⌘ Current version: **3.6.0** ⌘

*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:	⌘ Clarification of L1 synchronization procedures		
Source:	⌘ Nortel Networks		
Work item code:	⌘ TEI		Date: ⌘ 21 May 2001
Category:	⌘ F		Release: ⌘ R99
	Use <u>one</u> of the following categories: F (essential 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 <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The invocation of L1 synchronization procedures is missing		
Summary of change:	⌘ Reference to L1 synchronization procedures are added in the procedure description of the RRC Connection Establishment procedure, RB Control procedures, Active set update procedure and Cell Update procedure Backwards compatibility analysis: Functionality being corrected: L1 synchronization establishment Corrections being brought: Add new description text « Correction to a function where the specification was : -Procedural text or rules were missing. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise. »		
Consequences if not approved:	⌘ ambiguous specification		

Clauses affected:	⌘ 8.1.3.6, 8.2.2.3, 8.3.1.6, 8.3.4.3		
Other specs Affected:	⌘ <input checked="" type="checkbox"/> Other core specifications ⌘ <input checked="" type="checkbox"/> Test specifications ⌘ <input type="checkbox"/> O&M Specifications		⌘ 25.214

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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

8.1.3.6 Reception of an RRC CONNECTION SETUP message by the UE

The UE shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION SETUP message with the value of the variable INITIAL_UE_IDENTITY.

If the values are different, the UE shall:

- ignore the rest of the message;

If the values are identical, the UE shall:

- stop timer T300, and act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following;
 - if the UE will be in the CELL_FACH state at the conclusion of this procedure:
 - if the IE "Frequency info" is included:
 - select a suitable UTRA cell according to [4] on that frequency;
 - select PRACH according to subclause 8.6.6.2;
 - select Secondary CCPCH according to subclause 8.6.6.5;
 - perform the physical layer synchronization procedure as specified in [29];
 - enter a state according to subclause 8.6.3.3;
 - submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per subclause 8.6.3.3, with the contents set as specified below:
 - set the IE "RRC transaction identifier" to
 - the value of "RRC transaction identifier" in the entry for the RRC CONNECTION SETUP message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - clear that entry.
 - calculate START values for each CN domain according to subclause 8.5.9 and include the result in the IE "START list";
 - if the IE "UE radio access FDD capability update requirement" included in the RRC CONNECTION SETUP message has the value TRUE:
 - include its UTRAN-specific FDD capabilities and its UTRAN –specific capabilities common to FDD and TDD in the IE "UE radio access capability";
 - if the IE "UE radio access TDD capability update requirement" included in the RRC CONNECTION SETUP message has the value TRUE:
 - include its UTRAN-specific TDD capabilities and its UTRAN –specific capabilities common to FDD and TDD in the IE "UE radio access capability";
 - if the IE "System specific capability update requirement list" is present in the RRC CONNECTION SETUP message:
 - include its inter-RAT capabilities for the requested systems in the IE "UE system specific capability".

When of the RRC CONNECTION SETUP COMPLETE message has been submitted to lower layers for transmission the UE shall:

- if the UE has entered CELL_FACH state:
 - start timer T305 using its initial value if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;

- update its variable UE_CAPABILITY_TRANSFERRED which UE capabilities it has transmitted to the UTRAN;
- if the IE "Transport format combination subset" was not included in the RRC CONNECTION SETUP message:
 - set the IE "Current TFC subset" in the variable TFS_SUBSET to "Full transport format combination set";
- set the "Status" in the variable CIPHERING_STATUS to "Not started";
- set the "Reconfiguration" in the variable CIPHERING_STATUS to FALSE;
- set the "Status" in the variable INTEGRITY_PROTECTION_INFO to "Not started";
- set the "Historical status" in the variable INTEGRITY_PROTECTION_INFO to "Never been active";
- set the "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE;
- set the variable CELL_UPDATE_STARTED to FALSE;
- set the variable ORDERED_RECONFIGURATION to FALSE;
- set the variable FAILURE_INDICATOR to FALSE;
- set the variable INCOMPATIBLE_SECURITY_RECONFIGURATION to FALSE;
- set the variable INVALID_CONFIGURATION to FALSE;
- set the variable PROTOCOL_ERROR_INDICATOR to FALSE;
- set the variable PROTOCOL_ERROR_REJECT to FALSE;
- set the variable TGSN_REPORTED to FALSE;
- set the variable UNSUPPORTED_CONFIGURATION to FALSE;
- clear all optional IEs in all variables, except those optional IEs that are set in this procedure;
- consider the procedure to be successful;

And the procedure ends.

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message

it shall:

- set the variable ORDERED_RECONFIGURATION to TRUE;
- may first release the current physical channel configuration and
- then establish a new physical channel configuration ~~and~~
- perform the physical layer synchronization procedure as specified in [29];
- act upon all received information elements as specified in subclause 8.6, unless specified in the following:
 - in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - act upon the IE "PDSCH code mapping" as specified in subclause 8.6 and;
 - infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted;
- enter a state according to subclause 8.6.3.3.

If the UE remains in CELL_DCH state after state transition, the UE shall:

- if the IE "UL DPCH Info" is absent, not change its current UL Physical channel configuration;
- if the IE "DL DPCH Info for each RL" is absent, not change its current DL Physical channel configuration.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;

- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];
- if the received reconfiguration message 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:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- select PRACH according to subclause 8.6.6.2;
- select Secondary CCPCH according to subclause 8.6.6.5;
- use the transport format set given in system information;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
- ignore that IE and stop using DRX;
- if the contents of the variable C_RNTI is empty:
 - perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- if the received reconfiguration message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";
- if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - if the variable START_VALUE_TO_TRANSMIT is set:
 - include and set the IE "START" to the value of that variable;
 - if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";

- if the received reconfiguration message contained the IE "Ciphering mode info":
 - include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the received reconfiguration message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":
 - include and set the IE "Integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- clear that entry;
- if the variable PDCP_SN_INFO is not empty:
 - include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO;
- in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - set the IE "Uplink Timing Advance" to the calculated value;
- if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted response message;

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];
- prohibit periodical status transmission in RLC;
- remove any C-RNTI from MAC;
- clear the variable C_RNTI;
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- select Secondary CCPCH according to subclause 8.6.6.5;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2;
- if the UE enters CELL_PCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - The procedure ends;

- if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - when the URA update procedure completed:
 - The procedure ends.

8.3.4.3 Reception of an ACTIVE SET UPDATE message by the UE

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- first add the RLS indicated in the IE "Radio Link Addition Information";
- remove the RLS indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- perform the physical layer synchronization procedure as specified in [29];
- if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the ACTIVE SET UPDATE message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":
 - include and set the IE "Integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- if the variable PDCP_SN_INFO is non-empty:
 - include the IE "RB with PDCP information list" in the ACTIVE SET UPDATE COMPLETE message; and
 - set it to the value of the variable PDCP_SN_INFO;
- if the ACTIVE SET UPDATE message includes the IE "TFCI combining indicator" associated with a radio link to be added:
 - configure Layer 1 to soft combine TFCI (field 2) of this new link with those links already in the TFCI (field 2) combining set;
- if the received ACTIVE SET UPDATE message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the ACTIVE SET UPDATE COMPLETE message;
- set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- clear that entry;
- transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the Physical Layer synchronization;
- if the IE "Integrity protection mode info" was present in the ACTIVE SET UPDATE message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted ACTIVE SET UPDATE COMPLETE message;
- if the variable PDCP_SN_INFO is empty:
 - if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - when RLC has confirmed the successful transmission of the ACTIVE SET UPDATE COMPLETE message;

- perform the actions below;
- if the ACTIVE SET UPDATE message did not contain the IE "Ciphering mode info":
 - when RLC has been requested to transmit the ACTIVE SET UPDATE COMPLETE message:
 - perform the actions below;
- if the variable PDCP_SN_INFO is non-empty:
 - when RLC has confirmed the successful transmission of the ACTIVE SET UPDATE COMPLETE message:
 - for each radio bearer in the variable PDCP_SN_INFO:
 - if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":
 - configure the RLC entity for that radio bearer to "continue";
 - clear the variable PDCP_SN_INFO;
- if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the ACTIVE SET UPDATE message contained the IE "Integrity protection mode info":
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- The procedure ends on the UE side.

8.3.1.6 Reception of the CELL UPDATE CONFIRM/URA UPDATE CONFIRM message by the UE

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI, or;
- if the message is received on DCCH;

the UE shall:

- stop timer T302;
- set the variable CELL_UPDATE_STARTED to FALSE;
- in case of a cell update procedure and the CELL UPDATE CONFIRM message:
 - includes "RB information elements"; and/or
 - includes "Transport channel information elements"; and/or
 - includes "Physical channel information elements"; and
 - if the variable ORDERED_RECONFIGURATION is set to FALSE:
 - set the variable ORDERED_RECONFIGURATION to TRUE;
- act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:
 - use the transport channel(s) applicable for the physical channel types that is used; and
 - if the IE "TFS" is neither included nor previously stored in the UE for that transport channel(s):
 - use the TFS given in system information.
 - if none of the TFS stored is compatible with the physical channel:
 - delete the stored TFS;
 - use the TFS given in system information.
 - perform the physical layer synchronization procedure as specified in [29];
 - if the CELL UPDATE CONFIRM message includes the IE "RLC re-establish indicator (RB2 and RB3)":
 - re-establish the RLC entities for RB 2 and RB 3;
 - if the variable CIPHERING_STATUS is set to "Started":
 - set the HFN values for AM RLC entities with RB identity 2 and 3 equal to the START value included in the latest transmitted CELL UPDATE message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
 - if the CELL UPDATE CONFIRM message includes the IE "RLC re-establish indicator (RB>3)":
 - re-establish the AM RLC entities for RB with RB identity equal to or larger than 4;
 - if the variable CIPHERING_STATUS is set to "Started":
 - set the HFN values for AM RLC entities with RB identity equal to or larger than 4 equal to the START value included in the latest transmitted CELL UPDATE message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
- enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

If the UE after state transition enters CELL_DCH state, it shall:

- not prohibit periodical status transmission in RLC.

If the UE after state transition remains in CELL_FACH state, it shall

- start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- select PRACH according to subclause 8.6.6.2;
- select Secondary CCPCH according to subclause 8.6.6.5;
- not prohibit periodical status transmission in RLC;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - ignore that IE and stop using DRX;

If the UE after state transition enters URA_PCH or CELL_PCH state, it shall

- prohibit periodical status transmission in RLC;
- clear the variable C_RNTI;
- stop using that C_RNTI just cleared from the variable C_RNTI in MAC;
- start the timer T305 using its initial value if timer T305 is not running and periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- select Secondary CCPCH according to subclause 8.6.6.5.
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging Occasion and PICH Monitoring Occasion as specified in 8.6.3.2 in CELL_PCH state.

If the UE after the state transition remains in CELL_FACH state and;

- the contents of the variable C_RNTI are empty;

it shall check the value of V302 and

- If V302 is equal to or smaller than N302:
 - if, caused by the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message,
 - the IE "Reconfiguration" in the variable CIPHERING_STATUS is set to TRUE; and/or
 - the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO is set to TRUE:
 - abort the ongoing integrity and/or ciphering reconfiguration;
 - if the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message contained the IE "Ciphering mode info":
 - set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - if the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message contained the IE "Integrity protection mode info":
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;

- in case of a URA update procedure:
 - stop the URA update procedure; and
 - continue with a cell update procedure;
- set the contents of the CELL UPDATE message according to subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "cell reselection";
- submit the CELL UPDATE message for transmission on the uplink CCCH;
- increment counter V302;
- restart timer T302 when the MAC layer indicates success or failure to transmit the message;
- If V302 is greater than N302:
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
 - in case of a cell update procedure:
 - clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
 - in case of a URA update procedure:
 - clear the entry for the URA UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
 - release all its radio resources;
 - indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
 - clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
 - clear the variable ESTABLISHED_RABS;
 - enter idle mode;
 - other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;
 - And the procedure ends.

If the UE after the state transition remains in CELL_FACH state and

- a C-RNTI is stored in the variable C_RNTI;

or

the UE after the state transition moves to another state than the CELL_FACH state;

the UE shall:

- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Ciphering mode info":
 - include and set the IE "Radio bearer uplink ciphering activation time info" in any response message transmitted below to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":

- include and set the IE "Integrity protection activation info" in any response message transmitted below to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- in case of a cell update procedure:
 - set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - clear that entry.
- in case of a cell update procedure:
 - set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the URA UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - clear that entry;
- if the variable PDCP_SN_INFO is non-empty:
 - include the IE "RB with PDCP information list" in any response message transmitted below and set it to the value of the variable PDCP_SN_INFO;
- if the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in any response message transmitted below;
- transmit a response message as specified in subclause 8.3.1.7;
- if the IE "Integrity protection mode info" was present in the CELL UPDATE CONFIRM or URA UPDATE CONFIRM message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted response message;
- clear the variable PDCP_SN_INFO;
- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Ciphering mode info":
 - set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Integrity protection mode info":
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- in case of a cell update procedure:
 - clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
- in case of a URA update procedure:
 - clear the entry for the URA UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;

The procedure ends.

CHANGE REQUEST

⌘ **25.331 CR 807** ⌘ rev ⌘ Current version: **4.0.0** ⌘

*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:	⌘ Clarification of L1 synchronization procedures		
Source:	⌘ TSG-RAN WG2		
Work item code:	⌘ TEI		Date: ⌘ 21 May 2001
Category:	⌘ A		Release: ⌘ REL-4
	<i>Use <u>one</u> of the following categories:</i> F (essential 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.		<i>Use <u>one</u> of the following releases:</i> 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 invocation of L1 synchronization procedures is missing		
Summary of change:	⌘ Reference to L1 synchronization procedures are added in the procedure description of the RRC Connection Establishment procedure, RB Control procedures, Active set update procedure and Cell Update procedure		
Consequences if not approved:	⌘ ambiguous specification		

Clauses affected:	⌘ 8.1.3.6, 8.2.2.3, 8.3.1.6, 8.3.4.3		
Other specs Affected:	<input checked="" type="checkbox"/> Other core specifications <input checked="" type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications		⌘ 25.214
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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

8.1.3.6 Reception of an RRC CONNECTION SETUP message by the UE

The UE shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION SETUP message with the value of the variable INITIAL_UE_IDENTITY.

If the values are different, the UE shall:

- ignore the rest of the message;

If the values are identical, the UE shall:

- stop timer T300, and act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following;
 - if the UE will be in the CELL_FACH state at the conclusion of this procedure:
 - if the IE "Frequency info" is included:
 - select a suitable UTRA cell according to [4] on that frequency;
 - select PRACH according to subclause 8.6.6.2;
 - select Secondary CCPCH according to subclause 8.6.6.5;
 - perform the physical layer synchronization procedure as specified in [29];
 - enter a state according to subclause 8.6.3.3;
 - submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per subclause 8.6.3.3, with the contents set as specified below:
 - set the IE "RRC transaction identifier" to
 - the value of "RRC transaction identifier" in the entry for the RRC CONNECTION SETUP message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - clear that entry.
 - calculate START values for each CN domain according to subclause 8.5.9 and include the result in the IE "START list";
 - if the IE "UE radio access FDD capability update requirement" included in the RRC CONNECTION SETUP message has the value TRUE:
 - include its UTRAN-specific FDD capabilities and its UTRAN –specific capabilities common to FDD and TDD in the IE "UE radio access capability";
 - if the IE "UE radio access TDD capability update requirement" included in the RRC CONNECTION SETUP message has the value TRUE:
 - include its UTRAN-specific TDD capabilities and its UTRAN –specific capabilities common to FDD and TDD in the IE "UE radio access capability";
 - if the IE "System specific capability update requirement list" is present in the RRC CONNECTION SETUP message:
 - include its inter-RAT capabilities for the requested systems in the IE "UE system specific capability".

When of the RRC CONNECTION SETUP COMPLETE message has been submitted to lower layers for transmission the UE shall:

- if the UE has entered CELL_FACH state:
 - start timer T305 using its initial value if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;

- update its variable UE_CAPABILITY_TRANSFERRED which UE capabilities it has transmitted to the UTRAN;
- if the IE "Transport format combination subset" was not included in the RRC CONNECTION SETUP message:
 - set the IE "Current TFC subset" in the variable TFS_SUBSET to "Full transport format combination set";
- set the "Status" in the variable CIPHERING_STATUS to "Not started";
- set the "Reconfiguration" in the variable CIPHERING_STATUS to FALSE;
- set the "Status" in the variable INTEGRITY_PROTECTION_INFO to "Not started";
- set the "Historical status" in the variable INTEGRITY_PROTECTION_INFO to "Never been active";
- set the "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE;
- set the variable CELL_UPDATE_STARTED to FALSE;
- set the variable ORDERED_RECONFIGURATION to FALSE;
- set the variable FAILURE_INDICATOR to FALSE;
- set the variable INCOMPATIBLE_SECURITY_RECONFIGURATION to FALSE;
- set the variable INVALID_CONFIGURATION to FALSE;
- set the variable PROTOCOL_ERROR_INDICATOR to FALSE;
- set the variable PROTOCOL_ERROR_REJECT to FALSE;
- set the variable TGSN_REPORTED to FALSE;
- set the variable UNSUPPORTED_CONFIGURATION to FALSE;
- clear all optional IEs in all variables, except those optional IEs that are set in this procedure;
- consider the procedure to be successful;

And the procedure ends.

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message

it shall:

- set the variable ORDERED_RECONFIGURATION to TRUE;
- may first release the current physical channel configuration and
- then establish a new physical channel configuration ~~and~~
- perform the physical layer synchronization procedure as specified in [29];
- act upon all received information elements as specified in subclause 8.6, unless specified in the following:
 - in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - act upon the IE "PDSCH code mapping" as specified in subclause 8.6 and;
 - infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted;
- enter a state according to subclause 8.6.3.3.

If the UE remains in CELL_DCH state after state transition, the UE shall:

- if the IE "UL DPCH Info" is absent, not change its current UL Physical channel configuration;
- if the IE "DL DPCH Info for each RL" is absent, not change its current DL Physical channel configuration.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;

- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];
- if the received reconfiguration message 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:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- select PRACH according to subclause 8.6.6.2;
- select Secondary CCPCH according to subclause 8.6.6.5;
- use the transport format set given in system information;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
- ignore that IE and stop using DRX;
- if the contents of the variable C_RNTI is empty:
 - perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below;

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- if the received reconfiguration message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";
- if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - if the variable START_VALUE_TO_TRANSMIT is set:
 - include and set the IE "START" to the value of that variable;
 - if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info";

- if the received reconfiguration message contained the IE "Ciphering mode info":
 - include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the received reconfiguration message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":
 - include and set the IE "Integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- clear that entry;
- if the variable PDCP_SN_INFO is not empty:
 - include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO;
- in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - set the IE "Uplink Timing Advance" to the calculated value;
- if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted response message;

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4];
- prohibit periodical status transmission in RLC;
- remove any C-RNTI from MAC;
- clear the variable C_RNTI;
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- select Secondary CCPCH according to subclause 8.6.6.5;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2;
- if the UE enters CELL_PCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - The procedure ends;

- if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - when the URA update procedure completed:
 - The procedure ends.

8.3.4.3 Reception of an ACTIVE SET UPDATE message by the UE

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- first add the RLS indicated in the IE "Radio Link Addition Information";
- remove the RLS indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- perform the physical layer synchronization procedure as specified in [29];
- if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the ACTIVE SET UPDATE message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":
 - include and set the IE "Integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- if the variable PDCP_SN_INFO is non-empty:
 - include the IE "RB with PDCP information list" in the ACTIVE SET UPDATE COMPLETE message; and
 - set it to the value of the variable PDCP_SN_INFO;
- if the ACTIVE SET UPDATE message includes the IE "TFCI combining indicator" associated with a radio link to be added:
 - configure Layer 1 to soft combine TFCI (field 2) of this new link with those links already in the TFCI (field 2) combining set;
- if the received ACTIVE SET UPDATE message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the ACTIVE SET UPDATE COMPLETE message;
- set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- clear that entry;
- transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the Physical Layer synchronization;
- if the IE "Integrity protection mode info" was present in the ACTIVE SET UPDATE message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted ACTIVE SET UPDATE COMPLETE message;
- if the variable PDCP_SN_INFO is empty:
 - if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - when RLC has confirmed the successful transmission of the ACTIVE SET UPDATE COMPLETE message:

- perform the actions below;
- if the ACTIVE SET UPDATE message did not contain the IE "Ciphering mode info":
 - when RLC has been requested to transmit the ACTIVE SET UPDATE COMPLETE message:
 - perform the actions below;
- if the variable PDCP_SN_INFO is non-empty:
 - when RLC has confirmed the successful transmission of the ACTIVE SET UPDATE COMPLETE message:
 - for each radio bearer in the variable PDCP_SN_INFO:
 - if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":
 - configure the RLC entity for that radio bearer to "continue";
 - clear the variable PDCP_SN_INFO;
- if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the ACTIVE SET UPDATE message contained the IE "Integrity protection mode info":
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- The procedure ends on the UE side.

8.3.1.6 Reception of the CELL UPDATE CONFIRM/URA UPDATE CONFIRM message by the UE

When the UE receives a CELL UPDATE CONFIRM/URA UPDATE CONFIRM message; and

- if the message is received on the CCCH, and IE "U-RNTI" is present and has the same value as the variable U_RNTI, or;
- if the message is received on DCCH;

the UE shall:

- stop timer T302;
- set the variable CELL_UPDATE_STARTED to FALSE;
- in case of a cell update procedure and the CELL UPDATE CONFIRM message:
 - includes "RB information elements"; and/or
 - includes "Transport channel information elements"; and/or
 - includes "Physical channel information elements"; and
 - if the variable ORDERED_RECONFIGURATION is set to FALSE:
 - set the variable ORDERED_RECONFIGURATION to TRUE;
- act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:
 - use the transport channel(s) applicable for the physical channel types that is used; and
 - if the IE "TFS" is neither included nor previously stored in the UE for that transport channel(s):
 - use the TFS given in system information.
 - if none of the TFS stored is compatible with the physical channel:
 - delete the stored TFS;
 - use the TFS given in system information.
 - perform the physical layer synchronization procedure as specified in [29];
 - if the CELL UPDATE CONFIRM message includes the IE "RLC re-establish indicator (RB2 and RB3)":
 - re-establish the RLC entities for RB 2 and RB 3;
 - if the variable CIPHERING_STATUS is set to "Started":
 - set the HFN values for AM RLC entities with RB identity 2 and 3 equal to the START value included in the latest transmitted CELL UPDATE message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
 - if the CELL UPDATE CONFIRM message includes the IE "RLC re-establish indicator (RB>3)":
 - re-establish the AM RLC entities for RB with RB identity equal to or larger than 4;
 - if the variable CIPHERING_STATUS is set to "Started":
 - set the HFN values for AM RLC entities with RB identity equal to or larger than 4 equal to the START value included in the latest transmitted CELL UPDATE message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
- enter a state according to subclause 8.6.3.3 applied on the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message.

If the UE after state transition enters CELL_DCH state, it shall:

- not prohibit periodical status transmission in RLC.

If the UE after state transition remains in CELL_FACH state, it shall

- start the timer T305 using its initial value if timer T305 is not running and periodical cell update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- select PRACH according to subclause 8.6.6.2;
- select Secondary CCPCH according to subclause 8.6.6.5;
- not prohibit periodical status transmission in RLC;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - ignore that IE and stop using DRX;

If the UE after state transition enters URA_PCH or CELL_PCH state, it shall

- prohibit periodical status transmission in RLC;
- clear the variable C_RNTI;
- stop using that C_RNTI just cleared from the variable C_RNTI in MAC;
- start the timer T305 using its initial value if timer T305 is not running and periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity";
- select Secondary CCPCH according to subclause 8.6.6.5.
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging Occasion and PICH Monitoring Occasion as specified in 8.6.3.2 in CELL_PCH state.

If the UE after the state transition remains in CELL_FACH state and;

- the contents of the variable C_RNTI are empty;

it shall check the value of V302 and

- If V302 is equal to or smaller than N302:
 - if, caused by the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message,
 - the IE "Reconfiguration" in the variable CIPHERING_STATUS is set to TRUE; and/or
 - the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO is set to TRUE:
 - abort the ongoing integrity and/or ciphering reconfiguration;
 - if the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message contained the IE "Ciphering mode info":
 - set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - if the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message contained the IE "Integrity protection mode info":
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;

- in case of a URA update procedure:
 - stop the URA update procedure; and
 - continue with a cell update procedure;
- set the contents of the CELL UPDATE message according to subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "cell reselection";
- submit the CELL UPDATE message for transmission on the uplink CCCH;
- increment counter V302;
- restart timer T302 when the MAC layer indicates success or failure to transmit the message;
- If V302 is greater than N302:
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
 - in case of a cell update procedure:
 - clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
 - in case of a URA update procedure:
 - clear the entry for the URA UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
 - release all its radio resources;
 - indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
 - clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
 - clear the variable ESTABLISHED_RABS;
 - enter idle mode;
 - other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;
 - And the procedure ends.

If the UE after the state transition remains in CELL_FACH state and

- a C-RNTI is stored in the variable C_RNTI;

or

the UE after the state transition moves to another state than the CELL_FACH state;

the UE shall:

- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Ciphering mode info":
 - include and set the IE "Radio bearer uplink ciphering activation time info" in any response message transmitted below to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":

- include and set the IE "Integrity protection activation info" in any response message transmitted below to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- in case of a cell update procedure:
 - set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the CELL UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - clear that entry.
- in case of a cell update procedure:
 - set the IE "RRC transaction identifier" in any response message transmitted below to the value of "RRC transaction identifier" in the entry for the URA UPDATE CONFIRM message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - clear that entry;
- if the variable PDCP_SN_INFO is non-empty:
 - include the IE "RB with PDCP information list" in any response message transmitted below and set it to the value of the variable PDCP_SN_INFO;
- if the received CELL UPDATE CONFIRM or URA UPDATE CONFIRM message included the IE "Downlink counter synchronisation info":
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in any response message transmitted below;
- transmit a response message as specified in subclause 8.3.1.7;
- if the IE "Integrity protection mode info" was present in the CELL UPDATE CONFIRM or URA UPDATE CONFIRM message:
 - start applying the new integrity protection configuration in the uplink for RB#2 from and including the transmitted response message;
- clear the variable PDCP_SN_INFO;
- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Ciphering mode info":
 - set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- if the CELL UPDATE CONFIRM / URA UPDATE CONFIRM message contained the IE "Integrity protection mode info":
 - set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- in case of a cell update procedure:
 - clear the entry for the CELL UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
- in case of a URA update procedure:
 - clear the entry for the URA UPDATE CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;

The procedure ends.

CHANGE REQUEST

⌘ **25.331 CR 808** ⌘ rev **r1** ⌘ Current version: **3.6.0** ⌘

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: ⌘ Correction of Activation time definition

Source: ⌘ TSG-RAN WG2

Work item code: ⌘ TEI | | **Date:** ⌘ 21 May 2001

Category: ⌘ **F** | | **Release:** ⌘ R99

Use one of the following categories:

- F** (essential 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 current definition of activation time needs to be aligned on RAN1 specification (25.212)

Summary of change: ⌘ For the downlink the definition of Activation time in TS 25.331 is not correct. In downlink, rate matching is done on a TTI per TTI basis and there are dependencies between all Transport Channels multiplexed. No modification of a Transport Channel can occur in the middle of the TTI of another Transport Channel of the CCTrCh without spoiling the rate matching calculations; Therefore, for downlink, TS 25.212 approach should be taken

For the uplink, the rate matching is done on a frame per frame basis. The constraint in TS 25.331 enables in certain cases to apply the change a bit quicker than TS 25.212. However the gain is not likely to be so significant.

Therefore, from a timing point of view, keeping the same relation for uplink as for downlink, based on TS 25.212 might be a more reasonable choice

Usage of activation time has been clarified. The explicit value "Now" has been removed from the IE type definition, since the same IE type is used also for ciphering activation and "Now" is not applicable for that case. However, the existing references to "Now" as default value are kept. In 8.6.3.1, text is added clarifying what to do when the default value "Now" is applied. When an explicit activation time is given, it is clarified that at this frame number the new configuration shall be in use, and the activation time is at the frame boundary immediately before that frame. A clarification is added for reconfiguration of physical channels: at the activation time the old physical channel configuration shall be released and the establishment of a new physical channel configuration is initiated

This CR is a merge of CR 808 (blue text) and CR 747 section 8.6.3.1 (yellow text).

Backwards compatibility analysis:
functionality corrected: Activation Time
correction being brought:
resolved conflict with TS 25.212
provided necessary clarifications
« Correction to a function where the specification was :
Containing some contradictions
Ambiguous or not sufficiently explicit.
Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise. »

Backward compatibility will be ensured if the activation time satisfies the equation $CFN \bmod F_{max} = 0$ or if all TTIs of the CCTrCh have the same value or if the TFCS reconfiguration includes one TrCh having the TTI max of the CCTrCh.

Consequences if not approved: ⌘ synchronised reconfiguration fails in some cases

Clauses affected: ⌘ 8.6.3.1

Other specs Affected:

⌘ <input checked="" type="checkbox"/>	Other core specifications	⌘ 25.212
⌘ <input checked="" type="checkbox"/>	Test specifications	
⌘ <input type="checkbox"/>	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://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

8.6.3.1 Activation time

If the IE "Activation time" is present, the UE shall:

- start using the new configuration present in the same message as this IE at the indicated time;
- if the activation time is not at the TTI boundary of one or more of the affected transport formats:
 - ~~start using the new configuration at the next TTI boundary common to all the affected transport formats at the next TTI boundary common to all the transport channels which are multiplexed onto the same CCTrCh including any transport channel which are added, reconfigured or have been removed.~~

NOTE: ~~The new configuration is typically a dedicated physical channel present in the same message as the IE "Activation time". The Activation time corresponds to a CFN related to the old configuration.~~

If the UE receives a message in which presence is needed for the IE "Activation time" is present, and the value is other than the default value "Now", the UE shall:

- ~~if the frame boundary immediately before the frame with the CFN (Connection Frame Number) value indicated by the IE "Activation Time" is at the TTI boundary common to all the transport channels which are multiplexed onto the same CCTrCh including any transport channel which are added, reconfigured or have been removed for all affected transport formats:~~
 - ~~select that frame boundary as the activation time T;~~
- ~~else:~~
 - ~~select the next TTI boundary, which is common to all the transport channels which are multiplexed onto the same CCTrCh including any transport channel which are added, reconfigured or have been removed to all affected transport formats, after the frame with the CFN (Connection Frame Number) value indicated by the IE "Activation Time", as the activation time T;~~
- ~~at the activation time T:~~
 - ~~for a physical channel reconfiguration caused by the received message:~~
 - ~~release the physical channel configuration, which was present before T;~~
 - ~~initiate the establishment of the physical channel configuration as specified for the physical channel information elements in the received message as specified elsewhere;~~
 - ~~for actions, other than a physical channel reconfiguration, caused by the received message:~~
 - ~~perform the actions for the information elements in the received message as specified elsewhere;~~

If the UE receives a message in which presence is needed for the IE "Activation time", and the value is the default value "Now", the UE shall:

- ~~choose an activation time T as soon as possible after the reception of the message, respecting the performance requirements in subclause 13.5;~~
- ~~at the activation time T:~~
 - ~~perform the actions for the information elements in the received message as specified elsewhere;~~

CHANGE REQUEST

⌘ 25.331 CR 809 ⌘ rev ⌘ ⌘ Current version: 4.0.0 ⌘

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: ⌘ Correction of Activation time definition

Source: ⌘ TSG-RAN WG2

Work item code: ⌘ TEI | | **Date:** ⌘ 23 May 2001

Category: ⌘ F | | **Release:** ⌘ REL-4

Use one of the following categories:

- F** (essential correction)
- A** (corresponds to a correction in an earlier release)
- B** (Addition of feature),
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Reason for change: ⌘ The current definition of activation time needs to be aligned on RAN1 specification (25.212)

Summary of change: ⌘ For the downlink the definition of Activation time in TS 25.331 is not correct. In downlink, rate matching is done on a TTI per TTI basis and there are dependencies between all Transport Channels multiplexed. No modification of a Transport Channel can occur in the middle of the TTI of another Transport Channel of the CCTrCh without spoiling the rate matching calculations; Therefore, for downlink, TS 25.212 approach should be taken

For the uplink, the rate matching is done on a frame per frame basis. The constraint in TS 25.331 enables in certain cases to apply the change a bit quicker than TS 25.212. However the gain is not likely to be so significant.

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Usage of activation time has been clarified. The explicit value "Now" has been removed from the IE type definition, since the same IE type is used also for ciphering activation and "Now" is not applicable for that case. However, the existing references to "Now" as default value are kept. In 8.6.3.1, text is added clarifying what to do when the default value "Now" is applied. When an explicit activation time is given, it is clarified that at this frame number the new configuration shall be in use, and the activation time is at the frame boundary immediately before that frame. A clarification is added for reconfiguration of physical channels: at the activation time the old physical channel configuration shall be released and the establishment of a new physical channel configuration is initiated

Consequences if not approved: ⌘ synchronised reconfiguration fails in some cases

Clauses affected: ⌘ 8.6.3.1

Other specs Affected: ⌘ Other core specifications ⌘ 25.212
 Test specifications
 O&M Specifications

Other comments: ⌘

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NOTE:— The new configuration is typically a dedicated physical channel present in the same message as the IE "Activation time". The Activation time corresponds to a CFN related to the old configuration.

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 - select that frame boundary as the activation time T;
- else:
 - select the next TTI boundary, which is common to all the transport channels which are multiplexed onto the same CCTrCh including any transport channel which are added, reconfigured or have been removed, after the frame with the CFN (Connection Frame Number) value indicated by the IE "Activation Time", as the activation time T;
- at the activation time T:
 - for a physical channel reconfiguration caused by the received message:
 - release the physical channel configuration, which was present before T;
 - initiate the establishment of the physical channel configuration as specified for the physical channel information elements in the received message as specified elsewhere;
 - for actions, other than a physical channel reconfiguration, caused by the received message:
 - perform the actions for the information elements in the received message as specified elsewhere;

If the UE receives a message in which presence is needed for the IE "Activation time", and the value is the default value "Now", the UE shall:

- choose an activation time T as soon as possible after the reception of the message, respecting the performance requirements in subclause 13.5;
- at the activation time T:
 - perform the actions for the information elements in the received message as specified elsewhere;