

**Source:** T1  
**Title:** CR's to TS 34.122 v4.7.0 for approval  
**Agenda item:** 5.1.3  
**Document for:** Approval

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This document contains 6 CRs to TS 34.122 v4.7.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

*CRs related to Low Chip Rate TDD:*

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version -New	Doc-2nd-Level	Work item
34.122	167	-	Rel-4	Addition LCR cell re-selection in Cell_PCH, single cell test	F	4.7.0	4.8.0	T1-030329	LCRT DD
34.122	168	-	Rel-4	Addition LCR cell re-selection in PCH, multi-cell test	F	4.7.0	4.8.0	T1-030330	LCRT DD
34.122	169	-	Rel-4	Addition LCR cell re-selection in URA_PCH, single cell test	F	4.7.0	4.8.0	T1-030331	LCRT DD
34.122	170	-	Rel-4	Addition LCR cell re-selection in URA_PCH, multi-cell test	F	4.7.0	4.8.0	T1-030332	LCRT DD
34.122	171	-	Rel-4	Addition LCR cell re-selection in Cell_Fach, multi-cell test	F	4.7.0	4.8.0	T1-030346	LCRT DD
34.122	172	-	Rel-4	Addition LCR cell re-selection in Cell_Fach, single cell test	F	4.7.0	4.8.0	T1-030352	LCRT DD

CR-Form-v7
<b>CHANGE REQUEST</b>
⌘ <b>34.122 CR 167</b> ⌘ rev <b>-</b> ⌘ Current version: <b>4.7.0</b> ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition LCR cell re-selection in Cell_PCH, single cell test		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ LCRTDD	<b>Date:</b>	⌘ 30/04/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	Use <u>one</u> of the following categories: <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ Updates to reflect latest version core specification
<b>Summary of change:</b>	⌘ Addition of LCR single cell reselction cell-PCH test case
<b>Consequences if not approved:</b>	⌘ Incomplete testing, not reflecting latest core specification.

<b>Clauses affected:</b>	⌘ 8.3.5.1										
<b>Other specs Affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">⌘</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">⌘</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">⌘</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	⌘	⌘	⌘	⌘	⌘	⌘		
Y	N										
⌘	⌘										
⌘	⌘										
⌘	⌘										
<b>Other comments:</b>	⌘ Based on core spec 25.123 clauses clauses 5.5.2 and A.5.5.1.										

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Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 8.3.5 Cell Re-selection in CELL\_PCH

### 8.3.5.1 Scenario 1: TDD/TDD cell re-selection single carrier case

#### 8.3.5.1.1 Definition and applicability

##### 8.3.5.1.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

##### 8.3.5.1.1.2 1,28 Mcps TDD option

~~Void:~~ The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell, and starts to send SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a CELL UPDATE with cause value "cell reselection".

The requirements and this test apply to the 1,28 Mcps TDD UE.

#### 8.3.5.1.2 Minimum requirement

##### 8.3.5.1.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as:  $T_{\text{evaluateTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluateTDD}}$  of 6.4s according to TS 25.123 [2] table 4.1 in clause 4.2.2.7.

$T_{\text{SI}}$  Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5 and A.5.5.1.

##### 8.3.5.1.2.2 1,28 Mcps TDD option

~~Void:~~ The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as:  $T_{\text{evaluateNTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateNTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluateTDD}}$  of 6.4s according to TS 25.123 [2] table 4.1a in clause 4.2.2.

$T_{\text{SI}}$  Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allowing 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5.2.2 and A.5.5.1.

### 8.3.5.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in CELL\_PCH for the single carrier case

### 8.3.5.1.4 Method of test

8.3.5.1.4.1 3,84 Mcps TDD option

8.3.5.1.4.1.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.5.1.1.1, and 8.3.5.1.1.2.

**Table 8.3.5.1.1.1: General test parameters for Cell Re-selection single carrier multi-cell case**

	Parameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
HCS			Not used	
	UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
	Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	T <sub>SI</sub>	s	1.28	The value shall be used for all cells in the test.
	DRX cycle length	s	1.28	The value shall be used for all cells in the test.
	T1	s	15	
	T2	s	15	

Table 8.3.5.1.1.2: Cell re-selection single carrier multi-cell case

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/Ior	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_toffset		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/Ior	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/Ior	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	9	7	9	7	7	9	7	9	-1	-1	-1	-1
PCCPCH RSCP	dBm	-64	-66			-66	-64			-74	-74		
Qoffset1s,n	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		8		0		8		0		8	
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/Ior	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_toffset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/Ior	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/Ior	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1s,n	dB	C4, C1: 0; C4, C2:0; C4,C3:0C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1s	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

#### 8.3.5.1.4.1.2 Procedure

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1 to place the UE in the CELL\_PCH state on Cell 1 and then the SS waits for this process to complete.
- After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- If the UE responds on Cell 2 with a PRACH (CELL UPDATE message cause "cell reselection") within 8s, then a success is recorded, the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure moves to step g).
- Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues with step g).
- After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.

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- h) If the UE responds on Cell 1 with a PRACH (CELL UPDATE message cause "cell reselection") within 8s, then a success is recorded and the procedure moves to step j).
- i) Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues with step j).
- j) Repeat steps d) to i) [TBD] times.

NOTE: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s(Minimum requirement + 100ms), allow 8s in the test case.

### Specific Message Contents

All messages indicated above shall use the same content as described in the default message content in clause 9 of 34.108 [3], with the following exceptions:

#### RADIO BEARER SETUP (Step 3)

Information Element	Value/remark
RRC State Indicator	CELL PCH
UTRAN DRX cycle length coefficient	7

#### 8.3.5.1.4.2 1,28 Mcps TDD option

##### ~~Void~~ 8.3.5.1.4.2.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.5.1.4.2.1, and 8.3.5.1.4.2.2.

**Table 8.3.5.1.4.2.1: General test parameters for 1.28Mcps Cell Re-selection single carrier multi-cell case**

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
	HCS	Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-103	The value shall be used for all cells in the test.
Access Service Class (ASC#0) -- Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T <sub>SI</sub>	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	15	
T2	s	15	

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**Table 8.3.5.1.4.2.2: 1.28Mcps Cell re-selection single carrier multi-cell case**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCPCH Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/Ior	dB			0	0			0	0			0	0
OCNS Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	9	7	9	7	7	9	7	9	-1	-1	-1	-1
PCPCH RSCP	dBm	-64	-66			-66	-64			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Timeslot		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCPCH Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/Ior	dB			0	0			0	0			0	0
OCNS Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/1.28 MHz					-70							
Propagation Condition						AWGN							

**8.3.5.1.4.2.2 Procedure**

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1 to place the UE in the CELL\_PCH state on Cell 1 and then the SS waits for this process to complete.
- d) After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- e) If the UE responds on Cell 2 with a CELL\_UPDATE message cause "cell reselection" within 8s, then a success is recorded, the SS shall transmit a CELL\_UPDATE\_CONFIRM message and then the procedure moves to step g).
- f) If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL\_UPDATE\_CONFIRM message and then the procedure continues with step g).
- g) After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.
- h) If the UE responds on Cell 1 with a CELL\_UPDATE message cause "cell reselection" within 8s, then a success is recorded and the procedure moves to step j).

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- i) If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues with step j).
- j) Repeat steps d) to i) [TBD] times.

NOTE: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s(Minimum requirement + 100ms), so allow 8s in the test case.

### Specific Message Contents

All messages indicated above shall use the same content as described in the default message content in clause 9 of 34.108 [3], with the following exceptions:

### RADIO BEARER SETUP (Step 3)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State Indicator</u>	<u>CELL_PCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>7</u>

## 8.3.5.1.5 Test Requirements

### 8.3.5.1.5.1 3,84 Mcps TDD option

For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

### 8.3.5.1.5.2 1,28 Mcps TDD option

~~Void.~~

For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.



CR-Form-v7

## CHANGE REQUEST

⌘ **34.122 CR 168** ⌘ rev **-** ⌘ Current version: **4.7.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition LCR cell re-selection in PCH, multi-cell test		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ LCRTDD	<b>Date:</b>	⌘ 30/04/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Updates to reflect latest version core specification
<b>Summary of change:</b>	⌘ Addition of LCR multi-cell reselction cell-PCH test case
<b>Consequences if not approved:</b>	⌘ Incomplete testing, not reflecting latest core specification.

<b>Clauses affected:</b>	⌘ 8.3.5.2								
<b>Other specs Affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	⌘	⌘	⌘	⌘	⌘	⌘
Y	N								
⌘	⌘								
⌘	⌘								
⌘	⌘								
<b>Other comments:</b>	⌘ Based on core spec 25.123 clauses clauses 5.6.2.2 and A.5.5.2.2								

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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.

### 8.3.5.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

#### 8.3.5.2.1 Definition and applicability

##### 8.3.5.2.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the 3,84 Mcps option TDD UE.

##### 8.3.5.2.1.2 1,28 Mcps TDD option

~~Void.~~ The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a CELL UPDATE with cause value "cell reselection".

The requirements and this test apply to the 1,28 Mcps TDD UE.

#### 8.3.5.2.2 Minimum requirement

##### 8.3.5.2.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as:  $T_{\text{evaluateTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluate TDD}}$  of 6.4s according to TS 25.123 [2] table 4.1 in clause 4.2.2.7.

$T_{\text{SI}}$  Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5 and A.5.5.2.

##### 8.3.5.2.2.2 ~~3,84~~1,28 Mcps TDD option

~~Void.~~ The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as:  $T_{\text{evaluateNTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateNTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluate TDD}}$  of 6.4s according to TS 25.123 [2] table 4.1a in clause 4.2.2.

$T_{\text{SI}}$  Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allowing 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.5.2 and A.5.5.2.2.

### 8.3.5.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in CELL\_PCH for the multi carrier case.

### 8.3.5.2.4 Method of test

#### 8.3.5.2.4.1 3,84 Mcps TDD option

##### 8.3.5.2.4.1.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.5.2.1.1 and 8.3.5.2.1.2.

**Table 8.3.5.2.1.1: General test parameters for Cell Re-selection in Multi carrier case**

	Parameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3,Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
	UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
	Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	T <sub>SI</sub>	s	1.28	The value shall be used for all cells in the test.
	DRX cycle length	s	1.28	The value shall be used for all cells in the test.
	T1	s	30	
	T2	s	15	

**Table 8.3.5.2.1.2: Cell re-selection multi carrier multi cell case**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH_Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/Ior	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_toffset		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/Ior	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/Ior	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	6	0	6	0	0	6	0	6	-3	-3	-3	-3
PCCPCH RSCP	dBm	-67	-73			-73	-67			-76	-76		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0C2, C5:0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		8		0		8		0		8	
UTRA RF Channel Number		Channel 1				Channel 2				Channel 2			
PCCPCH_Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/Ior	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_toffset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/Ior	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/Ior	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
PCCPCH RSCP	dBm	-76	-76			-76	-76			-76	-76		
Qoffset1 <sub>s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

**8.3.5.2.4.1.2 Procedure**

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1 to place the UE in the CELL\_PCH state on Cell 1 and then the SS waits for this process to complete.
- After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- If the UE responds on Cell 2 with a PRACH (CELL UPDATE message cause "cell reselection") within 8s, then a success is recorded, the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure moves to step g).
- Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues with step g).

- g) After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.
- h) If the UE responds on Cell 1 with a PRACH (CELL UPDATE message cause "cell reselection") within 8s, then a success is recorded and the procedure moves to step j).
- i) Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues with step j).
- j) Repeat steps d) to i) [TBD] times.

NOTE 1: T1 is initially 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

NOTE 2: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s(Minimum requirement + 100ms), allow 8s in the test case.

### RADIO BEARER SETUP (Step 3)

Information Element	Value/remark
RRC State Indicator	CELL PCH
UTRAN DRX cycle length coefficient	7

8.3.5.2.4.2 1,28 Mcps TDD option

[8.3.5.2.4.2.1](#) [Initial conditions](#)

**Void.** This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables [8.3.5.2.4.2.1](#) and [8.3.5.2.4.2.2](#).

**[Table 8.3.5.2.4.2.1: General test parameters for 1.28Mcps Cell Re-selection in Multi carrier case](#)**

Parameter	Unit	Value	Comment
<a href="#">Initial condition</a>	<a href="#">Active cell</a>	<a href="#">Cell1</a>	
	<a href="#">Neighbour cells</a>	<a href="#">Cell2, Cell3,Cell4, Cell5, Cell6</a>	
<a href="#">Final condition</a>	<a href="#">Active cell</a>	<a href="#">Cell2</a>	
<a href="#">HCS</a>		<a href="#">Not used</a>	
<a href="#">UE_TXPWR_MAX_RACH</a>	<a href="#">dBm</a>	<a href="#">21</a>	<a href="#">The value shall be used for all cells in the test.</a>
<a href="#">Qrxlevmin</a>	<a href="#">dBm</a>	<a href="#">-103</a>	<a href="#">The value shall be used for all cells in the test.</a>
<a href="#">Access Service Class (ASC#0) - Persistence value</a>		<a href="#">1</a>	<a href="#">Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.</a>
<a href="#">T<sub>SI</sub></a>	<a href="#">s</a>	<a href="#">1.28</a>	<a href="#">The value shall be used for all cells in the test.</a>
<a href="#">DRX cycle length</a>	<a href="#">s</a>	<a href="#">1.28</a>	<a href="#">The value shall be used for all cells in the test.</a>
<a href="#">T1</a>	<a href="#">s</a>	<a href="#">30</a>	
<a href="#">T2</a>	<a href="#">s</a>	<a href="#">15</a>	

**Table 8.3.5.2.4.2.2: Cell re-selection 1.28Mcps multi carrier multi cell case**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/lor	dB			0	0			0	0			0	0
OCNS Ec/lor	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	10	7	10	7	7	10	7	10	-1	-1	-1	-1
PCCPCH RSCP	dBm	-63	-66			-66	-63			-74	-74		
Qoffset <sub>1s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0C2, C5:0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Qhyst <sub>1s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		DWPTS		0		DWPTS		0		DWPTS	
UTRA RF Channel Number		Channel				Channel 2				Channel			
PCCPCH Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/lor	dB			0	0			0	0			0	0
OCNS Ec/lor	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset <sub>1s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst <sub>1s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/ 1.28 MHz					-70							
Propagation Condition						AWGN							

**8.3.5.2.4.2.2 Procedure**

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.1 to place the UE in the CELL\_PCH state on Cell 1 and then the SS waits for this process to complete.
- After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- If the UE responds on Cell 2 with a CELL\_UPDATE message cause "cell reselection" within 8s, then a success is recorded, the SS shall transmit a CELL\_UPDATE\_CONFIRM message and then the procedure moves to step g).
- If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL\_UPDATE\_CONFIRM message and then the procedure continues with step g).
- After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.

h) If the UE responds on Cell 1 with a CELL UPDATE message cause "cell reselection" within 8s, then a success is recorded and the procedure moves to step j).

i) If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues with step j).

j) Repeat steps d) to i) [TBD] times.

NOTE 1: T1 should initially be 30 s to allow enough time for the UE to search for cells as it has no prior knowledge of these.

NOTE 2: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s(Minimum requirement + 100ms), allow 8s in the test case.

### RADIO BEARER SETUP (Step 3)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State Indicator</u>	<u>CELL PCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>7</u>

### 8.3.5.2.5 Test Requirements

#### 8.3.5.2.5.1 3,84 Mcps TDD option

For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

#### 8.3.5.2.5.2 1,28 Mcps TDD option

Void. For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

CR-Form-v7

## CHANGE REQUEST

⌘ **34.122 CR 169** ⌘ rev **-** ⌘ Current version: **4.7.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition LCR cell re-selection in URA_PCH, single cell test		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ LCRTDD	<b>Date:</b>	⌘ 30/04/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Updates to reflect latest version core specification
<b>Summary of change:</b>	⌘ Addition of LCR single cell reselction URA PCH test case
<b>Consequences if not approved:</b>	⌘ Incomplete testing, not reflecting latest core specification.

<b>Clauses affected:</b>	⌘ 8.3.6								
<b>Other specs Affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	⌘	⌘	⌘	⌘	⌘	⌘
Y	N								
⌘	⌘								
⌘	⌘								
⌘	⌘								
<b>Other comments:</b>	⌘ Based on core spec 25.123 clauses clauses 5.6.2 and A.5.6								

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.



## 8.3.6 Cell Re-selection in URA\_PCH

### 8.3.6.1 Scenario 1: TDD/TDD cell re-selection single carrier case

#### 8.3.6.1.1 Definition and applicability

##### 8.3.6.1.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

##### 8.3.6.1.1.2 1,28 Mcps TDD option

~~Void.~~ The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the 1,28 Mcps TDD UE. The two cells shall belong to different UTRAN Registration Areas (URAs)

#### 8.3.6.1.2 Minimum requirement

##### 8.3.6.1.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as:  $T_{\text{evaluateTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluate TDD}}$  of 6.4s according to TS25.123 [2] table 4.1 in clause 4.2.2.7.

$T_{\text{SI}}$  Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6 and A.5.6.1.

##### 8.3.6.1.2.2 1,28 Mcps TDD option

~~Void.~~

The cell re-selection delay shall be less than 8 s.

NOTE:

The cell re-selection delay can be expressed as:  $T_{\text{evaluateNTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateNTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluate TDD}}$  of 6.4s according to TS 25.123 [2] table 4.1a in clause 4.2.2.

$T_{\text{SI}}$  Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allowing 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6 and A.5.6.1.

### 8.3.6.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in URA\_PCH for the single carrier case.

### 8.3.6.1.4 Method of test

#### 8.3.6.1.4.1 3,84 Mcps TDD option

#### 8.3.6.1.4.1.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.6.1.1.1, and 8.3.6.1.1.2.

**Table 8.3.6.1.1.1: General test parameters for Cell Re-selection single carrier multi-cell case**

	<b>Parameter</b>	<b>Unit</b>	<b>Value</b>	<b>Comment</b>
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
	UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
	Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	T <sub>SI</sub>	s	1.28	The value shall be used for all cells in the test.
	DRX cycle length	s	1.28	The value shall be used for all cells in the test.
	T1	s	15	
	T2	s	15	

**Table 8.3.6.1.1.2: Cell re-selection single carrier multi-cell case**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t_offset		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
$\hat{I}_{or}/I_{oc}$	dB	9	7	9	7	7	9	7	9	-1	-1	-1	-1
PCCPCH RSCP	dBm	-64	-66			-66	-64			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		8		0		8		0		8	
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t_offset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

**8.3.6.1.4.1.2 Procedure**

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2 to place the UE in the URA\_PCH state on Cell 1 and then the SS waits for this process to complete.
- After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- If the UE responds on Cell 1 with a PRACH (URA UPDATE message cause "change of URA") within 8s, then a success is recorded, the SS shall transmit a URA UPDATE CONFIRM message and then the procedure moves to step g).
- Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a URA UPDATE CONFIRM message and then the procedure continues with step g).
- After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.

- h) If the UE responds on Cell 1 with a PRACH (URA UPDATE message cause "change of URA") within 8s, then a success is recorded and the procedure moves to step j).
- i) Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a URA UPDATE CONFIRM message and then the procedure continues with step j).
- j) Repeat steps d) to i) [TBD] times.

NOTE: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s (Minimum requirement + 100ms), allow 8s in the test case.

### RADIO BEARER SETUP (Step 3)

Information Element	Value/remark
RRC State Indicator	URA PCH
UTRAN DRX cycle length coefficient	7

#### 8.3.6.1.4.2 1,28 Mcps TDD option

Void.

##### 8.3.6.1.4.2.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.6.1.4.2.1, and 8.3.6.1.4.2.2. Cell 1 and Cell 2 shall belong to different UTRAN Registration Areas (URAs).

**Table 8.3.6.1.4.2.1: General test parameters for Cell Re-selection single carrier multi-cell case**

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-103	The value shall be used for all cells in the test.
Access Service Class (ASC#0) -- Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T <sub>SI</sub>	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	15	
T2	s	15	

**Table 8.3.6.1.4.2.2: Cell re-selection single carrier multi-cell case**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/lor	dB			0	0			0	0			0	0
OCNS Ec/lor	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	9	7	9	7	7	9	7	9	-1	-1	-1	-1
PCCPCH RSCP	dBm	-64	-66			-66	-64			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Timeslot		0		DWPTS		0		DWPTS		0		DWPTS	
UTRA RF Channel Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/lor	dB			0	0			0	0			0	0
OCNS Ec/lor	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/1.28 MHz					-70							
Propagation Condition						AWGN							

**8.3.6.1.4.2.2 Procedure**

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2 to place the UE in the URA PCH state on Cell 1 and then the SS waits for this process to complete.
- After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- If the UE responds on Cell 1 with an URA UPDATE message cause "change of URA" within 8s, then a success is recorded, the SS shall transmit a URA UPDATE CONFIRM message and then the procedure moves to step g).
- If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a URA UPDATE CONFIRM message and then the procedure continues with step g).
- After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.
- If the UE responds on Cell 1 with a "change of URA" message within 8s, then a success is recorded and the procedure moves to step j).
- If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched

off and the procedure returns to step a). Otherwise the SS shall transmit a URA UPDATE CONFIRM message and then the procedure continues with step j).

j) Repeat steps d) to i) [TBD] times.

NOTE: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s(Minimum requirement + 100ms), allow 8s in the test case.

#### RADIO BEARER SETUP (Step 3)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State Indicator</u>	<u>URA PCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>7</u>

### 8.3.6.1.5 Test Requirements

#### 8.3.6.1.5.1 3,84 Mcps TDD option

For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

#### 8.3.6.1.5.2 1,28 Mcps TDD option

For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

Void.

CR-Form-v7

## CHANGE REQUEST

⌘ **34.122 CR 170** ⌘ rev **-** ⌘ Current version: **4.7.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition LCR cell re-selection in URA_PCH, multi-cell test		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ LCRTDD	<b>Date:</b>	⌘ 30/04/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Updates to reflect latest version core specification		
<b>Summary of change:</b>	⌘ Addition of LCR multi cell reselction URA_PCH test case		
<b>Consequences if not approved:</b>	⌘ Incomplete testing, not reflecting latest core specification.		

<b>Clauses affected:</b>	⌘ 8.3.6.2										
<b>Other specs Affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> </table>	Y	N	⌘	⌘	⌘	⌘	⌘	⌘	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
⌘	⌘										
⌘	⌘										
⌘	⌘										
<b>Other comments:</b>	⌘ Based on core spec 25.123 clauses clauses 5.6.2 and A.5.6.2.										

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

### 8.3.6.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

#### 8.3.6.2.1 Definition and applicability

##### 8.3.6.2.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

##### 8.3.6.2.1.2 1,28 Mcps TDD option

~~Void.~~ The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the URA UPDATE message with cause value "change of URA" in the new cell.

The requirements and this test apply to the 1,28 Mcps TDD UE. The cells shall belong to different UTRAN Registration Areas (URAs)

#### 8.3.6.2.2 Minimum requirement

##### 8.3.6.2.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 8 s.

**NOTE:**

The cell re-selection delay can be expressed as:  $T_{\text{evaluateTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluate TDD}}$  of 6.4s according to TS25.123 [2] table 4.1 in clause 4.2.2.7.

$T_{\text{SI}}$  Maximum repetition period of relevant system info blocks that needs to be received by the UE to camp on a cell. 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allow 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6 and A.5.6.1.

##### 8.3.6.2.2.2 1,28 Mcps TDD option

~~Void.~~ The cell re-selection delay shall be less than 8 s.

**NOTE:**

The cell re-selection delay can be expressed as:  $T_{\text{evaluateNTDD}} + T_{\text{SI}}$ , where:

$T_{\text{evaluateNTDD}}$  A DRX cycle length of 1280ms is assumed for this test case, this leads to a  $T_{\text{evaluate TDD}}$  of 6.4s according to TS 25.123 [2] table 4.1a in clause 4.2.2.

$T_{\text{SI}}$  Time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell (ms). 1280 ms is assumed in this test case.

This gives a total of 7.68 s, allowing 8s in the test case.

The normative reference for this requirement is TS 25.123 [2] clauses 5.6.2 and A.5.6.2.1.2



### 8.3.6.2.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in URA\_PCH for the [single Multiple](#) carrier case

### 8.3.6.2.4 Method of test

#### 8.3.6.2.4.1 3,84 Mcps TDD option

##### 8.3.6.2.4.1.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.6.2.1.1, and 8.3.6.2.1.2.

**Table 8.3.6.2.1.1: General test parameters for Cell Re-selection single carrier multi-cell case**

	Parameter	Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
	HCS		Not used	
	UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
	Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
	Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
	T <sub>SI</sub>	s	1.28	The value shall be used for all cells in the test.
	DRX cycle length	s	1.28	The value shall be used for all cells in the test.
	T1	s	15	
	T2	s	15	

**Table 8.3.6.2.1.2: Cell re-selection single carrier multi-cell case**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t_offset		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
$\hat{I}_{or}/I_{oc}$	dB	9	7	9	7	7	9	7	9	-1	-1	-1	-1
PCCPCH RSCP	dBm	-64	-66			-66	-64			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		8		0		8		0		8	
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t_offset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12	-3,12
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

**8.3.6.2.4.1.2 Procedure**

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2 to place the UE in the URA\_PCH state on Cell 1 and then the SS waits for this process to complete.
- After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- If the UE responds on Cell 1 with a PRACH (URA UPDATE message cause "change of URA") within 8s, then a success is recorded, the SS shall transmit a URA UPDATE CONFIRM message and then the procedure moves to step g).
- Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a URA UPDATE CONFIRM message and then the procedure continues with step g).
- After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.

- h) If the UE responds on Cell 1 with a PRACH (URA UPDATE message cause "change of URA") within 8s, then a success is recorded and the procedure moves to step j).
- i) Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a URA UPDATE CONFIRM message and then the procedure continues with step j).
- j) Repeat steps d) to i) [TBD] times.

NOTE: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s (Minimum requirement + 100ms), allow 8s in the test case.

### RADIO BEARER SETUP (Step 3)

Information Element	Value/remark
RRC State Indicator	URA PCH
UTRAN DRX cycle length coefficient	7

#### 8.3.6.2.4.2 1,28 Mcps TDD option

~~Void.~~ [8.3.6.2.4.2.1 Initial conditions](#)

[This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.6.2.4.2.1, and 8.3.6.2.4.2.2.](#)

[Cell1 and Cell2 shall belong to different UTRAN Registration Areas \(URA\).](#)

**[Table A.5.6.7: General test parameters for 1.28Mcps Cell Re-selection in Multi carrier case](#)**

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-103	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T <sub>SI</sub>	s	1.28	The value shall be used for all cells in the test.
DRX cycle length	s	1.28	The value shall be used for all cells in the test.
T1	s	30	
T2	s	15	

**Table A.5.6.8: Cell re-selection 1.28Mcps multi carrier multi cell case**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/lor	dB			0	0			0	0			0	0
OCNS Ec/lor	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	10	7	10	7	7	10	7	10	-1	-1	-1	-1
PCCPCH RSCP	dBm	-63	-66			-66	-63			-74	-74		
Qoffset <sub>1s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1, C6:0				C2, C1: 0; C2, C3:0; C2,C4:0C2, C5:0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5:0; C3, C6:0			
Qhyst <sub>1s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
Timeslot		Cell 4				Cell 5				Cell 6			
		0		DWPTS		0		DWPTS		0		DWPTS	
UTRA RF Channel Number		Channel				Channel 2				Channel			
PCCPCH Ec/lor	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/lor	dB			0	0			0	0			0	0
OCNS Ec/lor	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset <sub>1s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst <sub>1s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
$I_{oc}$	dBm/1.28 MHz					-70							
Propagation Condition		AWGN											

**8.3.6.2.4.2.2 Procedure**

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the test procedure specified in TS 34.108 [3] subclause 7.4.2.7.2 to place the UE in the URA\_PCH state on Cell 1 and then the SS waits for this process to complete.
- After 15 s from the completion of step c) or the beginning of T1, the parameters are changed as described for T2.
- If the UE responds on Cell 1 with a URA\_UPDATE message cause "change of URA" within 8s, then a success is recorded, the SS shall transmit a URA\_UPDATE\_CONFIRM message and then the procedure moves to step g).
- If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T2 and if no response is received, the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a URA\_UPDATE\_CONFIRM message and then the procedure continues with step g).
- After a total of 15 s from the beginning of T2, the parameters are changed as described for T1.
- If the UE responds on Cell 1 with a URA\_UPDATE message cause "change of URA" within 8s, then a success is recorded and the procedure moves to step j).

i) Since the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s from the beginning of T1 and if no response is received the UE shall be switched off and the procedure returns to step a). Otherwise the SS shall transmit a URA UPDATE CONFIRM message and then the procedure continues with step j).

j) Repeat steps d) to i) [TBD] times.

NOTE: The time required for receiving all the relevant system information data according to the reception procedure and the RRC procedure delay of system information blocks defined in 25.331 for a UTRAN cell. Since the maximum repetition period of the relevant system info blocks that needs to be received by the UE to camp on a cell is 1280ms and the maximum RRC procedure delay for reception system information block is 100ms, 1380 ms is assumed in this test case. Therefore this gives a total of 7.78s (Minimum requirement + 100ms), allow 8s in the test case.

### RADIO BEARER SETUP (Step 3)

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State Indicator</u>	<u>URA PCH</u>
<u>UTRAN DRX cycle length coefficient</u>	<u>7</u>

### 8.3.6.2.5 Test Requirements

#### 8.3.6.2.5.1 3,84 Mcps TDD option

For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

#### 8.3.6.2.5.2 1,28 Mcps TDD option

~~Void:~~

For the test to pass, the total number of successful attempts shall be more than 90% with a confidence level of [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

CR-Form-v7

## CHANGE REQUEST

⌘ **34.122 CR 171** ⌘ rev **-** ⌘ Current version: **4.7.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition LCR cell re-selection in Cell_Fach, multi-cell test		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ LCRTDD	<b>Date:</b>	⌘ 30/04/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Updates to reflect latest version core specification
<b>Summary of change:</b>	⌘ Addition of LCR multi-cell reselction cell FACH test case
<b>Consequences if not approved:</b>	⌘ Incomplete testing, not reflecting latest core specification.

<b>Clauses affected:</b>	⌘ 8.3.4.2										
<b>Other specs Affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> </table>	Y	N	⌘	⌘	⌘	⌘	⌘	⌘	Other core specifications	⌘
Y	N										
⌘	⌘										
⌘	⌘										
⌘	⌘										
		Test specifications									
		O&M Specifications									
<b>Other comments:</b>	⌘ Based on core spec 25.123 clauses clauses 5.4.3.2 and A.5.4.2.2. (CR-257)										

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Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 8.3.4.2 Scenario 2: TDD/TDD cell re-selection multi carrier case

### 8.3.4.2.1 Definition and applicability

#### 8.3.4.2.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the [3.84 Mcps](#) TDD UE.

#### 8.3.4.2.1.2 1,28 Mcps TDD option

~~Void:~~[The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a CELL UPDATE with cause value "cell reselection".](#)

[The requirements and this test apply to the 1.28 Mcps TDD UE](#)

### 8.3.4.2.2 Minimum requirement

#### 8.3.4.2.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 3 s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.4.2 and A.5.4.2.

#### 8.3.4.2.2.2 1,28 Mcps TDD option

~~Void:~~[The cell re-selection delay shall be less than 2 s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.](#)

[The normative reference for this requirement is TS 25.123 \[2\] clauses 5.4.3 and A.5.4.2.2.](#)

### 8.3.4.2.3 Test purpose

This test verifies that the UE meets the requirement for the cell re-selection delay in CELL\_FACH for the multi carrier case.

### 8.3.4.2.4 Method of test

#### [8.3.4.2.4.1 3,84 Mcps TDD option](#)

##### 8.3.4.2.4.1.1 Initial conditions

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables 8.3.4.2.1.1, 8.3.4.2.1.2, 8.3.4.2.1.3, and 8.3.4.2.1.4.

**Table 8.3.4.2.1.1: General test parameters for Cell Re-selection in CELL\_FACH**

Parameter		Unit	Value	Comment
Initial condition	Active cell		Cell1	
	Neighbour cells		Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell		Cell2	
HCS			Not used	
UE_TXPWR_MAX_RACH		dBm	21	The value shall be used for all cells in the test.
Qrxlevmin		dBm	-102	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value		-	1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T <sub>SI</sub>		s	1,28	The value shall be used for all cells in the test.
T1		s	15	
T2		s	15	

**Table 8.3.4.2.1.2: Physical channel parameters for S-CCPCH.**

Parameter	Unit	Level
Channel bit rate	Kbps	24,4
Channel symbol rate	Ksps	12,2
Slot Format #	-	0
Frame allocation	-	Continuous frame allocation
Midamble allocation	-	Default Midamble

**Table 8.3.4.2.1.3: Transport channel parameters for S-CCPCH**

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	20 ms
Type of Error Protection	Convolutional Coding
Coding Rate	½
Rate Matching attribute	256
Size of CRC	16

**Table 8.3.4.2.1.4: Cell specific test parameters for Cell Re-selection in CELL\_FACH**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCCPCH_Ec/I <sub>or</sub>	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/I <sub>or</sub>	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t <sub>offset</sub>		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/I <sub>or</sub>	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/I <sub>or</sub>	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	9	3	9	3	3	9	3	9	-1	-1	-1	-1
PCCPCH RSCP	dBm	-64	-70			-70	-64			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection		0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			



FACH measurement occasion info		not sent				not sent				not sent			
Inter-frequency TDD measurement indicator		TRUE				TRUE				TRUE			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											
		Cell 4				Cell 5				Cell 6			
Timeslot		0		8		0		8		0		8	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 2			
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t_offset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset <sub>1s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst <sub>1s</sub>	dB	0				0				0			
Treselection		0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
FACH measurement occasion info		not sent				not sent				not sent			
Inter-frequency TDD measurement indicator		TRUE				TRUE				TRUE			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

NOTE: S-CCPCH shall not be located in TS0.

#### 8.3.4.2.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclauses [7.3.3](#) and [7.4.2](#) to place the UE in CELL\_FACH. [If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues](#)
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- f) After another 15 s, the parameters are changed as described for T1. [If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues](#)
- g) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE.
- h) Repeat steps d) to g) [TBD] times.

## 8.3.4.2.4.2 1,28 Mcps TDD option

~~Void.~~ [8.3.4.2.4.2.1 Initial conditions](#)

This scenario contains 6 cells and 2 carrier frequencies. The test parameters are given in Tables [8.3.4.2.4.2.1](#), [8.3.4.2.4.2.2](#), [8.3.4.2.4.2.3](#), and [8.3.4.2.4.2.4](#).

**Table 8.3.4.2.4.2.1 General test parameters for 1.28Mcps Cell Re-selection in CELL\_FACH**

	Parameter	Unit	Value	Comment
<a href="#">initial condition</a>	<a href="#">Active cell</a>		<a href="#">Cell1</a>	
	<a href="#">Neighbour cells</a>		<a href="#">Cell2, Cell3, Cell4, Cell5, Cell6</a>	
<a href="#">final condition</a>	<a href="#">Active cell</a>		<a href="#">Cell2</a>	
	<a href="#">HCS</a>		<a href="#">Not used</a>	
	<a href="#">UE_TXPWR_MAX_RACH</a>	<a href="#">DBm</a>	<a href="#">21</a>	<a href="#">The value shall be used for all cells in the test.</a>
	<a href="#">Qrxlevmin</a>	<a href="#">DBm</a>	<a href="#">-103</a>	<a href="#">The value shall be used for all cells in the test.</a>
	<a href="#">Access Service Class (ASC#0) - Persistence value</a>		<a href="#">1</a>	<a href="#">Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.</a>
	<a href="#">T<sub>SI</sub></a>	<a href="#">S</a>	<a href="#">1.28</a>	<a href="#">The value shall be used for all cells in the test.</a>
	<a href="#">T<sub>1</sub></a>	<a href="#">S</a>	<a href="#">15</a>	
	<a href="#">T<sub>2</sub></a>	<a href="#">S</a>	<a href="#">15</a>	

**Table 8.3.4.2.4.2.2 Physical channel parameters for S-CCPCH.**

Parameter	Unit	Level
<a href="#">Channel bit rate</a>	<a href="#">kbps</a>	<a href="#">35.2</a>
<a href="#">Channel symbol rate</a>	<a href="#">ksps</a>	<a href="#">17.6</a>
<a href="#">Slot Format #</a>	<a href="#">-</a>	<a href="#">0; 2</a>
<a href="#">Frame allocation</a>	<a href="#">-</a>	<a href="#">Continuous frame allocation</a>
<a href="#">Midamble allocation</a>	<a href="#">-</a>	<a href="#">Common Midamble</a>

**Table 8.3.4.2.4.2.3 Transport channel parameters for S-CCPCH**

Parameter	FACH
<a href="#">Transport Channel Number</a>	<a href="#">1</a>
<a href="#">Transport Block Size</a>	<a href="#">240</a>
<a href="#">Transport Block Set Size</a>	<a href="#">240</a>
<a href="#">Transmission Time Interval</a>	<a href="#">20 ms</a>
<a href="#">Type of Error Protection</a>	<a href="#">Convolution Coding</a>
<a href="#">Coding Rate</a>	<a href="#">1/2</a>
<a href="#">Rate Matching attribute</a>	<a href="#">256</a>
<a href="#">Size of CRC</a>	<a href="#">16</a>

**Table 8.3.4.2.4.2.4: Cell specific test parameters for 1.28Mcps Cell re-selection in CELL\_FACH state**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 2				Channel 1			
PCPCH Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/Ior	dB			0	0			0	0			0	0
OCNS Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	10	4	10	4	4	10	4	10	-1	-1	-1	-1
PCPCH RSCP	dBm	-63	-69			-69	-63			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2:C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3:C6:0			
Qhyst1 <sub>s</sub>	dBm	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
FACH measurement occasion info		not sent				not sent				not sent			
FACH measurement occasion cycle length		4				4				4			
Inter-frequency TDD measurement indicator		TRUE				TRUE				TRUE			
Inter-frequency FDD measurement indicator		FALSE				FALSE				FALSE			
		Cell 4				Cell 5				Cell 6			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel				Channel 2				Channel			
PCPCH Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/Ior	dB			0	0			0	0			0	0
OCNS Ec/Ior	dB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0C4, C5:0; C4:C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5:C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6:C5:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection	s	0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
Sintersearch	dB	not sent				not sent				not sent			
FACH measurement occasion info		not sent				not sent				not sent			
FACH measurement occasion cycle length		4				4				4			
Inter-frequency TDD measurement indicator		TRUE				TRUE				TRUE			
Inter-frequency FDD measurement indicator		FALSE				FALSE				FALSE			
$I_{oc}$	dBm/ 1.28 MHz	-70											
Propagation Condition		AWGN											

Note: S-CCPCH is located in an other downlink TS than TS0..

#### 8.3.4.2.4.2.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclauses 7.3.3 7.4.2 to place the UE in CELL\_FACH.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL\_UPDATE message with cause value "cell reselection" from the UE. If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of  
15s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL\_UPDATE\_CONFIRM message and then the procedure continues
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for CELL\_UPDATE message with cause value "cell reselection" from the UE. If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL\_UPDATE\_CONFIRM message and then the procedure continues
- h) Repeat steps d) to g) [TBD] times.

#### 8.3.4.2.5 Test Requirements

##### 8.3.4.2.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 3 s.
- 3) In step g), the UE shall respond on cell 2 within 3 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

**NOTE:** If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

##### 8.3.4.2.5.2 1,28 Mcps TDD option

- ~~Void:1)~~ In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 1 within 2 s.
- 3) In step g), the UE shall respond on cell 2 within 2 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

**NOTE:** If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

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CR-Form-v7

## CHANGE REQUEST

⌘ **34.122 CR 172** ⌘ rev **-** ⌘ Current version: **4.7.0** ⌘

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

**Proposed change affects:** UICC apps  ME  Radio Access Network  Core Network

<b>Title:</b>	⌘ Addition LCR cell re-selection in Cell_Fach, single cell test		
<b>Source:</b>	⌘ Siemens AG		
<b>Work item code:</b>	⌘ LCRTDD	<b>Date:</b>	⌘ 30/04/2003
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	<i>Use one of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<i>Use one of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Updates to reflect latest version core specification
<b>Summary of change:</b>	⌘ Addition of LCR single cell reselction cell FACH test case
<b>Consequences if not approved:</b>	⌘ Incomplete testing, not reflecting latest core specification.

<b>Clauses affected:</b>	⌘ 8.3.4										
<b>Other specs Affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> <tr> <td style="width: 20px; text-align: center;">⌘</td> <td style="width: 20px; text-align: center;">⌘</td> </tr> </table>	Y	N	⌘	⌘	⌘	⌘	⌘	⌘	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
⌘	⌘										
⌘	⌘										
⌘	⌘										
<b>Other comments:</b>	⌘ Based on core spec 25.123 clauses clauses 5.4.3 and A.5.4.2. (CR 257)										

**How to create CRs using this form:**

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

## 8.3.4 Cell Re-selection in CELL\_FACH

### 8.3.4.1 Scenario 1: TDD/TDD cell re-selection single carrier case

#### 8.3.4.1.1 Definition and applicability

##### 8.3.4.1.1.1 3,84 Mcps TDD option

The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send the CELL UPDATE message with cause value "cell reselection" in the new cell.

The requirements and this test apply to the 3,84 Mcps TDD UE.

##### 8.3.4.1.1.2 1,28 Mcps TDD option

~~Void.~~ [The cell re-selection delay is defined as the time from a change of cell levels to the moment when this change causes the UE to camp on a new cell , and starts to send SYNCH-UL sequence in the UpPTS for sending the RRC CONNECTION REQUEST to perform a CELL UPDATE with cause value "cell reselection".](#)

[The requirements and this test apply to the 1.28 Mcps TDD UE.](#)

#### 8.3.4.1.2 Minimum requirement

##### 8.3.4.1.2.1 3,84 Mcps TDD option

The cell re-selection delay shall be less than 2.5 s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.

The normative reference for this requirement is TS 25.123 [2] clauses 5.4.2 and A.5.4.1.

##### 8.3.4.1.2.2 1,28 Mcps TDD option

~~Void.~~ [The cell re-selection delay shall be less than 1.6s. The rate of correct cell re-selections observed during repeated tests shall be at least 90%.](#)

[The normative reference for this requirement is TS 25.123 \[2\] clauses 5.4.3 and A.5.4.2.](#)

#### 8.3.4.1.3 Test purpose

This test verifies that the UE meets the minimum requirement for the cell re-selection delay in CELL\_FACH for the single carrier case

#### 8.3.4.1.4 Method of test

##### 8.3.4.1.4.1 3,84 Mcps TDD option

##### 8.3.4.1.4.1.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables 8.3.4.1.1.1, 8.3.4.1.1.2, 8.3.4.1.1.3, and 8.3.4.1.1.4.

**Table 8.3.4.1.1.1: General test parameters for Cell Re-selection in CELL\_FACH**

Parameter	Unit	Value	Comment
Initial condition	Active cell	Cell1	
	Neighbour cells	Cell2, Cell3, Cell4, Cell5, Cell6	
Final condition	Active cell	Cell2	
HCS		Not used	
UE_TXPWR_MAX_RACH	dBm	21	The value shall be used for all cells in the test.
Qrxlevmin	dBm	-102	The value shall be used for all cells in the test.
Access Service Class (ASC#0) - Persistence value	-	1	Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.
T <sub>SI</sub>	s	1,28	The value shall be used for all cells in the test.
T1	s	15	
T2	s	15	

**Table 8.3.4.1.1.2: Physical channel parameters for S-CCPCH.**

Parameter	Unit	Level
Channel bit rate	Kbps	24,4
Channel symbol rate	Ksps	12,2
Slot Format #	-	0
Frame allocation	-	Continuous frame allocation
Midamble allocation	-	Default Midamble

**Table 8.3.4.1.1.3: Transport channel parameters for S-CCPCH**

Parameter	FACH
Transport Channel Number	1
Transport Block Size	240
Transport Block Set Size	240
Transmission Time Interval	20 ms
Type of Error Protection	Convolutional Coding
Coding Rate	½
Rate Matching attribute	256
Size of CRC	16

**Table 8.3.4.1.1.4: Cell specific test parameters for Cell Re-selection in CELL\_FACH**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		8		0		8		0		8	
Timeslot Number		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/I <sub>or</sub>	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/I <sub>or</sub>	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_t <sub>offset</sub>		0	0	0	0	5	5	5	5	10	10	10	10
PICH_Ec/I <sub>or</sub>	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/I <sub>or</sub>	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	9	7	9	7	7	9	7	9	-1	-1	-1	-1
PCCPCH RSCP	dBm	-64	-66			-66	-64			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection		0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			



FACH measurement occasion info		not sent				not sent				not sent			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											
		Cell 4				Cell 5				Cell 6			
Timeslot		0		8		0		8		0		8	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCCPCH_Ec/lor	dB	-3	-3			-3	-3			-3	-3		
SCH_Ec/lor	dB	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9
SCH_toffset		15	15	15	15	20	20	20	20	25	25	25	25
PICH_Ec/lor	dB			-3	-3			-3	-3			-3	-3
OCNS_Ec/lor	dB	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28	-4,28
$\hat{I}_{or}/I_{oc}$	dB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCCPCH RSCP	dBm	-74	-74			-74	-74			-74	-74		
Qoffset1 <sub>s,n</sub>	dB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 <sub>s</sub>	dB	0				0				0			
Treselection		0				0				0			
Sintrasearch	dB	not sent				not sent				not sent			
FACH measurement occasion info		not sent				not sent				not sent			
$I_{oc}$	dBm/3, 84 MHz	-70											
Propagation Condition		AWGN											

Note: S-CCPCH shall not be located in TS0.

#### 8.3.4.1.4.1.2 Procedure

- a) The SS activates cell 1-6 with T1 defined parameters.
- b) The UE is switched on.
- c) A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclauses [7.3.3](#) and [7.4.2](#) to place the UE in CELL\_FACH.
- d) After 15 s, the parameters are changed as described for T2.
- e) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE. If the [UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15 s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues](#)
- f) After another 15 s, the parameters are changed as described for T1.
- g) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE. If the [UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15 s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues](#)
- h) Repeat steps d) to g) [TBD] times.

## 8.3.4.1.4.2 1,28 Mcps TDD option

8.3.4.1.4.2.1 Initial conditions

This scenario contains 6 cells operating on the same carrier frequency. The test parameters are given in Tables [8.3.4.1.4.2.1](#), [8.3.4.1.4.2.2](#), [8.3.4.1.4.2.3](#), and [8.3.4.1.4.2.4](#).

**Table 8.3.4.1.4.2.1: General test parameters for 1.28 Mcps Cell Re-selection in CELL\_FACH**

	<u>Parameter</u>	<u>Unit</u>	<u>Value</u>	<u>Comment</u>
<u>initial condition</u>	<u>Active cell</u>		<u>Cell1</u>	
	<u>Neighbour cells</u>		<u>Cell2, Cell3, Cell4, Cell5, Cell6</u>	
<u>final condition</u>	<u>Active cell</u>		<u>Cell2</u>	
	<u>HCS</u>		<u>Not used</u>	
	<u>UE_TXPWR_MAX_RACH</u>	<u>dBm</u>	<u>21</u>	<u>The value shall be used for all cells in the test.</u>
	<u>Qrxlevmin</u>	<u>dBm</u>	<u>-103</u>	<u>The value shall be used for all cells in the test.</u>
	<u>Access Service Class (ASC#0) - Persistence value</u>		<u>1</u>	<u>Selected so that no additional delay is caused by the random access procedure. The value shall be used for all cells in the test.</u>
	<u>T<sub>SI</sub></u>	<u>s</u>	<u>1.28</u>	<u>The value shall be used for all cells in the test.</u>
	<u>T1</u>	<u>s</u>	<u>15</u>	
	<u>T2</u>	<u>s</u>	<u>15</u>	

**Table 8.3.4.1.4.2.2: Physical channel parameters for S-CCPCH.**

<u>Parameter</u>	<u>Unit</u>	<u>Level</u>
<u>Channel bit rate</u>	<u>kbps</u>	<u>35.2</u>
<u>Channel symbol rate</u>	<u>ksps</u>	<u>17.6</u>
<u>Slot Format #</u>	<u>-</u>	<u>0; 2</u>
<u>Frame allocation</u>	<u>-</u>	<u>Continuous frame allocation</u>
<u>Midamble allocation</u>	<u>-</u>	<u>Common Midamble</u>

**Table 8.3.4.1.4.2.3: Transport channel parameters for S-CCPCH**

<u>Parameter</u>	<u>FACH</u>
<u>Transport Channel Number</u>	<u>1</u>
<u>Transport Block Size</u>	<u>240</u>
<u>Transport Block Set Size</u>	<u>240</u>
<u>Transmission Time Interval</u>	<u>20 ms</u>
<u>Type of Error Protection</u>	<u>Convolution Coding</u>
<u>Coding Rate</u>	<u>1/2</u>
<u>Rate Matching attribute</u>	<u>256</u>
<u>Size of CRC</u>	<u>16</u>

**Table 8.3.4.1.4.2.4: Cell specific test parameters for 1.28 Mcps Cell Re-selection in CELL\_FACH**

Parameter	Unit	Cell 1				Cell 2				Cell 3			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCPCH Ec/Ior	DB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/Ior	DB			0	0			0	0			0	0
OCNS Ec/Ior	DB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	DB	9	7	9	7	7	9	7	9	-1	-1	-1	-1
PCPCH RSCP	DBm	-64	-66			-66	-64			-74	-74		
Qoffset1 <sub>s,n</sub>	DB	C1, C2: 0; C1, C3:0; C1,C4:0 C1, C5:0; C1,C6:0				C2, C1: 0; C2, C3:0; C2,C4:0 C2, C5: 0; C2, C6:0				C3, C1: 0; C3, C2:0; C3,C4:0 C3, C5: 0; C3, C6:0			
Qhyst1 <sub>s</sub>	DB	0				0				0			
Treselection		0				0				0			
Sintrasearch	DB	not sent				not sent				not sent			
FACH measurement occasion info		not sent				not sent				not sent			
		Cell 4				Cell 5				Cell 6			
		0		DWPTS		0		DWPTS		0		DWPTS	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
UTRA RF Channel Number		Channel 1				Channel 1				Channel 1			
PCPCH Ec/Ior	DB	-3	-3			-3	-3			-3	-3		
DwPCH Ec/Ior	DB			0	0			0	0			0	0
OCNS Ec/Ior	DB	-3	-3			-3	-3			-3	-3		
$\hat{I}_{or}/I_{oc}$	DB	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
PCPCH RSCP	DBm	-74	-74			-74	-74			-74	-74		
Qoffset1 <sub>s,n</sub>	DB	C4, C1: 0; C4, C2:0; C4,C3:0 C4, C5:0; C4, C6:0				C5, C1: 0; C5, C2:0; C5,C3:0 C5, C4:0; C5, C6:0				C6, C1: 0; C6, C2:0; C6,C3:0 C6, C4:0; C6, C5:0			
Qhyst1 <sub>s</sub>	DB	0				0				0			
Treselection		0				0				0			
Sintrasearch	DB	not sent				not sent				not sent			
FACH measurement occasion info		not sent				not sent				not sent			
$I_{oc}$	DBm/1.28 MHz					-70							
Propagation Condition						AWGN							

Note: S-CCPCH is located in an other downlink TS than TS0. ~~Void.~~

#### 8.3.4.1.4.2.2 Procedure

- The SS activates cell 1-6 with T1 defined parameters.
- The UE is switched on.
- A call is set up according to the generic set-up procedure specified in TS 34.108 [3] subclause s 7.3.3 and 7.4.2 to place the UE in CELL\_FACH.
- After 15 s, the parameters are changed as described for T2.
- The SS waits for CELL\_UPDATE message with cause value "cell reselection" from the UE. If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL\_UPDATE\_CONFIRM message and then the procedure continues
- After another 15 s, the parameters are changed as described for T1.

f) g) The SS waits for CELL UPDATE message with cause value "cell reselection" from the UE. If the UE has failed to respond with the correct message within the allowed time, a failure is recorded. The SS shall then wait for a total of 15 s and if no response is received the UE shall be switched off and the procedure returns to step 1. Otherwise the SS shall transmit a CELL UPDATE CONFIRM message and then the procedure continues

h) Repeat steps d) to g) [TBD] times.

#### 8.3.4.1.5 Test Requirements

##### 8.3.4.1.5.1 3,84 Mcps TDD option

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 2.5 s.
- 3) In step g), the UE shall respond on cell 1 within 2.5 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.

##### 8.3.4.1.5.2 1,28 Mcps TDD option

~~Void.~~

- 1) In step d), after the UE has responded on cell 1, it shall not respond on any other cell (cell selection).
- 2) In step e), the UE shall respond on cell 2 within 1.6 s.
- 3) In step g), the UE shall respond on cell 1 within 1.6 s.

For the test to pass, the total number of fulfilled test requirements 2) and 3) shall be more than [FFS]% of the cases.

NOTE: If the above Test Requirement differs from the Minimum Requirement then the Test Tolerance applied for this test is non-zero. The Test Tolerance for this test is defined in clause F.2 and the explanation of how the Minimum Requirement has been relaxed by the Test Tolerance is given in clause F.4.