

**Source:** T1  
**Title:** Late CRs to T1 specifications for approval  
**Agenda item:** 5.1.3  
**Document for:** Approval

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This document contains the CRs to T1 specifications which were approved and/or made available late and could not be incorporated in the documents containing the CRs sorted by specifications. They have been approved by T1 and are asked to be approved by TSG T#24.

Tdoc #	Title	CR#	Spec	Release	cat	Version in	Version out
T1-040855	Correction to 7.11 (Demodulation of paging channel (PCH))	395	34.121	Rel-5	F	5.3.1	5.4.0
T1-040961r2	CR 34.123-2 Rel-5: Applicability of Package 2 RRC test cases 8.3.1.22	856	34.123-1	Rel-5	F	5.7.1	5.8.0

Note that the following CRs were said to be approved unseen at T1 but were not available before TSG T#23, so they are not submitted for approval at this meeting:

<a href="#">T1-040870</a>	Siemens (Roke Manor)	Maximum Input Level for HSDPA
<a href="#">T1-040973</a>	Panasonic	Corrections to SRNS relocation PDCP test cases

## CHANGE REQUEST

# **34.121 CR 395** # rev **-** # Current version: **5.3.1** #

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

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

<b>Title:</b>	#	Correction to 7.11 (Demodulation of paging channel (PCH))	
<b>Source:</b>	#	Motorola	
<b>Work item code:</b>	#		<b>Date:</b> # 10/05/2004
<b>Category:</b>	#	<b>F</b>	<b>Release:</b> # Rel-5
		Use <u>one</u> of the following categories:	Use <u>one</u> of the following releases:
		<b>F</b> (correction)	2 (GSM Phase 2)
		<b>A</b> (corresponds to a correction in an earlier release)	R96 (Release 1996)
		<b>B</b> (addition of feature),	R97 (Release 1997)
		<b>C</b> (functional modification of feature)	R98 (Release 1998)
		<b>D</b> (editorial modification)	R99 (Release 1999)
		Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .	Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

<b>Reason for change:</b>	#	The test case in for Demodulation of paging channel (PCH) system information type 5 needs correction.
<b>Summary of change:</b>	#	Additional information for system information type 5 included
<b>Consequences if not approved:</b>	#	UE might not be tested properly.

<b>Clauses affected:</b>	#	7.11										
<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="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	#	X	#	X	#	X	Other core specifications	#
		Y	N									
		#	X									
#	X											
#	X											
#	X	Test specifications										
#	X	O&M Specifications										
<b>Other comments:</b>	#	Test cases introduced in this CR are applicable for Rel-4 and later releases.										

## 7.11 Demodulation of Paging Channel (PCH)

### 7.11.1 Definition and applicability

The receiver characteristics of paging channel are determined by the probability of missed paging message ( $P_{m-p}$ ). PCH is mapped into the S-CCPCH and it is associated with the transmission of Paging Indicators (PI) to support efficient sleep-mode procedures.

The requirements and this test apply to all types of UTRA for the FDD UE for Release 4 and later releases.

### 7.11.2 Minimum requirements

For the parameters specified in table 7.11.1 the average probability of missed paging ( $P_{m-p}$ ) shall be below the specified value in table 7.11.2 Power of downlink channels other than S-CCPCH and PICH are as defined in Table E.3.3 of Annex E. S-CCPCH structure is as defined in Annex C.7.

**Table 7.11.1: Parameters for PCH detection**

Parameter	Unit	Test 1	Test 2
Number of paging indicators per frame ( $N_p$ )	-	72	
Phase reference	-	P-CPICH	
$I_{oc}$	dBm/3.84 MHz	-60	
$\hat{I}_{or}/I_{oc}$	dB	-1	-3
Propagation condition		Static	Case 3

**Table 7.11.2: Test requirements for PCH detection**

Test Number	S-CCPCH $E_c/I_{or}$	PICH $E_c/I_{or}$	$P_{m-p}$
1	-14.8	-19	0.01
2	-9.8	-12	0.01

The reference for this requirement is TS 25.101 [1] clause 8.12.1.

### 7.11.3 Test purpose

To verify that average probability of missed paging ( $P_{m-p}$ ) does not exceed a specified value.

### 7.11.4 Method of test

#### 7.11.4.1 Initial conditions

Test environment: normal; see clauses G.2.1 and G.2.2.

Frequencies to be tested: mid range; see clause G.2.4.

- 1) Connect the SS and AWGN noise source to the UE antenna connector as shown in figure A.9 in the case of test 1. Connect the SS, multipath fading simulator and an AWGN noise source to the UE antenna connector as shown in figure A.10 in the case of test 2.
- 2) Set the test parameters for test 1-2 as specified in tables 7.11.1 and 7.11.2. In the case of test 2, Setup fading simulator as fading condition case 3 which are described in table D.2.2.1. Power of

downlink channels other than S-CCPCH and PICH are as defined in table E.3.3. S-CCPCH structure is as defined in Annex C.7.

#### 7.11.4.2 Procedure

- 1) The UE is switched on.
- 2) An RRC connection is set up according to the generic set-up procedure specified in TS 34.108 [3] subclause 7.3.3 to place the UE in the CELL\_PCH state.
- 3) The SS transmits the Paging type 1 message with used paging identity being a UTRAN identity and including the UE's assigned U-RNTI
- 4) If the UE responds with CELL UPDATE message within 8 seconds, then a success is recorded. If the UE does not respond with CELL UPDATE message within 8 seconds, a failure is recorded.
- 5) Repeat steps 3-4 according to Annex F.6.2 table 6.2.8.

#### 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] [and clause 6.1.1 of 34.108 \[3\]](#), with the following exceptions:

#### RADIO BEARER SETUP (STEP 2)

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	6
Downlink information for each radio link - Primary CPICH info - Primary scrambling code	100

#### SYSTEM INFORMATION BLOCK TYPE5 (STEP 2)

<u>Information Element</u>	<u>Value/remark</u>
<u>- FACH/PCH information</u>	
<u>- TFS</u>	<u>(PCH)</u>
<u>- Rate matching attribute</u>	<u>256</u>
<u>- PICH info</u>	
<u>- Number of PI per frame</u>	<u>72</u>

### 7.11.5 Test requirements

The test parameters and requirements are specified in tables 7.11.1 and 7.11.2. The average probability of missed paging (Pm-p) (test procedure step 4) shall not exceed a specified value.

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.

## CHANGE REQUEST

# **TS 34.123-1 CR 856** # rev **-** # Current version: **5.7.1** #

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

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

<b>Title:</b>	# Correction to Package 2 test case 9.4.2.3		
<b>Source:</b>	# Nokia		
<b>Work item code:</b>	# TEI	<b>Date:</b>	# 03/05/2004
<b>Category:</b>	# <b>F</b>	<b>Release:</b>	# Rel-5
	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>	# 1) The time allowed to check that no RRC Connection Request is sent following the attempted CM connection is 3s. This is too short as it can often take more than 3s to initiate a call. 2) The stored LAI, CKSN and TMSI shall be deleted when the location updating reject with cause "Location Area not allowed" is received by the UE and not at switch off.
<b>Summary of change:</b>	# 1. The time to check that no RRC Connection Request is received increased from 3 s to 30 s. 2. Test procedure modified.
<b>Consequences if not approved:</b>	# TC will fail with conformant UE.

<b>Clauses affected:</b>	# 9.4.2.3						
<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="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications	Y	N	#	X	#	34.123-3
Y	N						
#	X						
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	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">#</td> <td style="width: 20px; text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> O&M Specifications	#	X	#	X		
#	X						
#	X						
<b>Other comments:</b>	# Affects R99, Rel-4 and Rel-5.						

**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.

### 9.4.2.3 Location updating / rejected / location area not allowed

#### 9.4.2.3.1 Definition

#### 9.4.2.3.2 Conformance requirement

- 1) If the network rejects a location updating from the UE with the cause "Location Area not allowed" the UE shall:
  - 1.1 not perform periodic updating;
  - 1.2 not respond to paging with TMSI;
  - 1.3 reject any request from CM entity for MM connection other than for emergency call;
  - 1.4 not perform IMSI detach.
  - 1.5 not delete the list of "equivalent PLMNs".
- 2) If the network rejects a location updating from the UE with the cause "Location Area not allowed" the UE shall:
  - 2.1 perform normal location updating when a new location area is entered;
  - 2.2 accept a request for an emergency call, if it supports speech, by sending a RRC CONNECTION REQUEST message with the establishment cause set to "emergency call";
  - 2.3 delete the list of forbidden LAs after switch off (power off).
- 3) If the network rejects a location updating from the UE with the cause "Location Area not allowed" the UE shall delete the stored LAI, CKSN and TMSI.

#### Reference(s)

TS 24.008 clause 4.4.4.7.

#### 9.4.2.3.3 Test purpose

To test the behaviour of the UE if the network rejects the location updating of the UE with the cause "Location Area not allowed".

To test that the UE deletes the list of forbidden LAs after switch off (power off).

#### 9.4.2.3.4 Method of test

##### Initial conditions

- System Simulator:
  - three cells: A, B and C, belonging to different location areas a, b and c. Cell A and B belongs to PLMN1. Cell C belongs to PLMN2.
  - IMSI attach/detach is allowed in both cells;
  - the T3212 time-out value is 1/10 hour in both cells.

NB: i) Cell C will be mapped to Cell 4 as found in TS 34.108 clause 6.1.4.1.

- User Equipment:
  - the UE has a valid TMSI(= TMSI1) and CKSN(= CKSN1). It is "idle updated" on cell A.

- the UE has a list of "equivalent PLMNs" containing **PLMN1** and PLMN2.

#### Related ICS/IXIT statement(s)

Switch off on button Yes/No.

Support for speech Yes/No.

Method to clear the list of forbidden location areas periodically.

#### Test Procedure

The SS rejects a normal location updating with the cause value "Location Area not allowed". The RRC CONNECTION is released. The SS checks that the UE **deletes the stored LAI, CKSN and TMSI**, does not perform periodic updating, does not respond to paging with TMSI, rejects any requests from CM entities for MM-connections except emergency calls, does not perform IMSI detach, does not delete the list of "equivalent PLMNs", performs normal location updating when a new location area is entered, deletes the list of forbidden LAs when switched off **and deletes the stored LAI, CKSN and TMSI**.

Different types of UE may use different methods to periodically clear the list of forbidden location areas (e.g. every day at 12am). If the list is cleared while the test is being run, it may be necessary to re-run the test.



## Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1		SS		The following messages are sent and shall be received on cell B. Set the cell type of cell B to the "Serving cell". Set the cell type of cell A to the " Suitable neighbour cell". Set the cell type of cell C to the " Suitable neighbour cell". (see note).
2		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
3			Void	
4			Void	
5		→	LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = CKSN1, "LAI" = 2, "Mobile Identity" = TMSI1
6		←	LOCATION UPDATING REJECT	"Reject cause" = "Location Area not allowed".
7		SS		After the sending of this message, the SS waits for the disconnection of the mainsignalling link. The SS releases the RRC connection.
8			Void	
9		SS		SS waits for a possible location updating for 7 minutes.
10		UE		The UE shall not initiate an RRC-connection establishment either on cell A, C or cell B.
11		←	PAGING TYPE 1	The UE is paged in cell B. "UE identity" = TMSI1. Paging Cause: Terminating Conversational Call.
12		UE		The UE shall ignore this message. This is checked during 30 s.
13		UE		A MO CM connection is attempted.
14		UE		The UE shall not initiate an RRC connection establishment on cell A, C or cell B. This is checked during 30 s.
15		UE		If the UE supports speech (see ICS), it is made to perform an emergency call.
16		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Emergency call".
17			Void	
18			Void	
19		→	CM SERVICE REQUEST	"CM service type": Emergency call establishment.
20		←	CM SERVICE ACCEPT	
21		→	EMERGENCY SETUP	
22		←	RELEASE COMPLETE	Cause: "unassigned number".
23		SS		The SS releases the RRC connection.
24			Void	
25		UE		If possible (see ICS) switch off is performed. Otherwise the power is removed.
26		UE		The UE shall not initiate an RRC connection establishment on cell A, C or on cell B (check for IMSI detach) This is checked during 3 s.
27		UE		Depending on what has been performed in step 25 the UE is brought back to operation.
28		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
29			Void	
30			Void	
31		→	LOCATION UPDATING REQUEST	"location updating type" = normal, "CKSN" = no key available, "LAI" = deleted LAI, "mobile identity" = IMSI (This checks the deletion of the forbidden lists)
32		←	LOCATION UPDATING REJECT	"Reject cause" = "Location Area not allowed".
33		SS		The SS releases the RRC connection.
34			Void	

The following messages are sent and shall be received on cell C.

Step	Direction		Message	Comments
	UE	SS		
35		SS		Set the cell type of cell A to the "Suitable neighbour cell". Set the cell type of cell B to the " Suitable neighbour cell". Set the cell type of cell C to the "Serving cell". (see note).
36		SS		The SS verifies that the IE "Establishment cause" in the received RRC CONNECTION REQUEST message is set to "Registration".
37			Void	
38			Void	
39		→	LOCATION UPDATING REQUEST	
40		←	AUTHENTICATION REQUEST	
41		→	AUTHENTICATION RESPONSE	
41a		SS		The SS starts integrity protection.
42		←	LOCATION UPDATING ACCEPT	Mobile identity = TMSI.
43		→	TMSI REALLOCATION COMPLETE	
44		SS		The SS releases the RRC connection.
45			Void	
NOTE: The definitions for "Serving cell", "Suitable neighbour cell" and "non-suitable cell" are specified in TS 34.108 clause 6.1 "Reference Radio Conditions for signalling test cases only".				

#### Specific message contents

None.

#### 9.4.2.3.5 Test requirement

- 1) 1.1 At step 10 the UE shall not perform periodic updating.
- 1.2 At step 12 the UE shall not respond to paging with TMSI.
- 1.3 At step 14 the UE shall not initiate an RRC connection establishment.
- 1.4 At step 26 the UE shall not initiate an RRC connection establishment (IMSI detach).
- 1.5 At step 39 the UE shall perform normal location updating on cell C.
- 2) 2.1 At step 39 the UE shall perform normal location updating.
- 2.2 At step 16 the UE shall accept a request for an emergency call.
- 2.3 At step 31 the UE shall send a LOCATION UPDATING REQUEST message on cell B.
- 3) At step 31 the UE shall send a LOCATION UPDATING REQUEST message with Mobile Identity IE set to its IMSI, CKSN IE set to "no key is available" and LAI IE set to "deleted LAI" on cell B.