TSG RAN Meeting #17 **RP-020480**
Biarritz, France, 3 - 6 September, 2002

Title **CRs (Rel-4 and Rel-5 Category A) to TS 25.123 (2)**
Source **TSG RAN WG4**
Agenda Item **7.4.4**

RAN4 Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-021180	25.123	269		F	Rel-4	4.5.0	Correction to Test Case for Event 1G triggered reporting of neighbours in AWGN propagation condition for LCR TDD option	LCRTDD-RF
R4-021181	25.123	270		A	Rel-5	5.1.0	Correction to Test Case for Event 1G triggered reporting of neighbours in AWGN propagation condition for LCR TDD option	LCRTDD-RF
R4-021182	25.123	271		F	Rel-4	4.5.0	Correction to RX Timing Deviation for LCR TDD option	LCRTDD-RF
R4-021183	25.123	272		A	Rel-5	5.1.0	Correction to RX Timing Deviation for LCR TDD option	LCRTDD-RF
R4-021184	25.123	273		F	Rel-4	4.5.0	Correction to the intra frequency measurements for LCR TDD option	LCRTDD-RF
R4-021185	25.123	274		A	Rel-5	5.1.0	Correction to the intra frequency measurements for LCR TDD option	LCRTDD-RF
R4-021186	25.123	275		F	Rel-4	4.5.0	Correction to section 10	LCRTDD-RF
R4-021187	25.123	276		A	Rel-5	5.1.0	Correction to section 10	LCRTDD-RF
R4-021229	25.123	277		F	Rel-4	4.5.0	TDD inter-frequency measurement capability	LCRTDD-RF
R4-021230	25.123	278		A	Rel-5	5.1.0	TDD inter-frequency measurement capability	LCRTDD-RF

3GPP TSR RAN WG4 Meeting #24 **R4-021180**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **269** ⌘ **rev** ⌘ Current version: **4.5.0** ⌘

*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 ☐

Title:	⌘	Correction to Test Case for Event 1G triggered reporting of neighbours in AWGN propagation condition for LCR TDD option
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	Currently, Event 1G reporting in CELL_DCH state is tested for the 800ms measurement reporting delay requirement in Section 8.1A.2 only for 1.28Mcps TDD. This requirement applies to neighbour cells becoming detectable and that the UE needs to be able to identify. It is critical to test for the 200ms measurement reporting delay requirement for the set of 6 strongest cells in section 8.1A.2, as these are seen as the primary candidates for event 1G evaluation.
Summary of change:	⌘	Correction to intra-frequency test case for Event 1G reporting of detectable neighbours in AWGN propagation condition for 1.28Mcps TDD. In addition to the 800ms measurement reporting delay requirement for cells becoming detectable, the 200ms measurement reporting delay requirement for cells which belong to the 6 strongest neighbours is also tested for.
Consequences if not approved:	⌘	Critical measurement and reporting requirements for Handover preparation in CELL_DCH state not tested for. **Isolated Impact Analysis:** This CR introduces a test for an already existing requirement, UE measurement procedures in CELL_DCH state.
Clauses affected:	⌘	A.8.1.1

		Y	N			
Other specs Affected:	⌘		X	Other core specifications	⌘	
		X		Test specifications		34.122
			X	O&M Specifications		

Other comments:	⌘	No such test currently exists in TS34.122 Equivalent CRs in other Releases: CR270 cat. A to 25.123 v5.1.0

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.

A.8 UE Measurements Procedures

A.8.1 TDD intra frequency measurements

A.8.1.1 Event 1G triggered reporting in AWGN propagation conditions

A.8.1.1.1 Test Purpose and Environment

A.8.1.1.1.1 3.84 Mcps TDD option

The purpose of this test is to verify that the UE makes correct reporting of events. This test will partly verify the requirements in section 8.1.2 and section 9.1.

The test parameters are given in Table A.8.1.1 and A.8.1.1A below. The test consists of three successive time periods, with time durations of T1, T2 and T3 respectively. Three cells shall be present in the test, cell 1 being the serving cell and cell 2 and cell 3 being neighbour cells on the used frequency. All cells shall be synchronised, i.e. share the same frame and timeslot timing.

In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used, and that P-CCPCH RSCP shall be reported together with Event 1G. The Measurement control message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T1 is at least equal to the RRC procedure delay as defined in [16].

The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. The DL DPCH shall be transmitted in timeslot 2 and the UL DPCH shall be transmitted in timeslot 10. The TTI of the uplink DCCH shall be 20ms.

Table A.8.1.1: General test parameters for Event 1G triggered reporting in AWGN propagation condition

Parameter		Unit	Value	Comment
DCH parameters			DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2
Power Control			On	
Target quality value on DTCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbour cell		Cell 2, Cell 3	
Final condition	Active cell		Cell 1	
O		dB	0	Cell individual offset. This value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trigger		ms	0	
Threshold used frequency		dBm	-70	Applicable for Event 1G
Filter coefficient			0	
Monitored cell list size			12 TDD neighbours on Channel 1	
T1		s	6	
T2		s	6	
T3		s	6	

Table A.8.1.1A: Cell specific parameters for Event 1G triggered correct reporting in AWGN propagation condition

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T1	T2	T3	T1	T2	T3	T1	T2	T3
DL timeslot number		0			0			0		
UTRA RF Channel Number		Channel 1			Channel 1			Channel 1		
PCCPCH_Ec/Ior	dB	-3			-3			-3		
SCH_Ec/Ior	dB	-9			-9			-9		
SCH_t_{offset}		0			5			10		
OCNS_Ec/Ior	dB	-3,12			-3,12			-3,12		
$\hat{I}_{or}/I_{oc}$	dB	7	5		5	7	-Inf	-Inf		7
PCCPCH RSCP	dBm	-66	-68		-68	-66	-Inf	-Inf		-66
I_{oc}	dBm / 3,84 MHz	-70								
Propagation Condition		AWGN								

A.8.1.1.1.2 1.28 Mcps TDD option

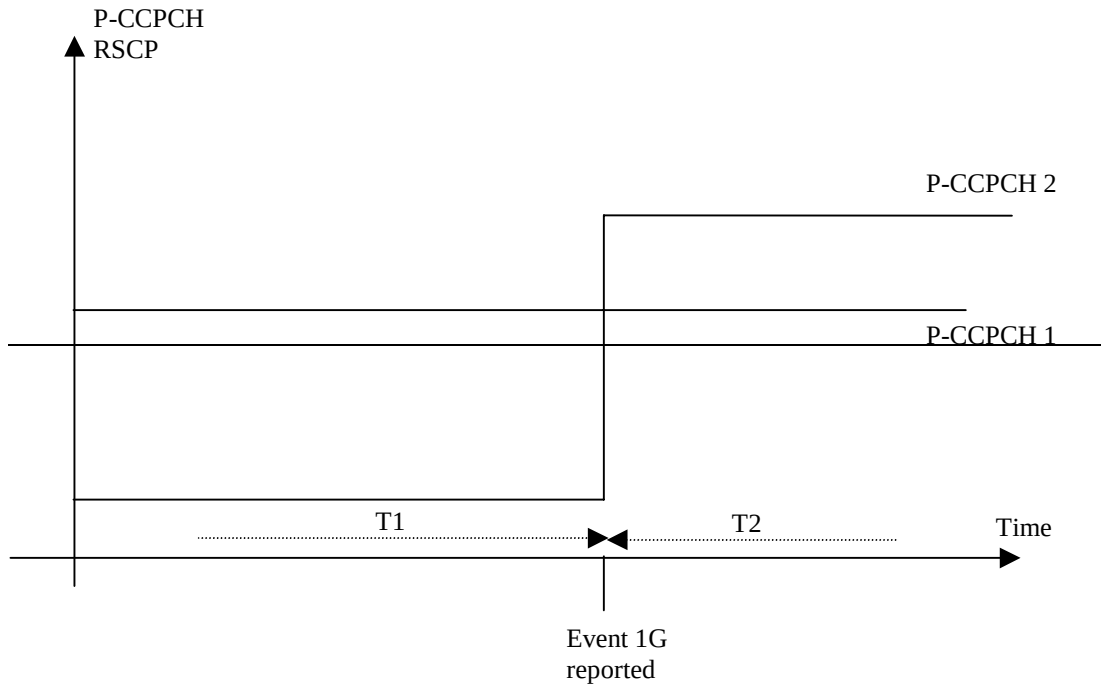
~~This test will derive that the terminal~~ The purpose of this test is to verify that the UE makes correct reporting of ~~an~~ events. This test will partly verify the requirements in section 8.1A.2 and section 9.1.

The test parameters are given in Table A.8.1.1B and A.8.1.1C below. The test consists of three successive time periods, with time durations of T1, T2 and T3 respectively. Three cells shall be present in the test, cell 1 being the serving cell and cell 2 and cell 3 being neighbour cells on the used frequency. All cells shall be synchronised, i.e. share the same frame and timeslot timing.

~~Cell 1 is the active cell, Cell 2 is a neighbour cell on the used frequency. The power level on Cell 1 is kept constant and the power level of Cell 2 is changed using "change of best cell event" as illustrated in Figure A. 8.1A. General test parameters are given in the table A.8.1C below and they are signalled from test device.~~

In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used~~.~~ and that P-CCPCH RSCP ~~of the best cell has to~~ shall be reported together with Event 1G reporting. ~~New measurement control information, which defines neighbour cells etc., is always sent before the event starts.~~ The Measurement control message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T1 is at least equal to the RRC procedure delay as defined in [16]. The cell specific test parameters are given in Table A.8.1C~~D~~ below.

The TTI of the uplink DCCH shall be 20ms.



~~**Figure A. 8.1A: Illustration of parameters for handover measurement reporting test case**~~

Table A.8.1B~~C~~: General test parameters for ~~correct reporting of intra frequency neighbours~~ Event 1G triggered reporting in AWGN propagation condition

Parameter	Unit	Value	Comment
DPCH parameters active cell		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A. The DPCH is located in an other timeslot than 0
Power Control		On	
Target quality value on DTCH	BLER	0.01	
Active cell		Cell 1	
Neighbour cell		Cell 2, Cell 3	
~~Threshold used frequency~~	~~dB~~	~~-71~~	~~Absolute P-CCPCH RSCP threshold for event 1G~~
O	dB	0	Cell individual offset. This value shall be used for all cells in the test.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		~~2~~412 TDD neighbours on Channel 1	~~Measurement control information is sent before T1 starts.~~
T1	s	~~10~~6	
T2	s	~~10~~6	
T3	s	6	

~~**Table A.8.1D: Cell specific parameters for correct reporting of intra frequency neighbours in AWGN propagation condition**~~

~~Parameter~~	~~Unit~~	~~Cell 1~~				~~Cell 2~~			
~~Timeslot Number~~		~~0~~		~~DwPTS~~		~~0~~		~~DwPTS~~	
		~~T1~~	~~T2~~	~~T1~~	~~T2~~	~~T1~~	~~T2~~	~~T1~~	~~T2~~
~~UTRA RF Channel Number~~		~~Channel 1~~				~~Channel 1~~			
~~PCCPCH_Ec/Ior~~	~~dB~~	~~-3~~				~~-3~~			
~~DwPCH_Ec/Ior~~	~~dB~~			~~0~~				~~0~~	
~~$\hat{I}_{or}/I_{oc}$~~	~~dB~~	~~3~~	~~3~~			~~-Infinity~~	~~6~~		
~~I_{oc}~~	~~dBm/1.28 MHz~~	~~-70~~							
~~PCCPCH_RSCP~~	~~dBm~~	~~-70~~	~~-70~~			~~-Infinity~~	~~-67~~		
~~Propagation Condition~~		~~AWGN~~							

Table A.8.1.1C: Cell specific parameters for Event 1G triggered correct reporting in AWGN propagation condition

Parameter	Unit	Cell 1						Cell 2						Cell 3					
DL timeslot number		0			DwPTS			0			DwPTS			0			DwPTS		
		T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1						Channel 1						Channel 1					
PCCPCH_Ec/Ior	dB	-3						-3						-3					
DwPCH_Ec/Ior	dB				0						0						0		
OCNS_Ec/Ior	dB	-3						-3						-3					
$\hat{I}_{or}/I_{oc}$	dB	6	4		6	4		4	6	-Inf	4	6	-Inf	-Inf	6		-Inf	6	
PCCPCH RSCP	dBm	-67	-69					-69	-67	-Inf				-Inf	-67				
I_{oc}	dBm / 1,28 MHz	-70																	
Propagation Condition		AWGN																	

NOTE: The DPCH of all cells are located in a timeslot other than 0.

A.8.1.1.2 Test Requirements

A.8.1.1.2.1 3.84Mcps TDD option

The UE shall send one Event 1G triggered measurement report for Cell 2 with a measurement reporting delay less than 200ms from the beginning of time period T2.

The UE shall send one Event 1G triggered measurement report for Cell 3 with a measurement reporting delay less than 800ms from the beginning of time period T3.

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

The rate of events correctly reported during repeated tests shall be at least 90%.

A.8.1.1.2.2 1.28Mcps TDD option

The UE shall send one Event 1G triggered measurement report for cell 2, with a measurement reporting delay less than ~~[800]~~ 200ms from the beginning of time period T2.

The UE shall send one Event 1G triggered measurement report for Cell 3 with a measurement reporting delay less than 800ms from the beginning of time period T3.

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

The rate of ~~correct~~ events correctly reported~~observed~~ during repeated tests shall be at least 90%.

3GPP TSR RAN WG4 Meeting #24 **R4-021181**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **270** ⌘ **rev** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to Test Case for Event 1G triggered reporting of neighbours in AWGN propagation condition for LCR TDD option
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	Currently, Event 1G reporting in CELL_DCH state is tested for the 800ms measurement reporting delay requirement in Section 8.1A.2 only for 1.28Mcps TDD. This requirement applies to neighbour cells becoming detectable and that the UE needs to be able to identify. It is critical to test for the 200ms measurement reporting delay requirement for the set of 6 strongest cells in section 8.1A.2, as these are seen as the primary candidates for event 1G evaluation.
Summary of change:	⌘	Correction to intra-frequency test case for Event 1G reporting of detectable neighbours in AWGN propagation condition for 1.28Mcps TDD. In addition to the 800ms measurement reporting delay requirement for cells becoming detectable, the 200ms measurement reporting delay requirement for cells which belong to the 6 strongest neighbours is also tested for.
Consequences if not approved:	⌘	Critical measurement and reporting requirements for Handover preparation in CELL_DCH state not tested for. **Isolated Impact Analysis:** This CR introduces a test for an already existing requirement, UE measurement procedures in CELL_DCH state.
Clauses affected:	⌘	A.8.1.1

Other specs Affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	No such test currently exists in TS34.122 Equivalent CRs in other Releases: CR269 cat. F to 25.123 v4.5.0

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.

A.8 UE Measurements Procedures

A.8.1 TDD intra frequency measurements

A.8.1.1 Event 1G triggered reporting in AWGN propagation conditions

A.8.1.1.1 Test Purpose and Environment

A.8.1.1.1.1 3.84 Mcps TDD option

The purpose of this test is to verify that the UE makes correct reporting of events. This test will partly verify the requirements in section 8.1.2 and section 9.1.

The test parameters are given in Table A.8.1.1 and A.8.1.1A below. The test consists of three successive time periods, with time durations of T1, T2 and T3 respectively. Three cells shall be present in the test, cell 1 being the serving cell and cell 2 and cell 3 being neighbour cells on the used frequency. All cells shall be synchronised, i.e. share the same frame and timeslot timing.

In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used, and that P-CCPCH RSCP shall be reported together with Event 1G. The Measurement control message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T1 is at least equal to the RRC procedure delay as defined in [16].

The second Beacon timeslot shall be provided in timeslot 8 for both cell 1 and cell 2. The DL DPCH shall be transmitted in timeslot 2 and the UL DPCH shall be transmitted in timeslot 10. The TTI of the uplink DCCH shall be 20ms.

Table A.8.1.1: General test parameters for Event 1G triggered reporting in AWGN propagation condition

Parameter		Unit	Value	Comment
DCH parameters			DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A.2.2
Power Control			On	
Target quality value on DTCH		BLER	0.01	
Initial conditions	Active cell		Cell 1	
	Neighbour cell		Cell 2, Cell 3	
Final condition	Active cell		Cell 1	
O		dB	0	Cell individual offset. This value shall be used for all cells in the test.
Hysteresis		dB	0	
Time to Trigger		ms	0	
Threshold used frequency		dBm	-70	Applicable for Event 1G
Filter coefficient			0	
Monitored cell list size			12 TDD neighbours on Channel 1	
T1		s	6	
T2		s	6	
T3		s	6	

Table A.8.1.1A: Cell specific parameters for Event 1G triggered correct reporting in AWGN propagation condition

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T1	T2	T3	T1	T2	T3	T1	T2	T3
DL timeslot number		0			0			0		
UTRA RF Channel Number		Channel 1			Channel 1			Channel 1		
PCCPCH_Ec/Ior	dB	-3			-3			-3		
SCH_Ec/Ior	dB	-9			-9			-9		
SCH_t_{offset}		0			5			10		
OCNS_Ec/Ior	dB	-3,12			-3,12			-3,12		
$\hat{I}_{or}/I_{oc}$	dB	7	5		5	7	-Inf	-Inf		7
PCCPCH RSCP	dBm	-66	-68		-68	-66	-Inf	-Inf		-66
I_{oc}	dBm / 3,84 MHz	-70								
Propagation Condition		AWGN								

A.8.1.1.1.2 1.28 Mcps TDD option

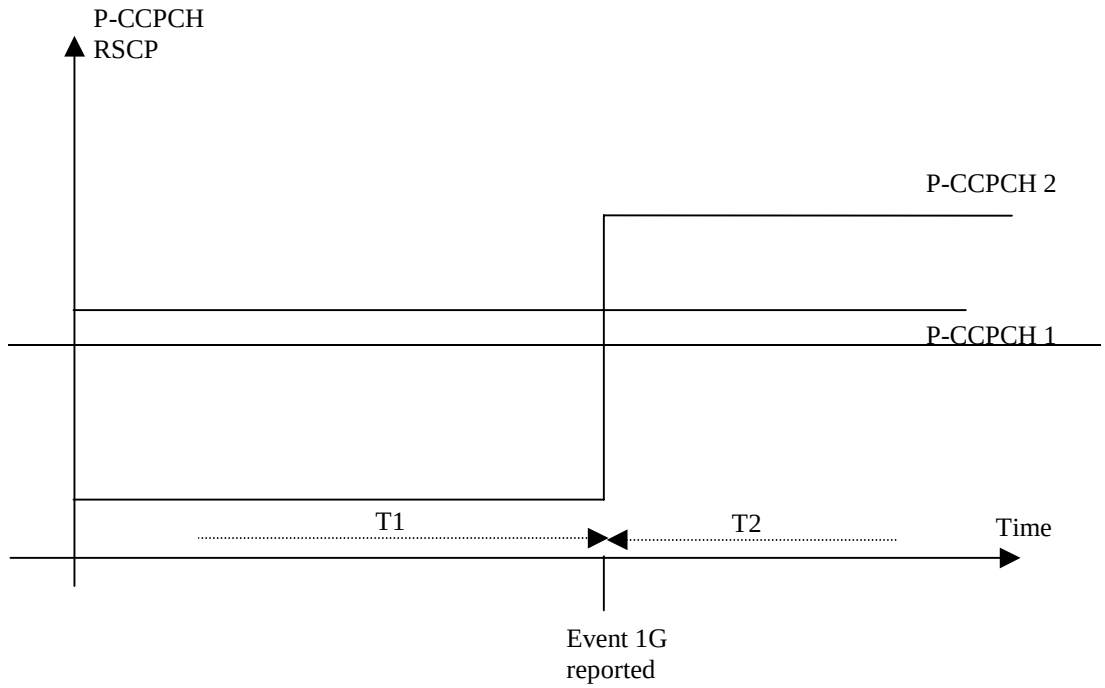
~~This test will derive that the terminal~~ The purpose of this test is to verify that the UE makes correct reporting of ~~an~~ events. This test will partly verify the requirements in section 8.1A.2 and section 9.1.

The test parameters are given in Table A.8.1.1B and A.8.1.1C below. The test consists of three successive time periods, with time durations of T1, T2 and T3 respectively. Three cells shall be present in the test, cell 1 being the serving cell and cell 2 and cell 3 being neighbour cells on the used frequency. All cells shall be synchronised, i.e. share the same frame and timeslot timing.

~~Cell 1 is the active cell, Cell 2 is a neighbour cell on the used frequency. The power level on Cell 1 is kept constant and the power level of Cell 2 is changed using "change of best cell event" as illustrated in Figure A. 8.1A. General test parameters are given in the table A.8.1C below and they are signalled from test device.~~

In the measurement control information it is indicated to the UE that event-triggered reporting with Event 1G shall be used~~.~~ and that P-CCPCH RSCP ~~of the best cell has to~~ shall be reported together with Event 1G reporting. ~~New measurement control information, which defines neighbour cells etc., is always sent before the event starts.~~ The Measurement control message shall be sent to the UE such that the delay between the end of the last received TTI containing the message and the beginning of T1 is at least equal to the RRC procedure delay as defined in [16]. The cell specific test parameters are given in Table A.8.1C~~D~~ below.

The TTI of the uplink DCCH shall be 20ms.



~~**Figure A. 8.1A: Illustration of parameters for handover measurement reporting test case**~~

Table A.8.1B~~C~~: General test parameters for ~~correct reporting of intra frequency neighbours~~ Event 1G triggered reporting in AWGN propagation condition

Parameter	Unit	Value	Comment
DPCH parameters active cell		DL Reference Measurement Channel 12.2 kbps	As specified in TS 25.102 section A. The DPCH is located in an other timeslot than 0
Power Control		On	
Target quality value on DTCH	BLER	0.01	
Active cell		Cell 1	
Neighbour cell		Cell 2, Cell 3	
~~Threshold used frequency~~	~~dB~~	~~-71~~	~~Absolute P-CCPCH RSCP threshold for event 1G~~
O	dB	0	Cell individual offset. This value shall be used for all cells in the test.
Hysteresis	dB	0	
Time to Trigger	ms	0	
Filter coefficient		0	
Monitored cell list size		~~2~~412 TDD neighbours on Channel 1	~~Measurement control information is sent before T1 starts.~~
T1	s	~~10~~6	
T2	s	~~10~~6	
T3	s	6	

~~**Table A.8.1D: Cell specific parameters for correct reporting of intra frequency neighbours in AWGN propagation condition**~~

~~Parameter~~	~~Unit~~	~~Cell 1~~				~~Cell 2~~			
~~Timeslot Number~~		~~0~~		~~DwPTS~~		~~0~~		~~DwPTS~~	
		~~T1~~	~~T2~~	~~T1~~	~~T2~~	~~T1~~	~~T2~~	~~T1~~	~~T2~~
~~UTRA RF Channel Number~~		~~Channel 1~~				~~Channel 1~~			
~~PCCPCH_Ec/Ior~~	~~dB~~	~~-3~~				~~-3~~			
~~DwPCH_Ec/Ior~~	~~dB~~			~~0~~				~~0~~	
~~$\hat{I}_{or}/I_{oc}$~~	~~dB~~	~~3~~	~~3~~			~~-Infinity~~	~~6~~		
~~I_{oc}~~	~~dBm/1.28 MHz~~	~~-70~~							
~~PCCPCH_RSCP~~	~~dBm~~	~~-70~~	~~-70~~			~~-Infinity~~	~~-67~~		
~~Propagation Condition~~		~~AWGN~~							

Table A.8.1.1C: Cell specific parameters for Event 1G triggered correct reporting in AWGN propagation condition

Parameter	Unit	Cell 1						Cell 2						Cell 3					
DL timeslot number		0			DwPTS			0			DwPTS			0			DwPTS		
		T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3	T1	T2	T3
UTRA RF Channel Number		Channel 1						Channel 1						Channel 1					
PCCPCH_Ec/Ior	dB	-3						-3						-3					
DwPCH_Ec/Ior	dB				0						0						0		
OCNS_Ec/Ior	dB	-3						-3						-3					
$\hat{I}_{or}/I_{oc}$	dB	6	4		6	4		4	6	-Inf	4	6	-Inf	-Inf	6		-Inf	6	
PCCPCH RSCP	dBm	-67	-69					-69	-67	-Inf				-Inf	-67				
I_{oc}	dBm / 1,28 MHz	-70																	
Propagation Condition		AWGN																	

NOTE: The DPCH of all cells are located in a timeslot other than 0.

A.8.1.1.2 Test Requirements

A.8.1.1.2.1 3.84Mcps TDD option

The UE shall send one Event 1G triggered measurement report for Cell 2 with a measurement reporting delay less than 200ms from the beginning of time period T2.

The UE shall send one Event 1G triggered measurement report for Cell 3 with a measurement reporting delay less than 800ms from the beginning of time period T3.

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

The rate of events correctly reported during repeated tests shall be at least 90%.

A.8.1.1.2.2 1.28Mcps TDD option

The UE shall send one Event 1G triggered measurement report for cell 2, with a measurement reporting delay less than ~~[800]~~ 200ms from the beginning of time period T2.

The UE shall send one Event 1G triggered measurement report for Cell 3 with a measurement reporting delay less than 800ms from the beginning of time period T3.

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

The rate of ~~correct~~ events correctly reported~~observed~~ during repeated tests shall be at least 90%.

3GPP TSR RAN WG4 Meeting #24 **R4-021182**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **271** ⌘ **rev** ⌘ Current version: **4.5.0** ⌘

*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 ☐

Title:	⌘	Correction to RX Timing Deviation for LCR TDD option
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	According definition of TS25.225, the measurement value of RX Timing Deviation can be negative or positive. The reporting range of [0, 16] chips for *RX Timing Deviation* is not reasonable.
Summary of change:	⌘	Changing the reporting range of RX Timing Deviation to [-16, 16] chips. Changing the range of reporting value to [0, 511].
Consequences if not approved:	⌘	The reporting value of RX Timing Deviation will be error when UL advance time is smaller than it should be. **Isolated Impact Analysis:** The change would not affect implementations behaving like indicated in the CR, would affect implementations that do not behave like indicated in the CR.

Clauses affected:	⌘	9.2.1.6			
Other specs Affected:	⌘	**Y** / **N**	Other core specifications	⌘	TS25.433
		X /	Test specifications		TS34.122
		/ **X**	O&M Specifications		
Other comments:	⌘	In TS25.433, the range of reporting value is [0, 255]. It should be changed to [0,511]. Equivalent CRs in other Releases: CR272 cat. A to 25.123 v5.1.0			

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.

9.2.1.6 RX Timing Deviation

The measurement period shall be 100 ms.

9.2.1.6.1 Accuracy requirements

9.2.1.6.1.1 3.84 Mcps TDD option

Table 9.41: RX Timing Deviation accuracy

Parameter	Unit	Accuracy [chip]	Conditions
			Range [chips]
RX Timing Deviation	chip	+/- 0,5	-256, …, 256

9.2.1.6.1.2 1.28 Mcps TDD option

Table 9.41A: RX Timing Deviation accuracy

Parameter	Unit	Accuracy [chip]	Conditions
			Range [chips]
RX Timing Deviation	Chips period	+/- 0.125	~~0~~ -16, ..., 16

9.2.1.6.2 Range/mapping

9.2.1.6.2.1 3.84 Mcps TDD option

The reporting range for *RX Timing Deviation* is from -255,9375 ... 255,9375 chips.

In table 9.42 mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.42

Reported value	Measured quantity value	Unit
RX_TIME_DEV_0000	RX Timing Deviation < –255,9375	chip
RX_TIME_DEV_0001	-255,9375≤ RX Timing Deviation < 255,875	chip
RX_TIME_DEV_0002	-255,875≤ RX Timing Deviation < –255,8125	chip
…	…	…
RX_TIME_DEV_4096	000,00≤ RX Timing Deviation <0,0625	chip
…	…	…
RX_TIME_DEV_8189	255,8125 ≤ RX Timing Deviation < 255,875	chip
RX_TIME_DEV_8190	255,875≤ RX Timing Deviation < 255,9375	chip
RX_TIME_DEV_8191	255,9375 ≤ RX Timing Deviation	chip

NOTE: This measurement may be used for timing advance calculation or location services.

9.2.1.6.2.2 1.28 Mcps TDD option

The reporting range for *RX Timing Deviation* is from ~~0~~ -16 .... 16 chips.

In table 9.42A mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.42A

Reported value	Measured quantity value	Unit
RX_TIME_DEV_000	~~0 ≤~~ RX Timing Deviation < ~~0,0625~~ 15,9375	chip
RX_TIME_DEV_001	~~0,0625~~ 15,9375 ≤ RX Timing Deviation < ~~0,125~~ 15,875	chip
RX_TIME_DEV_002	~~0,125~~ 15,875 ≤ RX Timing Deviation < ~~0,1875~~ 15,8125	chip
…	…	…
RX_TIME_DEV_~~253~~509	15,8125 ≤ RX Timing Deviation < 15,875	chip
RX_TIME_DEV_~~254~~510	15,875 ≤ RX Timing Deviation < 15,9375	chip
RX_TIME_DEV_~~255~~511	15,9375 ≤ RX Timing Deviation	chip

NOTE: This measurement can be used for timing advance (synchronisation shift) calculation for uplink synchronisation or location services.

3GPP TSR RAN WG4 Meeting #24 **R4-021183**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **272** ⌘ **rev** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to RX Timing Deviation for LCR TDD option
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	According definition of TS25.225, the measurement value of RX Timing Deviation can be negative or positive. The reporting range of [0, 16] chips for *RX Timing Deviation* is not reasonable.
Summary of change:	⌘	Changing the reporting range of RX Timing Deviation to [-16, 16] chips. Changing the range of reporting value to [0, 511].
Consequences if not approved:	⌘	The reporting value of RX Timing Deviation will be error when UL advance time is smaller than it should be. **Isolated Impact Analysis:** The change would not affect implementations behaving like indicated in the CR, would affect implementations that do not behave like indicated in the CR.
Clauses affected:	⌘	9.2.1.6

		Y	N			
Other specs Affected:	⌘	X		Other core specifications	⌘	TS25.433
			X	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	In TS25.433, the range of reporting value is [0, 255]. It should be changed to [0,511]. Equivalent CRs in other Releases: CR271 cat. F to 25.123 v4.5.0

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.

9.2.1.6 RX Timing Deviation

The measurement period shall be 100 ms.

9.2.1.6.1 Accuracy requirements

9.2.1.6.1.1 3.84 Mcps TDD option

Table 9.41: RX Timing Deviation accuracy

Parameter	Unit	Accuracy [chip]	Conditions
			Range [chips]
RX Timing Deviation	chip	+/- 0,5	-256, …, 256

9.2.1.6.1.2 1.28 Mcps TDD option

Table 9.41A: RX Timing Deviation accuracy

Parameter	Unit	Accuracy [chip]	Conditions
			Range [chips]
RX Timing Deviation	Chips period	+/- 0.125	~~0~~ -16, ..., 16

9.2.1.6.2 Range/mapping

9.2.1.6.2.1 3.84 Mcps TDD option

The reporting range for *RX Timing Deviation* is from -255,9375 ... 255,9375 chips.

In table 9.42 mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.42

Reported value	Measured quantity value	Unit
RX_TIME_DEV_0000	RX Timing Deviation < –255,9375	chip
RX_TIME_DEV_0001	-255,9375≤ RX Timing Deviation < 255,875	chip
RX_TIME_DEV_0002	-255,875≤ RX Timing Deviation < –255,8125	chip
…	…	…
RX_TIME_DEV_4096	000,00≤ RX Timing Deviation <0,0625	chip
…	…	…
RX_TIME_DEV_8189	255,8125 ≤ RX Timing Deviation < 255,875	chip
RX_TIME_DEV_8190	255,875≤ RX Timing Deviation < 255,9375	chip
RX_TIME_DEV_8191	255,9375 ≤ RX Timing Deviation	chip

NOTE: This measurement may be used for timing advance calculation or location services.

9.2.1.6.2.2 1.28 Mcps TDD option

The reporting range for *RX Timing Deviation* is from ~~0~~ -16 .... 16 chips.

In table 9.42A mapping of the measured quantity is defined. Signalling range may be larger than the guaranteed accuracy range.

Table 9.42A

Reported value	Measured quantity value	Unit
RX_TIME_DEV_000	~~0 ≤~~ RX Timing Deviation < ~~0,0625~~ 15,9375	chip
RX_TIME_DEV_001	~~0,0625~~ 15,9375 ≤ RX Timing Deviation < ~~0,125~~ 15,875	chip
RX_TIME_DEV_002	~~0,125~~ 15,875 ≤ RX Timing Deviation < ~~0,1875~~ 15,8125	chip
…	…	…
RX_TIME_DEV_~~253~~509	15,8125 ≤ RX Timing Deviation < 15,875	chip
RX_TIME_DEV_~~254~~510	15,875 ≤ RX Timing Deviation < 15,9375	chip
RX_TIME_DEV_~~255~~511	15,9375 ≤ RX Timing Deviation	chip

NOTE: This measurement can be used for timing advance (synchronisation shift) calculation for uplink synchronisation or location services.

3GPP TSR RAN WG4 Meeting #24 **R4-021184**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **273** ⌘ **rev** ⌘ Current version: **4.5.0** ⌘

*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 ☐

Title:	⌘	Correction to the intra frequency measurements for LCR TDD option
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	For the 1.28Mcps TDD option, all cells using the same frequency are synchronised in the timeslot level. PCCPCH is always located in Ts0. The measurement is performed in the special periods of TS0, DwPCH and Main Guard Period. Other timeslots need not to be taken into account for intra-frequency measurements. They can be used for other purposes without degrading intra-frquency measurement performance.
Summary of change:	⌘	Changing the formula for calculating the $T_{identify\ intra}$, $Y_{measurement\ intra}$ for P-CCPCH RSCP measurements and the definition of the variables.
Consequences if not approved:	⌘	The calculation of $T_{identify\ intra}$ and $Y_{measurement\ intra}$ is clarified/corrected. **Isolated Impact Analysis:** The Change does not affect the function.

Clauses affected:	⌘	8.1A.2.2.1, 8.1A.2.2.2, 8.4A.2.2.1, 8.4A.2.2.2

Other specs Affected:	⌘	Y	N		⌘	
			X	Other core specifications		
		X		Test specifications		TS34.122
			X	O&M Specifications		

Other comments:	⌘	Equivalent CRs in other Releases: CR274 cat. A to 25.123 v5.1.0

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.

8.1A.2.2.1 Identification of a new cell

The UE shall be able to identify- a new detectable cell belonging to the monitored set within

~~$$T_{identify\ intra} = Max\left\{800, T_{basic\ identify\ TDD,\ intra} \cdot \frac{T_{Measurement\ Period,\ Intra}}{T_{Intra}}\right\} ms$$~~

$$T_{identify\ intra} = T_{basic\ identify\ TDD,\ intra} \cdot \frac{N_{Period,\ Intra}}{N_{Intra}}\ ms$$

A cell shall be considered detectable when P-CCPCH Ec/Io ≥ -8 dB and DwPCH_Ec/Io ≥ -5 dB. When L3 filtering is used an additional delay can be expected.

The UE shall be able to identify a new detectable cell not belonging to the monitored set within

$$T_{identify\ detected\ set} = 30s$$

when P-CCPCH Ec/Io ≥ -8 dB, DwPCH_Ec/Io ≥ -5 dB. When L3 filtering is used an additional delay can be expected.

8.1A.2.2.2 UE P-CCPCH RSCP measurement capability

In the CELL_DCH state the measurement period for intra frequency P-CCPCH RSCP measurements is 200 ms. When ~~no inter frequency measurement is scheduled~~all TS0, DwPTS and main guard periods~~guard periods~~ in the measurement period are scheduled for intra frequency measurements, the UE shall be capable of performing P-CCPCH RSCP measurements for 6 identified intra-frequency cells of the monitored set and the UE physical layer shall be capable of reporting these measurements to higher layers with the measurement period of 200 ms. When inter-frequency measurements ~~are~~ required by the network have to be performed during periods of TS0, DwPTS or main guard period, the UE shall be capable of performing P-CCPCH RSCP measurements for at least $Y_{measurement\ intra}$ cells , where $Y_{measurement\ intra}$ is defined in the following equation. The measurement accuracy for all measured cells shall be as specified in the section 9. If the UE has identified more than $Y_{measurement\ intra}$ cells, the UE shall perform measurements of all identified cells but the reporting rate of P-CCPCH RSCP measurements of cells from UE physical layer to higher layers may be decreased.

~~$$Y_{measurement\ intra} = Floor\left\{X_{basic\ measurement\ TDD} \cdot \frac{T_{Intra}}{T_{Measurement\ Period,\ Intra}}\right\}$$~~

$$Y_{measurement\ intra} = \text{Floor}\left\{X_{basic\ measurement\ TDD} \cdot \frac{N_{Intra}}{N_{Period,\ Intra}}\right\}$$

whereby function Floor(x) takes the integer part of x.

$X_{basic\ measurement\ TDD}$= 6 (cells)

$T_{Measurement_Period,\ Intra}$ =200 ms. The measurement period for Intra frequency P-CCPCH RSCP measurements.

$N_{Period,Intra:}$ = 40 Number of subframes in $T_{Measurement_Period,\ Intra.}$

~~T_{Intra} :~~ ~~This is the minimum time that is available for intra frequency measurements, during the measurement period with an arbitrarily chosen timing. It is assumed for the requirement that the slot allocation allows measurement windows to be of minimum duration necessary to perform the measurements.~~

N_{Intra} : This is the minimum number of sub-frame in that the period of TS0, DwPTS and main guard period is available for intra frequency measurements, during the measurement period.

$T_{basic_identify_TDD, intra}$ = 800 ms. This is the time period used in the intra frequency equation where the maximum allowed time for the UE to identify a new TDD cell is defined. (side conditions are defined in subclause 8.1A.2.6).

The UE shall furthermore be capable of performing P-CCPCH measurements for at least 1 detected intra-frequency cell, in the detected set, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of 10 s. The measurement accuracy for all measured cells shall be as specified in the section

< Next changed section >

8.4A.2.2.1 Identification of a new cell

The UE shall be able to identify- a new detectable cell belonging to the monitored set within

~~$$T_{identify\ intra} = Max\left\{800, T_{basic\ identify\ TDD, intra} \cdot \frac{T_{Measurement\ Period, Intra}}{T_{Intra}}\right\} ms$$~~

$$T_{identify\ intra} = T_{basic\ identify\ TDD, intra} \cdot \frac{N_{Period, Intra}}{N_{Intra}} \text{ ms}$$

A cell shall be considered detectable when P-CCPCH Ec/Io ≥ -8 dB, DwPCH_Ec/Io ≥ -5 dB.

8.4A.2.2.2 UE P-CCPCH RSCP measurement capability

In the CELL_FACH state the measurement period for intra frequency P-CCPCH RSCP measurements is 200 ms. When ~~no inter-frequency measurement is scheduled~~all TS0, DwPTS and main guard period in the measurement period are scheduled for intra frequency measurements, the UE shall be capable of performing P-CCPCH RSCP measurements for 6 identified intra-frequency cells of the monitored set and the UE physical layer shall be capable of reporting thse measurements to higher layers with the measurement period of 200 ms. When inter-frequency measurements ~~are~~ required by the network have to be performed during periods of TS0, DwPTS and main guard period, the UE shall be capable of performing P-CCPCH RSCP measurements for at least $Y_{measurement\ intra}$ cells , where $Y_{measurement\ intra}$ is defined in the following equation.. The measurement accuracy for all measured cells shall be as specified in the section 9. If the UE has identified more than $Y_{measurement\ intra}$ cells, the UE shall perform measurements of all identified cells but the reporting rate of P-CCPCH RSCP measurements of cells from UE physical layer to higher layers may be decreased.

~~$$Y_{measurement\ intra} = Floor\left\{X_{basic\ measurement\ TDD} \cdot \frac{T_{Intra}}{T_{Measurement\ Period, Intra}}\right\}$$~~

$$Y_{measurement\ intra} = \text{Floor}\left\{X_{basic\ measurement\ TDD} \cdot \frac{N_{Intra}}{N_{Period, Intra}}\right\}$$

whereby function Floor(x) takes the integer part of x.

$X_{basic\ measurement\ TDD}$ is specified in section 8.1A.2.2.2

$T_{Measurement_Period, Intra}$ is specified in section 8.1A.2.2.2

~~T_{Intra} : is specified in section 8.1A.2.2.2~~

$N_{Period, Intra}$: is specified in section 8.1A.2.2.2

N_{Intra} : is specified in section 8.1A.2.2.2

$T_{basic_identify_TDD, intra}$ is specified in section 8.1A.2.2.2

3GPP TSR RAN WG4 Meeting #24 **R4-021185**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **274** ⌘ **rev** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to the intra frequency measurements for LCR TDD option
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	For the 1.28Mcps TDD option, all cells using the same frequency are synchronised in the timeslot level. PCCPCH is always located in Ts0. The measurement is performed in the special periods of TS0, DwPCH and Main Guard Period. Other timeslots need not to be taken into account for intra-frequency measurements. They can be used for other purposes without degrading intra-frquency measurement performance.
Summary of change:	⌘	Changing the formula for calculating the $T_{identify\ intra}$, $Y_{measurement\ intra}$ for P-CCPCH RSCP measurements and the definition of the variables.
Consequences if not approved:	⌘	The calculation of $T_{identify\ intra}$ and $Y_{measurement\ intra}$ is clarified/corrected. **Isolated Impact Analysis:** The Change does not affect the function.

Clauses affected:	⌘	8.1A.2.2.1, 8.1A.2.2.2, 8.4A.2.2.1, 8.4A.2.2.2

Other specs Affected:	⌘	Y	N		⌘
			X	Other core specifications	
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	Equivalent CRs in other Releases: CR273 cat. F to 25.123 v4.5.0

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.

8.1A.2.2.1 Identification of a new cell

The UE shall be able to identify- a new detectable cell belonging to the monitored set within

~~$$T_{identify\ intra} = Max\left\{800, T_{basic\ identify\ TDD,\ intra} \cdot \frac{T_{Measurement\ Period,\ Intra}}{T_{Intra}}\right\} ms$$~~

$$T_{identify\ intra} = T_{basic\ identify\ TDD,\ intra} \cdot \frac{N_{Period,\ Intra}}{N_{Intra}}\ ms$$

A cell shall be considered detectable when P-CCPCH Ec/Io ≥ -8 dB and DwPCH_Ec/Io ≥ -5 dB. When L3 filtering is used an additional delay can be expected.

The UE shall be able to identify a new detectable cell not belonging to the monitored set within

$$T_{identify\ detected\ set} = 30s$$

when P-CCPCH Ec/Io ≥ -8 dB, DwPCH_Ec/Io ≥ -5 dB. When L3 filtering is used an additional delay can be expected.

8.1A.2.2.2 UE P-CCPCH RSCP measurement capability

In the CELL_DCH state the measurement period for intra frequency P-CCPCH RSCP measurements is 200 ms. When ~~no inter frequency measurement is scheduled~~all TS0, DwPTS and main guard periods~~guard periods~~ in the measurement period are scheduled for intra frequency measurements, the UE shall be capable of performing P-CCPCH RSCP measurements for 6 identified intra-frequency cells of the monitored set and the UE physical layer shall be capable of reporting these measurements to higher layers with the measurement period of 200 ms. When inter-frequency measurements ~~are~~ required by the network have to be performed during periods of TS0, DwPTS or main guard period, the UE shall be capable of performing P-CCPCH RSCP measurements for at least $Y_{measurement\ intra}$ cells , where $Y_{measurement\ intra}$ is defined in the following equation. The measurement accuracy for all measured cells shall be as specified in the section 9. If the UE has identified more than $Y_{measurement\ intra}$ cells, the UE shall perform measurements of all identified cells but the reporting rate of P-CCPCH RSCP measurements of cells from UE physical layer to higher layers may be decreased.

~~$$Y_{measurement\ intra} = Floor\left\{X_{basic\ measurement\ TDD} \cdot \frac{T_{Intra}}{T_{Measurement\ Period,\ Intra}}\right\}$$~~

$$Y_{measurement\ intra} = \text{Floor}\left\{X_{basic\ measurement\ TDD} \cdot \frac{N_{Intra}}{N_{Period,\ Intra}}\right\}$$

whereby function Floor(x) takes the integer part of x.

$X_{basic\ measurement\ TDD}$= 6 (cells)

$T_{Measurement_Period,\ Intra}$ =200 ms. The measurement period for Intra frequency P-CCPCH RSCP measurements.

$N_{Period,Intra:}$ = 40 Number of subframes in $T_{Measurement_Period,\ Intra.}$

~~T_{Intra} :~~ ~~This is the minimum time that is available for intra frequency measurements, during the measurement period with an arbitrarily chosen timing. It is assumed for the requirement that the slot allocation allows measurement windows to be of minimum duration necessary to perform the measurements.~~

N_{Intra} : This is the minimum number of sub-frame in that the period of TS0, DwPTS and main guard period is available for intra frequency measurements, during the measurement period.

$T_{basic_identify_TDD, intra}$ = 800 ms. This is the time period used in the intra frequency equation where the maximum allowed time for the UE to identify a new TDD cell is defined. (side conditions are defined in subclause 8.1A.2.6).

The UE shall furthermore be capable of performing P-CCPCH measurements for at least 1 detected intra-frequency cell, in the detected set, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of 10 s. The measurement accuracy for all measured cells shall be as specified in the section

< Next changed section >

8.4A.2.2.1 Identification of a new cell

The UE shall be able to identify- a new detectable cell belonging to the monitored set within

~~$$T_{identify\ intra} = Max\left\{800, T_{basic\ identify\ TDD, intra} \cdot \frac{T_{Measurement\ Period, Intra}}{T_{Intra}}\right\} ms$$~~

$$T_{identify\ intra} = T_{basic\ identify\ TDD, intra} \cdot \frac{N_{Period, Intra}}{N_{Intra}} \text{ ms}$$

A cell shall be considered detectable when P-CCPCH Ec/Io ≥ -8 dB, DwPCH_Ec/Io ≥ -5 dB.

8.4A.2.2.2 UE P-CCPCH RSCP measurement capability

In the CELL_FACH state the measurement period for intra frequency P-CCPCH RSCP measurements is 200 ms. When ~~no inter-frequency measurement is scheduled~~all TS0, DwPTS and main guard period in the measurement period are scheduled for intra frequency measurements, the UE shall be capable of performing P-CCPCH RSCP measurements for 6 identified intra-frequency cells of the monitored set and the UE physical layer shall be capable of reporting thse measurements to higher layers with the measurement period of 200 ms. When inter-frequency measurements ~~are~~ required by the network have to be performed during periods of TS0, DwPTS and main guard period, the UE shall be capable of performing P-CCPCH RSCP measurements for at least $Y_{measurement\ intra}$ cells , where $Y_{measurement\ intra}$ is defined in the following equation.. The measurement accuracy for all measured cells shall be as specified in the section 9. If the UE has identified more than $Y_{measurement\ intra}$ cells, the UE shall perform measurements of all identified cells but the reporting rate of P-CCPCH RSCP measurements of cells from UE physical layer to higher layers may be decreased.

~~$$Y_{measurement\ intra} = Floor\left\{X_{basic\ measurement\ TDD} \cdot \frac{T_{Intra}}{T_{Measurement\ Period, Intra}}\right\}$$~~

$$Y_{measurement\ intra} = \text{Floor}\left\{X_{basic\ measurement\ TDD} \cdot \frac{N_{Intra}}{N_{Period, Intra}}\right\}$$

whereby function Floor(x) takes the integer part of x.

$X_{basic\ measurement\ TDD}$ is specified in section 8.1A.2.2.2

$T_{Measurement_Period, Intra}$ is specified in section 8.1A.2.2.2

~~T_{Intra} : is specified in section 8.1A.2.2.2~~

$N_{Period, Intra}$: is specified in section 8.1A.2.2.2

N_{Intra} : is specified in section 8.1A.2.2.2

$T_{basic_identify_TDD, intra}$ is specified in section 8.1A.2.2.2

3GPP TSR RAN WG4 Meeting #24 **R4-021186**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **275** ⌘ **rev** ⌘ Current version: **4.5.0** ⌘

*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 ☐

Title:	⌘	Correction to section 10
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)

Reason for change:	⌘	The $PRX_{PRACH,des}$ FIELD_LEV mapping is error. In TS25.221, the FPACH is The Fast Physical Access Channel. TS25.123 should be consistent with that. Received starting position of the UpPCH ($UpPCH_{POS}$), that is the measurement parameter of SYNC-UL Timing Deviation for 1.28 Mcps. In the section 10, the contents resemble that in section 9. the format of form should be same with that in section 9.
Summary of change:	⌘	Correction to an error of the $PRX_{PRACH,des}$ FIELD_LEV mapping. Changing the FPACH(Forward Physical Access Channel) in section 10 to FPACH(Fast Physical Access Channel). Deleting the contents of Received starting position of the UpPCH and explaining it is the SYNC-UL Timing Deviation for 1.28 Mcps. Modifying the format of form in section 10 consistent with section 9.
Consequences if not approved:	⌘	It may make mapping error of the $PRX_{PRACH,des}$ FIELD_LEV. The definition in TS25.123 will be not consistent with TS25.221. that may be make misunderstand. **Isolated Impact Analysis:** Would not affect the implementation behaving like indicated in the CR, the implementation would be affected if not behaving like indicated in the CR.

Clauses affected:	⌘	Section 10			
Other specs	⌘	Y ☐	N ☒	Other core specifications	⌘

Affected:		Test specifications O&M Specifications
Other comments: ⌘		Equivalent CRs in other Releases: CR276 cat. A to 25.123 v5.1.0

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.

10 FPACH physical layer information field definition (1.28 Mcps TDD)

1.28 Mcps TDD introduces the FPACH (~~Forward~~ Fast Physical Access CHannel) which carries physical layer information. Two of these information fields are the 'received starting position of the UpPCH' (Uplink Pilot CHannel) and the 'transmit power level command for the RACH message'. Both information fields are directly (received starting position of the UpPCH) or can be indirectly (transmit power level command for the RACH message) derived from measurements but are no measurements themselves.

10.1 Received starting position of the UpPCH ($UpPCH_{POS}$) (1.28 Mcps TDD)

The received starting position of the UpPCH ($UpPCH_{POS}$) is derectly derived from measurement, it is equivalent to the received SYNC-UL Timing Deviation for 1.28 Mcps. Its accurecy and range/mapping is defined in section 9.2.1.10. The information field value, $UpPCH_{POS}$ -FIELD_LEV_xxxx, is equivalent to the reported value SYNC_UL_TIME_DEV_xxxx.

~~10.1.1 Range/mapping~~

~~Table 10.1~~

~~Range/mapping~~	~~$UpPCH_{POS}$ FIELD is given with a resolution of 1/8 chip with the range [0,255.875] chip.~~ ~~$UpPCH_{POS}$ FIELD shall be transmitted in the FPACH where:~~ ~~$UpPCH_{POS}$ FIELD_LEV_0000: $UpPCH_{POS}$ < 0 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_0001: 0 chip ≤ $UpPCH_{POS}$ < 0.125 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_0002: 0.125 chip ≤ $UpPCH_{POS}$ < 0.25 chip~~ ~~...~~ ~~$UpPCH_{POS}$ FIELD_LEV_2045: 255.625 chip ≤ $UpPCH_{POS}$ < 255.75 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_2046: 255.75 chip ≤ $UpPCH_{POS}$ < 255.875 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_2047: 255.875 chip ≤ $UpPCH_{POS}$~~

~~10.1.2 Accuracy requirements~~

~~Table 10.2~~

~~Parameter~~	**~~Unit~~**	**~~Accuracy~~**	**~~Conditions~~** **~~Range [chips]~~**
~~Received starting position of the UpPCH~~	~~chips period~~	~~+/- 0.125~~	~~0, ..., 255.875~~

10.2 Transmit Power Level Command for the RACH message (1.28 Mcps TDD)

10.2.1 Accuracy requirements~~Range/mapping~~

~~**Table 10.3**~~

~~**Range/mapping**~~	~~$PRX_{PRACH,des}$ FIELD is given with a resolution of 0.5 dB with the range [-120,-80] dBm.~~ ~~$PRX_{PRACH,des}$ FIELD shall be transmitted in the FPACH where:~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_00: $PRX_{PRACH,des}$ < -120 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_01: -120 dBm ≤ $PRX_{PRACH,des}$ < -119.5 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_02: -119.5 dBm ≤ $PRX_{PRACH,des}$ < -119 dBm~~ ~~…~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_78: -81 dBm ≤ $PRX_{PRACH,des}$ < -80.5 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_79: -80.5 dBm≤ $PRX_{PRACH,des}$ < -80 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_80: -80 dBm ≤ $PRX_{PRACH,des}$~~

~~10.2.2 Accuracy requirements~~

Since this is a desired RX power at the node B and this is no measured value and the derivation of this value in the node B is implementation specific, accuracy requirements are not applicable.

10.2.2 Range/mapping

$PRX_{PRACH,des}$ FIELD is given with a resolution of 0.5 dB with the range [-120,-80] dBm.
$PRX_{PRACH,des}$ FIELD shall be transmitted in the FPACH.

Table 10.1

Information field value	Measured quantity value	Unit
$PRX_{PRACH,des}$ FIELD_LEV_00	$PRX_{PRACH,des}$ < -120	dBm
$PRX_{PRACH,des}$ FIELD_LEV_01	-120 ≤ $PRX_{PRACH,des}$ < -119.5	dBm
$PRX_{PRACH,des}$ FIELD_LEV_02	-119.5 ≤ $PRX_{PRACH,des}$ < -119	dBm
…	…	…
$PRX_{PRACH,des}$ FIELD_LEV_79	-81 ≤ $PRX_{PRACH,des}$ < -80.5	dBm
$PRX_{PRACH,des}$ FIELD_LEV_80	-80.5 ≤ $PRX_{PRACH,des}$ < -80	dBm
$PRX_{PRACH,des}$ FIELD_LEV_81	-80 ≤ $PRX_{PRACH,des}$	dBm

3GPP TSR RAN WG4 Meeting #24 **R4-021187**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **276** ⌘ **rev** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☐ Core Network ☐

Title:	⌘	Correction to section 10
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change:	⌘	The $PRX_{PRACH,des}$ FIELD_LEV mapping is error. In TS25.221, the FPACH is The Fast Physical Access Channel. TS25.123 should be consistent with that. Received starting position of the UpPCH ($UpPCH_{POS}$), that is the measurement parameter of SYNC-UL Timing Deviation for 1.28 Mcps. In the section 10, the contents resemble that in section 9. the format of form should be same with that in section 9.
Summary of change:	⌘	Correction to an error of the $PRX_{PRACH,des}$ FIELD_LEV mapping. Changing the FPACH(Forward Physical Access Channel) in section 10 to FPACH(Fast Physical Access Channel). Deleting the contents of Received starting position of the UpPCH and explaining it is the SYNC-UL Timing Deviation for 1.28 Mcps. Modifying the format of form in section 10 consistent with section 9.
Consequences if not approved:	⌘	It may make mapping error of the $PRX_{PRACH,des}$ FIELD_LEV. The definition in TS25.123 will be not consistent with TS25.221. that may be make misunderstand. **Isolated Impact Analysis:** Would not affect the implementation behaving like indicated in the CR, the implementation would be affected if not behaving like indicated in the CR.

Clauses affected:	⌘	Section 10			
Other specs	⌘	Y ☐	N ☒	Other core specifications	⌘

Affected:		Test specifications O&M Specifications
Other comments: ⌘		Equivalent CRs in other Releases: CR275 cat. F to 25.123 v4.5.0

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.

10 FPACH physical layer information field definition (1.28 Mcps TDD)

1.28 Mcps TDD introduces the FPACH (~~Forward~~ Fast Physical Access CHannel) which carries physical layer information. Two of these information fields are the 'received starting position of the UpPCH' (Uplink Pilot CHannel) and the 'transmit power level command for the RACH message'. Both information fields are directly (received starting position of the UpPCH) or can be indirectly (transmit power level command for the RACH message) derived from measurements but are no measurements themselves.

10.1 Received starting position of the UpPCH ($UpPCH_{POS}$) (1.28 Mcps TDD)

The received starting position of the UpPCH ($UpPCH_{POS}$) is derectly derived from measurement, it is equivalent to the received SYNC-UL Timing Deviation for 1.28 Mcps. Its accurecy and range/mapping is defined in section 9.2.1.10. The information field value, $UpPCH_{POS}$ -FIELD_LEV_xxxx, is equivalent to the reported value SYNC_UL_TIME_DEV_xxxx.

~~10.1.1 Range/mapping~~

~~Table 10.1~~

~~Range/mapping~~	~~$UpPCH_{POS}$ FIELD is given with a resolution of 1/8 chip with the range [0,255.875] chip.~~ ~~$UpPCH_{POS}$ FIELD shall be transmitted in the FPACH where:~~ ~~$UpPCH_{POS}$ FIELD_LEV_0000: $UpPCH_{POS}$ < 0 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_0001: 0 chip ≤ $UpPCH_{POS}$ < 0.125 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_0002: 0.125 chip ≤ $UpPCH_{POS}$ < 0.25 chip~~ ~~...~~ ~~$UpPCH_{POS}$ FIELD_LEV_2045: 255.625 chip ≤ $UpPCH_{POS}$ < 255.75 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_2046: 255.75 chip ≤ $UpPCH_{POS}$ < 255.875 chip~~ ~~$UpPCH_{POS}$ FIELD_LEV_2047: 255.875 chip ≤ $UpPCH_{POS}$~~

~~10.1.2 Accuracy requirements~~

~~Table 10.2~~

~~Parameter~~	**~~Unit~~**	**~~Accuracy~~**	**~~Conditions~~** **~~Range [chips]~~**
~~Received starting position of the UpPCH~~	~~chips period~~	~~+/- 0.125~~	~~0, ..., 255.875~~

10.2 Transmit Power Level Command for the RACH message (1.28 Mcps TDD)

10.2.1 Accuracy requirements~~Range/mapping~~

~~**Table 10.3**~~

~~**Range/mapping**~~	~~$PRX_{PRACH,des}$ FIELD is given with a resolution of 0.5 dB with the range [-120,-80] dBm.~~ ~~$PRX_{PRACH,des}$ FIELD shall be transmitted in the FPACH where:~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_00: $PRX_{PRACH,des}$ < -120 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_01: -120 dBm ≤ $PRX_{PRACH,des}$ < -119.5 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_02: -119.5 dBm ≤ $PRX_{PRACH,des}$ < -119 dBm~~ ~~…~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_78: -81 dBm ≤ $PRX_{PRACH,des}$ < -80.5 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_79: -80.5 dBm≤ $PRX_{PRACH,des}$ < -80 dBm~~ ~~$PRX_{PRACH,des}$ FIELD_LEV_80: -80 dBm ≤ $PRX_{PRACH,des}$~~

~~10.2.2 Accuracy requirements~~

Since this is a desired RX power at the node B and this is no measured value and the derivation of this value in the node B is implementation specific, accuracy requirements are not applicable.

10.2.2 Range/mapping

$PRX_{PRACH,des}$ FIELD is given with a resolution of 0.5 dB with the range [-120,-80] dBm.
$PRX_{PRACH,des}$ FIELD shall be transmitted in the FPACH.

Table 10.1

Information field value	Measured quantity value	Unit
$PRX_{PRACH,des}$ FIELD_LEV_00	$PRX_{PRACH,des}$ < -120	dBm
$PRX_{PRACH,des}$ FIELD_LEV_01	-120 ≤ $PRX_{PRACH,des}$ < -119.5	dBm
$PRX_{PRACH,des}$ FIELD_LEV_02	-119.5 ≤ $PRX_{PRACH,des}$ < -119	dBm
…	…	…
$PRX_{PRACH,des}$ FIELD_LEV_79	-81 ≤ $PRX_{PRACH,des}$ < -80.5	dBm
$PRX_{PRACH,des}$ FIELD_LEV_80	-80.5 ≤ $PRX_{PRACH,des}$ < -80	dBm
$PRX_{PRACH,des}$ FIELD_LEV_81	-80 ≤ $PRX_{PRACH,des}$	dBm

3GPP TSR RAN WG4 Meeting #24 **R4-021229**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **277** ⌘ **rev** ⌘ Current version: **4.5.0** ⌘

*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 ☐

Title:	⌘	**TDD inter-frequency measurement capability**
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	UE capabilities on number of carriers for TDD monitoring still undefined for UE measurement procedures in CELL_DCH and CELL_FACH State for 1.28 Mcps TDD Option.
Summary of change:	⌘	- '[x] additional carriers' is replaced by '3 additional carriers' for UE measurement capabilities in Cell_DCH - '[x] additional carriers' is replaced by '3 additional carriers' for UE measurement capabilities in Cell_FACH state
Consequences if not approved:	⌘	Requirements on the number of TDD inter-frequency carriers to be monitored remains undefined. Uncertainty about requirements. **Isolated Impact Analysis:** UE capabilities on number of carriers to be monitored have been modified. Would not affect the implementation behaving like indicated in the CR, would affect the implementation not behaving like indicated in the CR.

Clauses affected:	⌘	8.1A.2.1, 8.4A.2.1

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

Other comments:	⌘	Equivalent CRs in other Releases: CR278 cat. A to 25.123 v5.1.0

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.

8.1A Measurements in CELL_DCH State (1.28 Mcps option)

8.1A.1 Introduction

This section contains requirements on the UE regarding measurement reporting in CELL_DCH state. The requirements are split in TDD intra frequency, TDD inter frequency, FDD and GSM measurements. These measurements may be used by the UTRAN, e.g. for handover decisions. The measurements are defined in TS 25.225, the measurement model is defined in TS 25.302 and measurement accuracies are specified in section 9. Control of measurement reporting is specified in TS 25.331 and parallel measurements are specified in section 8.2A. For the description of the idle intervals see TS 25.225, Annex A.

8.1A.2 Requirements

8.1A.2.1 UE Measurement Capability

The UE shall be able to monitor up to

- 32 intra frequency TDD cells, and
- 32 inter frequency cells, including
  - TDD cells distributed on up to ~~[x]~~3 additional TDD carriers and
  - Depending on UE capability, FDD cells, distributed on up to 3 FDD carriers, and
- Depending on UE capability, 32 GSM cells distributed on up to 32 GSM carriers.

Performance requirements for different types of measurements and different number of cells are defined in the following sections.

The requirements in section 9 are applicable for a UE performing measurements according to this section.

The received P-CCPCH E_c/I_o is defined as

$$\left(\frac{P-CCPCH_E_c}{I_o}\right)_{in\ dB} = \left(\frac{P-CCPCH_E_c}{I_{or}}\right)_{in\ dB} - \left(\frac{I_o}{\hat{I}_{or}}\right)_{in\ dB}$$

The received DwPTS E_c/I_o is defined as

$$\left(\frac{DwPCH_E_c}{I_o}\right)_{in\ dB} = \left(\frac{DwPCH_E_c}{I_{or}}\right)_{in\ dB} - \left(\frac{I_o}{\hat{I}_{or}}\right)_{in\ dB}$$

<next changed section>

8.4A Measurements in CELL_FACH State (1.28 Mcps option)

8.4A.1 Introduction

This section contains requirements on the UE regarding measurement reporting in CELL_FACH state. The measurements are defined in TS 25.225, the measurement model is defined in TS 25.302 and measurement accuracies are specified in section 9. Control of measurement reporting is specified in TS 25.331 and parallel measurements are specified in section 8.2. For the description of the idle intervals see TS 25.225, Annex A.

8.4A.2 Requirements

8.4A.2.1 UE Measurement Capability

The UE shall be able to monitor up to

- 32 intra frequency TDD cells, and
- 32 inter frequency cells, including
  - TDD cells distributed on up to ~~[x]~~3 additional TDD carriers and
  - Depending on UE capability, FDD cells, distributed on up to 3 FDD carriers.
- Depending on UE capability, 32 GSM cells distributed on up to 32 GSM carriers.

The requirements in section 9 on P-CCPCH RSCP measurements are applicable for a UE performing measurements according to this section. For inter-frequency FDD, TDD and GSM cell re-selection, measurement occasions as specified in TS 25.331 and, in addition, idle intervals as described in TS 25.225 are used to find and measure on these cells.

It is defined below how the measurements on different systems and modes are performed given the time allocated to that system. The time during the measurement occasions and idle intervals that is allocated to each of the different modes and systems shall be equally shared by the modes which the UE has capability for and that are in the monitored set signalled by the network.

The UE is required to measure periodically once every time period T_{meas} on each of the modes and systems, FDD interfrequency cells, TDD interfrequency cells and GSM carriers, for which the corresponding parameter N_{FDD}, N_{TDD} and N_{GSM} is set to 1, within the measurement time T_{meas}

$$T_{meas} = \left[\left(N_{FDD} + N_{TDD} + N_{GSM}\right) \cdot N_{TTI} \cdot \text{M_REP} \cdot 10\right] \text{ms}$$

where the following parameters are defined:

N_{TDD}	= 0 or 1. If there are inter-frequency TDD cells in the neighbour list N_{TDD}=1, otherwise N_{TDD}=0.
N_{FDD}	= 0 or 1. If the UE is capable of FDD and there are FDD cells in the neighbour list N_{FDD}=*1* otherwise N_{FDD} =0.
N_{GSM}	= 0 or 1. If the UE is capable of GSM and there are GSM cells in the neighbour list, N_{GSM}=*1*, otherwise N_{GSM} =0.
M_REP	is the Measurement Occasion cycle length in number of frames as specified in TS 25.331.
N_{TTI}	is the number of frames in each measurement occasion, equal to the length of the largest TTI on the SCCPCH monitored by the UE.

3GPP TSR RAN WG4 Meeting #24 **R4-021230**

Helsinki, Finland 12 - 16 August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **25.123** **CR** **278** ⌘ **rev** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	**TDD inter-frequency measurement capability**
Source:	⌘	RAN WG4
Work item code:	⌘	LCRTDD-RF
Date:	⌘	21/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	UE capabilities on number of carriers for TDD monitoring still undefined for UE measurement procedures in CELL_DCH and CELL_FACH State for 1.28 Mcps TDD Option.
Summary of change:	⌘	- '[x] additional carriers' is replaced by '3 additional carriers' for UE measurement capabilities in Cell_DCH - '[x] additional carriers' is replaced by '3 additional carriers' for UE measurement capabilities in Cell_FACH state
Consequences if not approved:	⌘	Requirements on the number of TDD inter-frequency carriers to be monitored remains undefined. Uncertainty about requirements. **Isolated Impact Analysis:** UE capabilities on number of carriers to be monitored have been modified. Would not affect the implementation behaving like indicated in the CR, would affect the implementation not behaving like indicated in the CR.

Clauses affected:	⌘	8.1A.2.1, 8.4A.2.1

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

Other comments:	⌘	Equivalent CRs in other Releases: CR277 cat. F to 25.123 v4.5.0

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.

8.1A Measurements in CELL_DCH State (1.28 Mcps option)

8.1A.1 Introduction

This section contains requirements on the UE regarding measurement reporting in CELL_DCH state. The requirements are split in TDD intra frequency, TDD inter frequency, FDD and GSM measurements. These measurements may be used by the UTRAN, e.g. for handover decisions. The measurements are defined in TS 25.225, the measurement model is defined in TS 25.302 and measurement accuracies are specified in section 9. Control of measurement reporting is specified in TS 25.331 and parallel measurements are specified in section 8.2A. For the description of the idle intervals see TS 25.225, Annex A.

8.1A.2 Requirements

8.1A.2.1 UE Measurement Capability

The UE shall be able to monitor up to

- 32 intra frequency TDD cells, and
- 32 inter frequency cells, including
  - TDD cells distributed on up to ~~[x]~~3 additional TDD carriers and
  - Depending on UE capability, FDD cells, distributed on up to 3 FDD carriers, and
- Depending on UE capability, 32 GSM cells distributed on up to 32 GSM carriers.

Performance requirements for different types of measurements and different number of cells are defined in the following sections.

The requirements in section 9 are applicable for a UE performing measurements according to this section.

The received P-CCPCH E_c/I_o is defined as

$$\left(\frac{P-CCPCH_E_c}{I_o}\right)_{in\ dB} = \left(\frac{P-CCPCH_E_c}{I_{or}}\right)_{in\ dB} - \left(\frac{I_o}{\hat{I}_{or}}\right)_{in\ dB}$$

The received DwPTS E_c/I_o is defined as

$$\left(\frac{DwPCH_E_c}{I_o}\right)_{in\ dB} = \left(\frac{DwPCH_E_c}{I_{or}}\right)_{in\ dB} - \left(\frac{I_o}{\hat{I}_{or}}\right)_{in\ dB}$$

<next changed section>

8.4A Measurements in CELL_FACH State (1.28 Mcps option)

8.4A.1 Introduction

This section contains requirements on the UE regarding measurement reporting in CELL_FACH state. The measurements are defined in TS 25.225, the measurement model is defined in TS 25.302 and measurement accuracies are specified in section 9. Control of measurement reporting is specified in TS 25.331 and parallel measurements are specified in section 8.2. For the description of the idle intervals see TS 25.225, Annex A.

8.4A.2 Requirements

8.4A.2.1 UE Measurement Capability

The UE shall be able to monitor up to

- 32 intra frequency TDD cells, and
- 32 inter frequency cells, including
  - TDD cells distributed on up to ~~[x]~~3 additional TDD carriers and
  - Depending on UE capability, FDD cells, distributed on up to 3 FDD carriers.
- Depending on UE capability, 32 GSM cells distributed on up to 32 GSM carriers.

The requirements in section 9 on P-CCPCH RSCP measurements are applicable for a UE performing measurements according to this section. For inter-frequency FDD, TDD and GSM cell re-selection, measurement occasions as specified in TS 25.331 and, in addition, idle intervals as described in TS 25.225 are used to find and measure on these cells.

It is defined below how the measurements on different systems and modes are performed given the time allocated to that system. The time during the measurement occasions and idle intervals that is allocated to each of the different modes and systems shall be equally shared by the modes which the UE has capability for and that are in the monitored set signalled by the network.

The UE is required to measure periodically once every time period T_{meas} on each of the modes and systems, FDD interfrequency cells, TDD interfrequency cells and GSM carriers, for which the corresponding parameter N_{FDD}, N_{TDD} and N_{GSM} is set to 1, within the measurement time T_{meas}

$$T_{meas} = \left[\left(N_{FDD} + N_{TDD} + N_{GSM}\right) \cdot N_{TTI} \cdot \text{M_REP} \cdot 10\right] \text{ms}$$

where the following parameters are defined:

N_{TDD}	= 0 or 1. If there are inter-frequency TDD cells in the neighbour list N_{TDD}=1, otherwise N_{TDD}=0.
N_{FDD}	= 0 or 1. If the UE is capable of FDD and there are FDD cells in the neighbour list N_{FDD}=*1* otherwise N_{FDD} =0.
N_{GSM}	= 0 or 1. If the UE is capable of GSM and there are GSM cells in the neighbour list, N_{GSM}=*1*, otherwise N_{GSM} =0.
M_REP	is the Measurement Occasion cycle length in number of frames as specified in TS 25.331.
N_{TTI}	is the number of frames in each measurement occasion, equal to the length of the largest TTI on the SCCPCH monitored by the UE.