TSG RAN Meeting #24 SEOUL, Korea, June 2nd-4th, 2004 RP-040249

Title CRs (Rel-5 and Rel-6 Category A) to TS 25.214 on Clarification of UE

procedure in case of HHO failure

Source QUALCOMM Europe, Ericsson, LGE

Agenda Item 7.2.5

RAN2 Tdoc	Spec	curr. Vers.	new Vers.	CR	Rev	Cat	Rel	Title	Work item
-	TS 25.331	5.8.0	5.9.0	2366	-	F	Rel-5	Clarification of UE procedure in case of HHO failure	TEI-5
-	TS 25.331	6.1.0	6.2.0	2367	-	Α	Rel-6	Clarification of UE procedure in case of HHO failure	TEI-5

3GPP TSG-RAN Meeting #24 Seoul, South Korea, 2-4 June, 2004

CHANGE REQUEST									CR-Form-v7			
×	25	.331	CR	2366	э	rev	-	¥	Current ve	ersion:	5.8.0	æ
For <u>HELP</u> or	n using	this for	m, see	bottom	of this p	page or	look	at the	e pop-up te	xt ove	r the ₩ syı	mbols.
Proposed chang	je affec	<i>ets:</i> (JICC a	pps#		ME X	Rad	dio Ad	ccess Netw	ork	Core No	etwork
Title:	₩ Cla	arificati	on on l	JE proce	dure in	case of	f HHC) fail	ure			
Source:	₩ Qu	ıalcomı	m Euro	pe, Erics	son, LC	SE						
Work item code.	∺ <mark>TE</mark>	15							Date:	∺ <mark>Ju</mark>	<mark>ne, 2 2004</mark>	
Category:	Deta	F (cord A (cord B (add C (fundation D (editation)	rection) respond dition of ctional i torial mo olanatio	wing cate ds to a cor feature), modification diffication ns of the a TR 21.900	rrection in the contraction of feating) above cases	ture)		elease	2	of the for (GSI) (Relative (Relative	el-5 ollowing rele M Phase 2) ease 1996) ease 1997) ease 1999) ease 4) ease 5) ease 6)	
Reason for char	nge: Ж	and	further		he risk				er to faciliat case of ir			
Summary of cha	nge: #	re-es	stablish		CH after	a inter	-RAT	, intra	tion proced a- or inter-f ns.			
Consequences in not approved:	f #								challenging m handove			ıration
Clauses affected	∄: ૠ	8.2.2	2.7, 8.3	.7.5, 8.3.	11.5, 8.	.6.6.30,	13.4	.11b	(new)			
Other specs	ж	Y N X X	Test	core spe specificat Specifica	tions	ons	¥		25.214 CR : 25.133 CR :		350r2	
Other comments	s: #											

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

- downloaded from the 3GPP server under $\underline{\text{ftp://ftp.3gpp.org/specs/}}$ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.2.7 Physical channel failure

If the received message caused the UE to be in CELL_DCH state and the UE according to subclause 8.5.4 failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> if HS-DSCH is configured:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H_RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.
- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 2> revert to the configuration prior to the reception of the message (old configuration);
 - 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
 - 2> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST CONFIGURED SRB DELAY AND PC PREAMBLE; and
 - 2> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;
- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is set to TRUE or if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.
- 1> if the old configuration does not include dedicated physical channels (CELL_FACH state):
 - 2> select a suitable UTRA cell according to [4];
 - 2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:
 - 3> initiate a cell update procedure according to subclause 8.3.1, using the cause "Cell reselection";
 - 3> after the cell update procedure has completed successfully:
 - 4> proceed as below.
- 1> transmit a failure response message as specified in subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;

- 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The procedure ends.

[...]

8.3.7.5 UE fails to complete requested handover

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

- 1> revert back to the UTRA configuration;
- 1> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
- 1> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable

 LATEST CONFIGURED SRB DELAY AND PC PREAMBLE; and
- 1> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;

NOTE: If configured for HS-DSCH while in UTRA, the UE will have still stored the IEs "Added or Reconfigured MAC-d flow" and "RB mapping Info".

- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 2> establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND.
- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is set to TRUE or if the UE does not succeed to establish the UTRA physical channel(s):
 - 2> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 2> when the cell update procedure has completed successfully:
 - 3> proceed as below.
- 1> transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "Inter-RAT handover failure" to "physical channel failure".
- 1> When the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 2> the procedure ends.

[...]

8.3.11.5 Expiry of timer T309 or UE fails to complete requested cell change order

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or

- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL_DCH:
 - 2> revert back to the UTRA configuration;
 - 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
 - 2> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST CONFIGURED SRB DELAY AND PC PREAMBLE; and
 - 2> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;
- NOTE: If configured for HS-DSCH while in UTRA, the UE will have still stored the IEs "Added or Reconfigured MAC-d flow" and "RB mapping Info".
 - 2> establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
 - 2> if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.
- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and

- 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 3> clear that entry;
- 3> set the IE "Inter-RAT change failure" to "physical channel failure".
- 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

8.6.6.30 SRB delay, PC preamble (FDD only)

When the IE "SRB delay" and IE "PC preamble" is received in a message that results in a configuration of uplink DPCH, the UE shall:

- 1> store the received IE "SRB delay" and IE "PC preamble" in the variable LATEST CONFIGURED SRB DELAY AND PC PREAMBLE;
- 1> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble"; and
- 1> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay".

[...]

13.4.11b LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE

This variable stores the SRB delay and PC preamble that were most recently configured to be used for establishing the DPCH.

Information Element/Group name	<u>Need</u>	<u>Multi</u>	Type and reference	Semantics description
SRB delay	<u>OP</u>		Integer (07)	Cleared when entering UTRA RRC connected mode when not stated otherwise in the procedure.
PC preamble	<u>OP</u>		Integer (07)	Cleared when entering UTRA RRC connected mode when not stated otherwise in the procedure.

[...]

3GPP TSG-RAN Meeting #24 Seoul, South Korea, 2-4 June, 2004

CHANGE REQUEST								
*	25.331 CR 2367 #rev	¥ Current version: 6.1.0 [₩]						
For <u>HELP</u> on u	sing this form, see bottom of this page	or look at the pop-up text over the						
Proposed change	<i>affects:</i> UICC apps発 <mark></mark> ME	X Radio Access Network Core Network						
Title:	Clarification on UE procedure in case	of HHO failure						
Source: #	Qualcomm Europe, Ericsson, LGE							
Work item code: ₩	TEI5	<i>Date:</i>						
Category: अ	A Use one of the following categories: F (correction) A (corresponds to a correction in an B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above catego be found in 3GPP TR 21.900.	R97 (Release 1997) R98 (Release 1998) R99 (Release 1999)						
Reason for change	e: # Improve consistency of UE beha	aviour in order to faciliate network configuration						
reason for onlings		opped calls in case of inter-RAT, intra- or inter-						
Summary of chang		synchronisation procedure A when attempting to ter-RAT, intra- or inter-frequency hard handover specifications.						
Consequences if not approved:		ting in more challenging network configuration s resulting from handover attempts.						
Clauses affected:	8.2.2.7 , 8.3.7.5 , 8.3.11.5 , 8.6.6.3	30, 13.4.11b (new)						
Other specs affected:	Y N X Other core specifications X Test specifications O&M Specifications	# TS 25.214 CR 349r2, 350r2 TS 25.133 CR tbd						
Other comments:	x							

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked % contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

- downloaded from the 3GPP server under $\underline{\text{ftp://ftp.3gpp.org/specs/}}$ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.2.7 Physical channel failure

If the received message caused the UE to be in CELL_DCH state and the UE according to subclause 8.5.4 failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> if HS-DSCH is configured:
 - 2> stop any HS-DSCH reception procedures;
 - 2> clear any stored HS-PDSCH configuration;
 - 2> act as if the IE "MAC-hs reset indicator" is received and set to TRUE;
 - 2> release all HARQ resources;
 - 2> remove any H-RNTI stored;
 - 2> clear the variable H RNTI;
 - 2> set the variable HS_DSCH_RECEPTION to FALSE.
- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 2> revert to the configuration prior to the reception of the message (old configuration);
 - 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
 - 2> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST CONFIGURED SRB DELAY AND PC PREAMBLE; and
 - 2> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;
- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is set to TRUE or if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.
- 1> if the old configuration does not include dedicated physical channels (CELL_FACH state):
 - 2> select a suitable UTRA cell according to [4];
 - 2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:
 - 3> initiate a cell update procedure according to subclause 8.3.1, using the cause "Cell reselection";
 - 3> after the cell update procedure has completed successfully:
 - 4> proceed as below.
- 1> transmit a failure response message as specified in subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;

- 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The procedure ends.

[...]

8.3.7.5 UE fails to complete requested handover

If the UE does not succeed in establishing the connection to the target radio access technology, it shall:

- 1> revert back to the UTRA configuration;
- 1> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
- 1> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable

 LATEST CONFIGURED SRB DELAY AND PC PREAMBLE; and
- 1> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;

NOTE: If configured for HS-DSCH while in UTRA, the UE will have still stored the IEs "Added or Reconfigured MAC-d flow" and "RB mapping Info".

- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is not set to TRUE:
 - 2> establish the UTRA physical channel(s) used at the time for reception of HANDOVER FROM UTRAN COMMAND.
- 1> if the CM_PATTERN_ACTIVATION_ABORTED flag is set to TRUE or if the UE does not succeed to establish the UTRA physical channel(s):
 - 2> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 2> when the cell update procedure has completed successfully:
 - 3> proceed as below.
- 1> transmit the HANDOVER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the HANDOVER FROM UTRAN COMMAND message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "Inter-RAT handover failure" to "physical channel failure".
- 1> When the HANDOVER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 2> the procedure ends.

[...]

8.3.11.5 Expiry of timer T309 or UE fails to complete requested cell change order

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or

- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL_DCH:
 - 2> revert back to the UTRA configuration;
 - 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only);
 - 2> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble" in the variable LATEST CONFIGURED SRB DELAY AND PC PREAMBLE; and
 - 2> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay" in the variable LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE;
- NOTE: If configured for HS-DSCH while in UTRA, the UE will have still stored the IEs "Added or Reconfigured MAC-d flow" and "RB mapping Info".
 - 2> establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
 - 2> if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.
- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and

- 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 3> clear that entry;
- 3> set the IE "Inter-RAT change failure" to "physical channel failure".
- 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

8.6.6.30 SRB delay, PC preamble (FDD only)

When the IE "SRB delay" and IE "PC preamble" is received in a message that results in a configuration of uplink DPCH, the UE shall:

- 1> store the received IE "SRB delay" and IE "PC preamble" in the variable LATEST CONFIGURED SRB DELAY AND PC PREAMBLE;
- 1> after the establishment of the uplink physical channel, send DPCCH and no DPDCH according to [26] during the number of frames indicated in the IE "PC preamble"; and
- 1> then not send any data on signalling radio bearers RB0 to RB4 during the number of frames indicated in the IE "SRB delay".

[...]

13.4.11b LATEST_CONFIGURED_SRB_DELAY_AND_PC_PREAMBLE

This variable stores the SRB delay and PC preamble that were most recently configured to be used for establishing the DPCH.

Information Element/Group name	Need	<u>Multi</u>	Type and reference	Semantics description
SRB delay	<u>OP</u>		Integer (07)	Cleared when entering UTRA RRC connected mode when not stated otherwise in the procedure.
PC preamble	<u>OP</u>		Integer (07)	Cleared when entering UTRA RRC connected mode when not stated otherwise in the procedure.

[...]